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**RELATIONSHIP BETWEEN PERSONALITY TRAITS AND WORK  
ENGAGEMENT IN MEDICAL DOCTORS AT THE M.P SHAH  
HOSPITAL**

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION IN HEALTHCARE MANAGEMENT AT  
STRATHMORE UNIVERSITY.**



**STRATHMORE UNIVERSITY BUSINESS SCHOOL**

**NAIROBI, KENYA**

**FEBRUARY 2024**

## DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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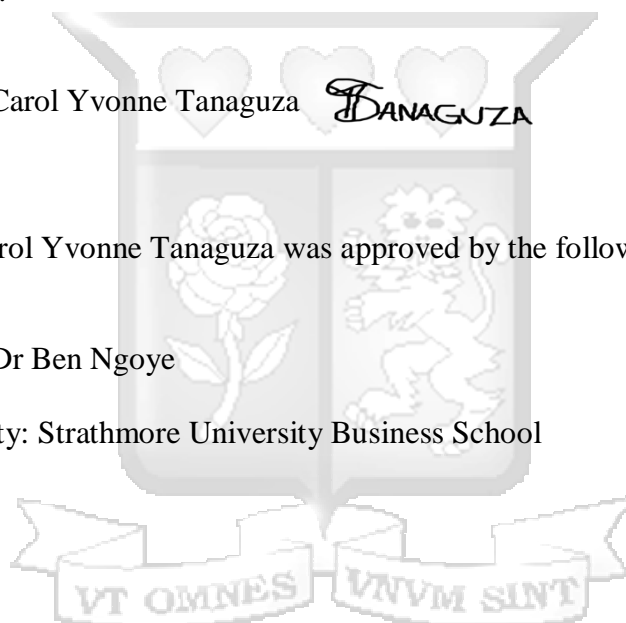
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## ABSTRACT

Personality traits are what make each of us unique, and it also determines how we handle different situations in our daily lives. Work engagement is characterised as a fulfilling, active-motivational state indicative of positive work-related well-being. Physicians who are work-engaged are less prone to experiencing burnout and exhibit dedication and energy in their professional endeavours. It gives businesses the ability to appraise worker efficiency. The job of a medical doctor is largely reliant on their response to medical situations presented to them on a day-to-day basis, usually under stressful conditions because these decisions usually determine the overall outcome of the patient. Knowledge of their personality traits could aid in improving the delivery of quality healthcare services to patients, as well as determine the success of their careers. This study, therefore, sought to assess how the five personality dimensions influenced the work engagement of medical doctors at the M.P Shah Hospital. The research was based on the trait theory of personality. It was a cross-sectional analytical study. Convenience sampling of doctors was primarily used in the study. Primary data was collected using a single online questionnaire that was administered to a sample of 62 licensed medical doctors practicing at the M.P Shah Hospital. Data was analysed with the use of the SPSS version 26.0. The results showed that majority of the medical doctors scored high for agreeableness, conscientiousness, neuroticism, and openness traits like openness and conscientiousness demonstrated significant positive correlations with work engagement, other traits like extraversion, agreeableness, and neuroticism showed weaker and non-significant relationships. The regression analysis underscored the prognostic significance of openness for work engagement, indicating that individuals with a greater inclination toward new experiences are highly likely to demonstrate elevated levels of engagement in their professional responsibilities. However, the limited influence of other personality traits implied that other factors not considered in the study contributed to doctors' levels of engagement at the hospital. The study findings suggested that policymakers could incorporate personality tests in the process of recruiting and retaining personalities best fit for certain jobs and optimize working conditions. Academicians could determine the professions that would best fit them by examining the five traits of personality, faculty development, and career planning could be tailor-made to medical doctors 'personality traits.

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## LIST OF ABBREVIATIONS

<b>AMOS</b>	Analysis of Moment Structures
<b>COSECSA</b>	College of Surgeons of East Central and Southern Africa
<b>DISC</b>	Dominance, Influence, Steadiness, and Conscientiousness
<b>LISREL</b>	Linear Structural Relations
<b>MBTI</b>	Myers Briggs Type Indicator
<b>MFL</b>	Master Facility List
<b>NGO</b>	Non- Governmental Organization
<b>OCB</b>	Organizational Citizenship Behavior
<b>OCEAN</b>	(Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism)
<b>UK</b>	United Kingdom
<b>USA</b>	United States of America
<b>UWES</b>	Utrecht Work Engagement Scale



## DEFINITIONS

**Psychometric Test** - the measurement of personality and other individual capabilities



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# CHAPTER 1: INTRODUCTION

## 1.1 Background

Conceptualising one's personality is crucial for personal development, enabling individuals to adapt to their behaviour, leverage strengths, address weaknesses and foster effective collaboration with colleagues, ultimately contributing to career success. Personality assessment is particularly valuable in determining whether an individual's personality aligns with the requirements of a job, team or organisation. Mismatch in personality may lead to conflicts and increased turnover (Landis, 2020).

In the medical, physicians with higher levels of work engagement tend to make medical errors, contributing to better patient outcomes (Prins et al., 2009). Work engagement is associated with enhanced well-being and reduced work-related stress among healthcare professionals (Bakker & Leiter, 2010). It can be seen as the antithesis of burnout, while burnout reflects an experience that is detrimental to the workforce marked by exhaustion (Gonzalez-Roma et al., 2006). Professions with high levels of work engagement and mitigate burnout, it is essential to optimise working conditions, providing job resources that encourage increased performance (Schaufeli & Baker, 2004).

The healthcare industry is unique from other industries in that it is a highly regulated industry because it involves taking care of people's health needs (Bondugula, 2021). The industry is governed by strict policies and guidelines recommended by local and international certifying authorities. Privacy and safety of patients' information are some of the guidelines put in place. Healthcare organizations, with the help of governments and policymakers, tackle many challenges in the bid to keep healthcare affordable and accessible. Addressing these constraints is impossible without the active participation and the full engagement of healthcare system (Krijghsheld, Tummers & Scheepers, 2022). A successful organization is heavily reliant on the quality of its employees, which is measured against their level of work engagement.

### 1.1.1 Personality Traits

Personality is defined in the Cambridge Dictionary (2022) as a unique amalgamation of qualities that sets an individual apart from others, as evidenced by their actions, feelings, and thoughts. Allport (1937 as cited by Yang, 2014) termed personality as the nuanced organisation with a person's psychological systems shape their distinctive adaptations to the environment. Building on McDougall's (1932) work, Eysenk (1947) identified neuroticism/emotional stability and extraversion /introversion as two significant dimensions of personality traits. Types and

Christal (1961), reanalysing correlations published by Cattell (1943, 1946, 1947, 1948) and Fiske (1949), identified five factors: agreeableness, dependability, surgency, emotional stability, and culture. The Big Five, labelled by Norman (1963), gained popularity and included emotional stability, conscientiousness, extraversion, agreeableness, and culture. The fifth factor is now recognized as openness to experience (McCrae & Costa, 1985).

The Big Five psychometric test evaluates individuals' personalities based on five key traits, also known as the OCEAN model (Cherry, 2022), named after the first letters of each dimension. Openness (sometimes termed intellect or imagination) gauges an individual's creativity and inclination to learn new things and have novel experiences. Conscientiousness assesses the degree of care an individual takes in their life and work, with high scores indicating organizational and meticulous tendencies, as well as effective planning and execution skills. A low score shows one has a likelihood of laxity and disorganization. Extraversion assesses one's degree to socialize with others i.e. if they are outgoing, quiet, get energized in the presence of crowds, or if they struggle to collaborate and interact with others. Agreeableness measures the level to which one gets on with other. Neuroticism (also called emotional stability) assesses emotional reactions i.e., how one calmly or negatively reacts to bad news, and how they concentrate on minor details, or remain composed in situations of stress. Research now recognizes a sixth personality dimension labeled the '**H factor**' that concerns Honesty-Humility. Those who get high scores avoid manipulating others, seldom break the rules, and have no interest in wealth. In contrast, individuals with low scores have a proclivity to flatter people in order to obtain what they desire, to disobey norms when it suits them, and pursue money gain as their primary purpose (University of Calgary).

The Big Five Personality Test is a psychological model that is scientifically validated and reliable to assess personality (Thiel, 2022). The test contains statements that one responds to with an answer that best represents his/her opinion (*see Appendix F*). The results show where an individual falls on a spectrum for each unit, based on the answers. The Big Five model is utilized in matching personality and job role, which could lay a firm foundation for general life success. One can determine the professions that best fit him or her by examining the five traits of personality. The model can be of great help to companies in the process of recruiting and retaining personalities best fit for certain jobs (Robinson, 2022). For example, an employee

who is shy, quiet, and prefers working alone, will find it difficult working in a high – pressured sales job.

### **1.1.2 Work Engagement**

The engagement of the workforce was initially conceptualised by Kahn (1990), who termed it as the attachment of organisational membership to roles within employment and their performances within this role. Kahn suggested that engagement is anticipated to yield favourable outcomes at all levels as a personal level as well as a firm’s overall perspective.

Burnout on the other hand is characterised by high levels of exhaustion coupled with a loss of drive and ideals as it pertains to one’s job (Maslach, Schaufeli, & Leiter, 2001). It is a nuanced instance comprising exhaustion (feelings of tiredness and perception of severe resource overextension), cynicism (depersonalisation and negative reactions), and inefficacy (Maslach et al., 2001; Maslach, 2003). Burnout can lead to low levels of quality in terms of services, increased layoffs, and issues with morale, and truancy (Rowe, 1997), particularly significant in human services and healthcare.

Researchers have shifted focus from the burnout to employee engagement, aligning with of “positive psychology” emphasising human strengths. Work engagement is characterised by vigour, dedication signifies importance, eagerness, inspiration pride, and challenge, while absorption is being fully focused and happily immerse in one’s duty. Positive outcomes related to work engagement include work satisfaction, organisational commitment, and low turnover interest.

The Utrecht Work Engagement Scale (UWES) is widely used in literature, with its strength and applicability confirmed across various cultures. It consists of 17 items measured on a 4-item Likert-type scale, including three subscales: Vigor (6 items), dedication (5 items), and absorption (6 items). The UWES has been translated into several languages, attesting to its international acceptance.

### **1.1.3 Relationship between Personality Traits and Work Engagements**

The intricate interplay between personality traits and work engagement among employees and in this study the medical doctors, emerges as a critical aspect of understanding of professionals' dynamics. The Big Five Personality Traits, provide a comprehensive framework to explore

how individual differences in doctors' personalities may impact their level of work engagement. For instance, a doctor scoring high on conscientiousness is likely to demonstrate meticulousness and organizational skills in their medical practice, potentially translating into a heightened sense of dedication and absorption in their work. Conversely, a lower conscientiousness score may indicate a tendency towards laxity and disorganization, potentially affecting work engagement negatively. Moreover, the extraversion dimension may shed light on doctors' ability to socialize and collaborate, influencing their engagement levels in team-based healthcare settings. These insights can be instrumental in tailoring professional development initiatives at M.P Shah Hospital, fostering a work environment that aligns with individual personality traits to optimize work engagement.

Building on Kahn's (1990) conceptualization of work engagement as a holistic attachment to work roles, there is a present correlation between the various variables as the emotional, cognitive, and physical aspects of engagement are deeply intertwined with the personality traits exhibited by medical doctors. For instance, doctors scoring high on emotional stability within the neuroticism dimension may exhibit greater resilience and composed reactions to stress, positively impacting their work engagement by maintaining focus and effectiveness during challenging situations. Conversely, those with lower emotional stability may face challenges in maintaining sustained engagement due to heightened emotional reactions. This study utilized the Utrecht Work Engagement Scale (UWES) to quantitatively assess the dimensions of work engagement, namely vigor, dedication, and absorption, providing a standardized measure to examine the relationship between personality traits and work engagement among medical doctors at M.P Shah Hospital (Schaufeli & Bakker, 2010).

#### **1.1.4 Healthcare Sector in Kenya**

The healthcare system in Kenya is structured into public and private sectors, featuring six levels in the hierarchy. The highest tier, level 6, encompasses national referral hospitals (K.H. Sector, 2016). The Kenyan Master Facility List (MFL) serves as a comprehensive registry of officially registered health facilities in the country, totalling 9,696. Public sector ownerships accounts for 4,616 facilities, the commercial private sector manages 3,696, and Non-Governmental Organisations (NGOs), oversee 1,384. The distribution of health facilities illustrates that the Ministry of Health oversees 42.9 percent of the total facilities, while the private sector manages 37.8 percent (Kenya Master Health Facility List, 2020).

The public and private healthcare sectors represent distinct facets of the country's healthcare system, each characterized by unique service delivery models. The public healthcare sector, funded and administered by the government, aims to provide affordable and accessible healthcare services to a broad spectrum of the population. In contrast, the private healthcare sector, typified by institutions like M.P Shah Hospital, operates on a more commercial basis, relying on user fees and private funding. Service delivery in the public sector is often constrained by resource limitations, leading to challenges such as long waiting times, insufficient infrastructure, and shortages of medical personnel and equipment. In comparison, the private sector tends to offer a more streamlined and resource-rich environment, often featuring advanced medical technologies, shorter waiting times, and personalized care. However, the private sector's services come at a higher cost, limiting accessibility for certain socio-economic groups. While the public sector strives to cater to the needs of the majority, the private sector emphasizes efficiency and quality of care, creating a contrast in service delivery approaches between these two integral components of Kenya's healthcare system.

### **1.1.5 The M.P Shah Hospital**

Situated in the Parklands Area of Nairobi, the M.P Shah Hospital, stands as a distinguished level 5 private healthcare institution. With a rich history dating back to the 1930s when it was established as Parklands Nursing Home, the hospital has evolved into a modern 217-bed facility. Boasting a cadre of highly skilled specialists and a professional medical team, the M.P Shah Hospital has earned its reputation as one of the premier private hospitals in Kenya, celebrated for its exceptional standards and the delivery of high-quality services coupled with personalized care (Kamanda, 2016).

The organisation's dedication to excellence is expressed through its mission, which underscores the delivery of high-quality healthcare at reasonable rates, executed with the unparalleled passion and commitment Guided by fundamental values like respect teamwork, trust, competence, compassion, the hospital has consistently showcased its commitment to cultivating a positive and patient-conducive environments. Notably, the M.P Shah Hospital has been accorded national recognition and holds the esteemed ISO 9001:2015 quality management certification. In addition to its local acclaim, the hospital is affiliated with COSECSA (College of Surgeons of East Central and Southern Africa), an independent organisation. This affiliation reflects the M.P Shah Hospital's commitment to staying at the forefront of medical education and professional development (Wang'ondy, 2019).

Crucially, the institution places a significant emphasis on the continuous improvement of employee performance. The hospital recognizes that its staff, from medical specialists to support personnel, play a pivotal role in maintaining and enhancing service delivery. Regular training programs, skill development initiatives, and performance assessments are integral components of the hospital's approach to ensure that its workforce remains at the forefront of medical advancements. This commitment to ongoing professional growth aligns seamlessly with the hospital's overarching mission, creating a culture of excellence that permeates every facet of its operations. It extends its sphere of influence through various healthcare facilities, and in doing so, the hospital continues to set benchmarks for quality healthcare, emphasising not only on the physical infrastructure but also on the continuous refinement of its human capital to ensure unparalleled service delivery (Sheikh, 2014).

## **1.2 Problem Statement**

Efficient service delivery in a level 5 hospital, hinges on the exemplary performance of medical doctors who play a crucial role in patient care and overall healthcare outcomes (Essien, Anani & Amadi, 2023). If medical doctors are not adequately equipped for the demanding tasks or if their service delivery falls short of exceptional standards, it poses a significant problem (Gao & Wang, 2021). Suboptimal service delivery can lead to compromised patient care, medical errors, and a decline in overall hospital reputation. In a level 5 hospital, where complex medical cases are often addressed, any lapses in service delivery by medical doctors can have severe consequences, impacting not only the health and well-being of patients but also the hospital's standing within the healthcare community (Gao & Wang, 2021).

The work engagement of medical doctors is intricately linked to their personality traits, and any misfit between the two can adversely affect service delivery (Hamid & Shah, 2017). Personality traits influence how doctors approach their work, handle stress, and interact with patients and colleagues. If there is a mismatch between the demands of their job and their inherent personality traits, it may lead to decreased work engagement, burnout, and ultimately impact the quality of service they provide (Bakker, 2011). For instance, a doctor with a low level of extraversion may struggle with collaborative aspects of healthcare delivery, potentially affecting teamwork and patient care. Understanding these dynamics is essential for creating targeted interventions that align with the unique personalities of medical doctors, fostering a work environment conducive to high levels of engagement and exceptional service delivery.

In various international and local healthcare settings, instances of questionable service delivery by doctors have been documented, raising concerns about patient safety and overall healthcare quality. Misalignment between doctors' personality traits and work demands can lead to disengagement. For instance, introverted doctors in highly social environments might feel drained, potentially impacting patient interactions or team collaboration. This misfit can manifest in reduced empathy, professionalism, or decision-making quality, ultimately influencing service delivery (Duncan et al., 2023). Internationally, the UK's Mid Staffordshire NHS Foundation Trust scandal (2005-2009) exposed systematic neglect and poor care leading to hundreds of unnecessary deaths. In India, Fortis Hospital's (Gurgaon) 2017 case involved the death of a 7-year-old due to alleged medical negligence (Tiger, Dragon & Soans, 2018).

In the Kenyan context, there have been instances of service delivery challenges in various healthcare facilities, with concerns about inadequate staffing, resource constraints, and occasional reports of medical malpractice. The 2019 case of MP Shah Hospital in Nairobi, while complex, highlighted concerns about patient communication and informed consent practices (Sekah, 2019). These cases, though diverse, underscore the potential consequences of subpar service delivery. While M.P Shah Hospital is renowned for its commitment to quality healthcare, it is essential to continually assess and address any potential issues in service delivery to maintain its exceptional reputation within the Kenyan healthcare landscape.

The research undertaking was aimed at exploring the relationships between traits associated with personality and work engagement with doctors in the medical field M.P Shah Hospital. By investigating how doctors' personalities influence their level of engagement, the research sought to provide actionable insights for tailored interventions and strategies that addressed the unique challenges faced by healthcare professionals, ultimately fostering a more resilient and engaged workforce. The study was anchored in the belief that a better understanding of the interplay between personality traits and work engagement was imperative for enhancing the well-being of medical doctors and, by extension, improving patient outcomes at M.P Shah Hospital.

### **1.3 Research Objectives**

#### **1.3.1 Broad Objective**

To assess the relationship between personality traits and work engagement in medical doctors at M.P Shah Hospital.

### 1.3.2 Specific Objectives

- i. To assess the effect of openness on work engagement among medical doctors at M.P Shah.
- ii. To establish the effect of conscientiousness on work engagement among medical doctors at M.P Shah.
- iii. To determine the effect of extraversion on work engagement among medical doctors at M.P Shah.
- iv. To determine the effect of agreeableness on work engagement among medical doctors at M.P Shah.
- v. To determine the influence of neuroticism on work engagement among medical doctors at M.P Shah.

### 1.4 Research Questions

- i. What are the effect of openness on work engagement among medical doctors at M.P Shah Hospital?
- ii. What is the the effect of conscientiousness on work engagement among medical doctors at M.P Shah Hospital?
- iii. What is the effect of extraversion on work engagement among medical doctors at M.P Shah Hospital?
- iv. What is the effect of agreeableness on work engagement among medical doctors at M.P Shah Hospital?
- v. What is the influence of neuroticism on work engagement among medical doctors at M.P Shah Hospital?

### 1.5 Study Scope

The study focused on examining the relationship between the five well-established personality dimensions, known as OCEAN (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism), and work engagement in licensed medical doctors at M.P Shah Hospital. Notably, the recently recognized sixth personality dimension referred to as the 'H factor,' associated with Honesty-Humility, was excluded from the assessment due to its more recent identification and the limitation of the assessment tool, which only measures the traditional OCEAN dimensions. The research utilised the Utrecht Work Engagement Scale to gauge work engagement among participants. Data collection was undertaken in May 2023, with a sample size of 62 medical doctors chosen from M.P Shah Hospital, a strategic selection owing to its status as a teaching hospital and the diverse range of specialists it accommodated. This

approach aimed to provide valuable cognisance of the intricate interplay that lies between personality quirks and work engagement specific to the medical context.

## **1.6 Study Significance**

### **1.6.1 Contribution to Academic Knowledge and Future Research**

This research undertaking presents an opportune instance where the contribution to academic understanding of the correlation between personality and work engagement and aiming to enrich the prevailing body of knowledge in this field of expertise. By delving into the intricacies of how personality traits impact the work engagement of medical professionals, the research sets the stage for future scholars to explore the dimensions within this interdisciplinary domain. The findings of this study were poised to open avenues for additional research, providing academicians with a foundation to further investigate and refine theories related to personality traits and work engagement.

### **1.6.2 Implications for Policymakers in Healthcare Organizations**

For policymakers and human resource departments in healthcare organizations, the insights garnered from this study offer a valuable resource for refining and formulating policies that foster an environment conducive to high levels of work engagement and low instances of burnout among medical professionals. The study emphasizes the importance of job resources, such as performance feedback, in stimulating personal growth and learning. Policymakers can leverage these findings to implement strategies that optimize working conditions, ultimately enhancing the overall well-being and job satisfaction of medical professionals, leading to improved healthcare service delivery.

### **1.6.3 Empowering Medical Doctors for Enhanced Performance**

Medical doctors can avail utility significantly from the findings of this study, gaining insights into how their personality traits can influence work engagement and, subsequently, impact the quality of patient care. Recognising the role of attributes associated with personality in preventing medical errors, the study underscores the importance of cultivating an environment that promotes quick feedback, rewards, and appreciation, alongside encouraging continuous learning and personal growth. The awareness of one's own traits enables doctors to be more observant of their colleagues' traits, fostering adaptability and better collaboration. This heightened understanding can contribute to enhanced efficiency and effectiveness in the workplace, ultimately improving the quality of services rendered to patients and elevating the overall quality of life for medical professionals.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

Past research that is relevant to the study was reviewed in this chapter. This section discussed theoretical review which the study was embedded in, conclusions based on the undertaking's end goal and the work of other authors. Finally, the chapter addressed the conceptual framework and summarized the study's predicted interaction between the variables.

### **2.2 Theoretical Review**

This section of the research undertaking delved into the theories pertinent to the research. It plays a crucial role in enhancing comprehension of the research question while also providing rationale for the present study.

#### **2.2.1 The Big Five Personality Traits Theory**

The Big Five Personality Traits Theory, formulated by Costa and McCrae (1985), posits that personality can be categorized into five broad dimensions: (OCEAN). According to this theory, each individual falls along a spectrum within each dimension, influencing their behaviours, thoughts, and emotions (Costa & McCrae, 1985).

The theory indicates that these personality traits significantly impact how individuals' approach and engage with their work, potentially influencing job performance, satisfaction, and interpersonal relationships. Concerning research objectives, the Big Five Theory corresponds with the study's objectives to evaluate the connection between personality traits and work engagement among medical doctors at M.P Shah Hospital. The individual objectives, including examining the impact of openness, conscientiousness, extraversion, agreeableness, and neuroticism on work engagement, directly stem from the dimensions outlined in the Big Five Personality Traits Theory as indicated in Table 2.1.

Critics of the Big Five Personality Traits Theory argue that its comprehensive approach may oversimplify the complex nature of human personality by reducing it to only five dimensions. One major criticism is the theory's potential lack of cultural universality, as the traits identified may not capture the diversity and variations in personality expressions across different cultural contexts (Cherry, 2022). Additionally, critics contend that the theory may neglect important facets of personality that could significantly impact behavior and work engagement. The static nature of the five traits, which implies stability over time, is also contested, as some argue that personality is more dynamic and subject to change due to various life experiences.

Furthermore, the Big Five's reliance on self-report measures raises concerns about the accuracy of individuals' self-perceptions, potentially introducing biases into the assessment. Despite its widespread acceptance, these critiques highlight the need for a better understanding of personality beyond the constraints of the Big Five Personality Traits Theory (Yang and Hwang, 2014).

**Table 2. 1: Summary of the OCEAN Personality Test**

<b>Personality Trait</b>	<b>Meaning</b>	<b>High score</b>	<b>Low score</b>
<b>Conscientiousness</b>	Describes a meticulous, detail-oriented personality.	<ul style="list-style-type: none"> <li>- Very well organized.</li> <li>- Arrive at school or work prepared.</li> <li>- Driven to achieve goals</li> <li>- Are tenacious</li> </ul>	<ul style="list-style-type: none"> <li>- Not well organized</li> <li>- Their completion of tasks is less structured.</li> <li>- Accept things as they come</li> <li>- Completing tasks at the last minute</li> <li>- Are impulsive</li> </ul>
<b>Agreeableness</b>	The urge to make things work smoothly.	<ul style="list-style-type: none"> <li>- Are stubborn</li> <li>- Forgiving mistakes is difficult</li> <li>- Are self-absorbed/centered</li> <li>- Their compassion for others is less.</li> </ul>	<ul style="list-style-type: none"> <li>- Feel vulnerable or insecure often</li> <li>- Easily become stressed</li> <li>- Difficult situations make one struggle</li> <li>- Have a more stable mood</li> </ul>
<b>Openness</b>	Have curiosity in learning about the world and others.	<ul style="list-style-type: none"> <li>- Find pleasure in trying new things.</li> <li>- Are more creative</li> <li>- Their imagination is good.</li> <li>- Are willing to put into consideration of new ideas.</li> </ul>	<ul style="list-style-type: none"> <li>- Prefer familiar ways of carrying out tasks.</li> <li>- Rigid to change</li> <li>- Thinking is more traditional.</li> </ul>
<b>Extraversion</b>	Energy is drawn from interactions of social nature.	<ul style="list-style-type: none"> <li>- Looking for thrills or adventure</li> <li>- Easy to make acquaintances/friends</li> <li>- Speak without much thought into it</li> <li>- Find enjoyment/pleasure by being active with others.</li> </ul>	<ul style="list-style-type: none"> <li>- Find it difficult to have small talk or introducing oneself</li> <li>- Socializing wears oneself.</li> <li>- Don't like being in a group that is large.</li> <li>- Tend to be more reserved</li> </ul>
<b>Neuroticism</b>	An inclination of having unsettling feelings and thoughts.	<ul style="list-style-type: none"> <li>- Feeling vulnerable or insecure on a regular basis</li> <li>- Easily becomes stressed</li> </ul>	<ul style="list-style-type: none"> <li>- At peace in situations that are stressful.</li> <li>- Quite optimistic</li> </ul>

		<ul style="list-style-type: none"> <li>- Find it difficult to cope with difficult situations</li> <li>- Experience mood swings</li> </ul>	<ul style="list-style-type: none"> <li>- Worry less</li> <li>- Their mood is more stable.</li> </ul>
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Source: Healthline, (2019)

### 2.2.2 Kahn’s Theory of Work Engagement

The postulation was posited by William A. Kahn in 1990, It focused on the psychological and emotional aspects of the workplace and the interplay with factors pertaining to employee engagement, proposed a comprehensive framework for understanding the psychological and emotional aspects of engagement in the workplace. Unlike traditional views that primarily focus on the completion of tasks and job roles, Kahn's theory delves into the subjective and personal dimensions of an individual's connection to their work. According to Kahn, engagement involves the investment of three core dimensions: physical, cognitive, and emotional energies.

It suggests that individuals who are fully engaged not only perform their tasks as required (physical energy) but also bring their complete cognitive abilities to their roles, investing their attention, focus, and thinking in their work (cognitive energy). Furthermore, engagement in work is characterized by emotional connection, where individuals experience a genuine emotional involvement and connection with their tasks, colleagues, and the overall work environment. Kahn's theory emphasizes the importance of individuals feeling valued, understood, and supported in their roles, fostering a sense of personal significance and meaningfulness in their work. This emotional and cognitive investment, according to Kahn, leads to higher job satisfaction, increased commitment, and improved overall well-being for employees (Alexander & Schnipke, 2020).

This postulation is particularly underpinned to the study's objectives as it highlights the emotional and cognitive dimensions of work engagement. For instance, when exploring the effect of conscientiousness on work engagement, Kahn's theory suggests that individuals high in conscientiousness may exhibit a stronger investment of cognitive energies in their roles, potentially influencing their level of work engagement.

## **2.3 Empirical Review**

This section summarized past research based on the specific objectives of the study. Gaps were illuminated through these studies, which this study aimed to answer.

### **2.3.1 Personality Traits and Medical Doctors**

Hau & Bing (2018) delved into the staff in the academic field in private universities in Perak, Malaysia and the connection between Norman's five traits and work engagement. Using a quantitative approach with a sample of 102 respondents from selected private universities, the study employed a biographical questionnaire, the NEO-FFI-3, and the UWES to collect demographic data, assess personality traits, and measure work engagement, respectively. Utilising PLS structural modelling the research ascertained that it did exert a substantial positive influence. The study offered potential implications for government and private universities in the country. In relation to the current study, this research served as a relevant reference due to its exploration of the relationship between personality traits and work engagement in an academic context, potentially contributing to the understanding of similar dynamics in the healthcare setting. However, a gap exists in the transferability of findings from the academic sector to the medical field, necessitating a specific investigation within the healthcare domain, such as the present study at M.P Shah Hospital.

In 2018, Mullola et al. conducted a study exploring the impact of personality traits on the career choices of 2,837 Finnish physicians. The investigation focused on factors such as employment sector, clinical patient contact, specialty preferences, and changes in specialty. The findings indicated that specific personality traits were linked to physicians' career and specialty decisions. Among these traits, openness emerged as the most consistently associated personality trait with physicians' choices, influencing decisions related to the employment sector, speciality preference, and changes in speciality.

In Russia, Bogacheva, Kornilova, and Pavlova (2019) conducted research undertaking to investigate connections between medical doctors' personality quirks and their perception of professional risks. The primary end goal was to explore cognitive representation of risks which refer to individuals' mental images risky situations, potential outcomes, and alternative decisions. The study involved a sample of 64 practicing doctors who completed questionnaires. While no significant differences were observed between genders as it pertains to axdoctors, the data revealed that, on average, women tended to perceive risks more significantly than men.

The scholars this arrived at the conclusion that associations between traits associated with personality and the individual cognitive evaluations of diverse risks within a doctor's professional endeavours were identified.

Stienen et al. (2016) discovered that board-certified physicians demonstrated higher scores in conscientiousness, extraversion, and agreeableness, while scoring lower on neuroticism. The study involved 2,345 board-certified physicians, 1,453 residents, and 1,350 medical students who provided the necessary data. The findings pointed towards the presence of a distinctive and consistently average 'physician personality'. This conclusion stemmed from a cross-sectional observational study that examined various yet matching identity attributes among the research population.

Nawaiseh et al. (2020) conducted a study on the correlation between identity idiosyncrasies and specialty preferences among medical students in Jordan. This cross-sectional study involved students at the latter stages of their education, along with post-graduate internships from 5 universities in Jordan. The process of acquiring data was done through a survey that was administered through the use of online resources. The findings indicated that students opting for clinical specialties and those aspiring to be practicing doctors exhibited higher levels of extraversion and conscientiousness. Additionally, graduates in the medical field from Jordan, characterised by decreased negative emotions, expressed a preference for becoming practicing clinicians.

Aswegen et al. (2018) explored the relationship between personality factors and the choice of consulting specialty among doctors in Bloemfontein, South Africa. The study collected data from 58 consultants and senior registrars in the departments of Family Medicine, Paediatrics, and Internal Medicine. The conclusions derived from the culmination of this investigation indicate, that on the whole, the consulting group exhibited lower levels in impulsive sensation seeking, aggression-hostility, sociability, and activity compared to the surgical group. In contrast they demonstrated higher levels of neuroticism-anxiety.

Daniel Ganu (2014) explored the personality traits on satisfaction with current employment and organisational loyalty over the long run among healthcare professionals in Kenya, utilising a correlational descriptive study design. Two hundred and fifty tow healthcare workers answered questionnaires, where doctors, nurses, pharmacists, and lab tech made up the population. The completion of the study laid it bare that associations between openness,

conscientiousness, and neuroticism with organisational loyalty The research undertaking to investigate and, in its completion, ascertain the connection if any, between traits associated with personality and licensed medical doctors in Kenya.

### **2.3.2 Work Engagement and Medical Doctors**

Torabinia, Mahmoudi, Mahmoudi and Mahmoudi (2015) conducted a study on nurses in Iran, where the Utrecht Work Engagement Scale was examined under a psychometric lense. The research comprised 34males and 248 females with expertise in this field ranging from 6 months to 30 years. The completion of the research undertaking laid bare the negative association between engagement and burnout and overtime, while a positive correlation was observed with age and job experience.

In 2020, Zhang et al. conducted research undertaking in China among doctors in villages such as the implications of the satisfaction with their jobs, fortitude, and engagement on an employee level on the intention to leave employment. The study, based on a quantitative approach with a self-administered questionnaire, included a sample size of two thousand six hundred and ninety-three from one thousand three hundred and forty-five rural clinics in Shandong province, China. The findings showed that turnover intention was affected antagonistically by the instances of work engagement within the organisation.

Mahfouz, Ewis, and Seedhom (2017) explored the effects of engaging employees among healthcare providers in hospitals in Minia city, Egypt. The study, with a sample of two hundred and eighty medical practitioners' hospitals three in particular, used a self-administered questionnaire to measure engagement. The research undertaking thus conclusively established a substantial association between engagement and working duration and shift hours.

Scott, Hogden, Taylor, and Mauldon (2022) carried out a study investigating the empirical implications of employee engagement and the safety of patients in Australia. Articles, 3,693, in total were chosen of which 15 were made of use in the final review. The research undertaking established an overall positive association between workforce engagement and the safety of the patients but the magnitude of this association differed depending on context. Researchers also highlighted anecdotal accounts suggesting that the improvement of workforce engagement could contribute to the assured safety of the patients.

In order to explore the implications of the development of the career on the engagement of the workforce in the sector of health particularly the public in Kenya, Muchibi, Mutua, and Juma (2022) conducted a descriptive research design. The study, guided by positivism philosophy and the deductive method, targeted with a sample size of 342 respondents, including 35 doctors and 307 nurses. The results concluded that low or no career development for nurses and doctors within the public health sector would decrease their engagement levels. The study recommended adopting career management policies for equal learning opportunities and providing management support through scholarships.

Kangure (2014) focused on the association between the balance between work and life and the employee engagement within Kenyan State corporations. The researchers gathered information from thirty thousand eight hundred and forty employees in 197 corporations owned by the state. Out of 434 valid responses, the structured questionnaire revealed that workplace policy, positively contributed to employee engagement. The research concluded that work-life balance significantly predicted employee engagement.

Njuki, Nzulwa, and Kwena (2017) investigated the determinants of employee engagement in Nairobi Women's Hospital, Kenya. Employing a descriptive research design, the study targeted managerial and non-managerial staff (350 employees). The sample size of 97 employees utilized questionnaires, showing a substantial and positive association between independent variables and the engagement of employees in Kenya. The conclusion especially emphasised the positive implications of rewards on the engagement of the workforce.

### **2.3.3 Personality Traits and Work Engagement**

In 2017, Renée A. Scheepers conducted a study in the Netherlands examining explored the facilitation of physicians' professional output in both doctor and mentor roles through the engagement of the workforce, examining thus how it is influenced by job resources and personality traits. The researchers went about this by conducting a systematic review of the implications of physicians experiencing the engagement of their life's work as well as related constructs such as job satisfaction on output and care in the context of the patients they treat. The conclusion the research revealed that work engagement was linked to fewer medical constraints as well as errors, while satisfaction with current employment conditions was positively associated improved and seamless communication and patient satisfaction. Moreover, personality trait conscientiousness (e.g., responsibility) was identified as likely

supporting physician work engagement. The recommendation highlighted that hospitals could augment physician work engagement for optimal performance in residency training and patient care by implementing worker health surveillance, providing peer support, and promoting job crafting at the individual or team level.

Tisu et al. (2020) aimed to explore the simultaneous associations of individual differences with work engagement, job performance, and mental health while investigating mediating variables. The study proposed a model incorporating predictors of work engagement, subsequently influencing employees' job performance and mental health. With a sample of 365 Romanian workers, the authors utilized structural equation modelling to test their proposed model. The outcomes provided partial support for their hypotheses, revealing that personality characteristics were linked to work engagement, which, in turn, predicted job performance and mental health. This research presents an assessment into the correlation between character attributes, work engagement, and job-related outcomes, offering insights into potential mediating factors within the healthcare context.

Scheepers, Arah, Heineman, and Lombarts (2016) examined the implications of personality traits of clinician-supervisors engagement in terms of employment and subsequent mentoring performance in residency training. Utilising these three inputs the study encompassed involved 61 diverse training programs across 18 medical centres in Holland. The conclusion of this research undertaking established that supervisor with conscientious, extraverted, and agreeable personality quirks displayed higher engagement with the workforce especially in mentoring enhancing their effectiveness in residency training. Inferred from the conclusion the researchers recommended the customisation of the work environment, faculty development, planning out careers to align with the unique personality traits of the supervisors.

Wildermuth (2008) conducted a research undertaking investigating the correlation between character attributes and engagement among human services professionals and paraprofessionals. A survey. Combining the FFM and Kahn's model questions, were electronically distributed to 890 human service professionals, resulting in 420 surveys being returned. The results revealed that two personality traits, extraversion and conscientiousness, were identified of notable predictors of engagement, demonstrating a positive correlation with it. Notably, the need for stability exhibited a negative correlation with engagement but was not considered as a predictor. It's important to note that this study specifically focused on licensed doctors within the Kenyan Medical context.

## 2.4 Summary of Empirical Studies and Gaps

**Table 2. 2: A Summary of Empirical Studies and Gaps**

Specific Objective	Author	Topic	Findings	Research Gap
a) <b>Personality traits and medical doctors</b>	Mullola et al. (2000)	Exploring the relationship between physicians' personality traits and the decisions as it pertains to careers in Finland.	Consistently, physicians' career decisions were most likely linked to the personality trait of openness.	The study was done in Finland. This study was done in Kenya.
	Bogacheva, Kornilova and Pavlova (2019)	Associations between personality traits of medical doctors and their perception of professional risks	The research undertaken determined associations between personality attributes and the subjective cognitive assessments of various risks in the professional activities of doctors	The study took place in Russia, while this study took place in Kenya.
	Stienen et al. (2016)	Distinct yet comparable. The personality attributes of surgeons and internists were examined, revealing insights from a cross-sectional survey	The conclusions suggested the presence of a unique and consistently average 'physician personality'	The study was conducted in other countries on surgeons and interns. This study focused on the Kenyan medical doctors including doctors of other specialties.

	Nawaiseh et al. (2020)	The link between personality attributes and the preference for medical specialties among scholars in Jordan was explored, unveiling pertinent insights.	Individuals who opted from clinical specialties and those aspiring to become practicing doctors demonstrated higher levels of extraversion and conscientiousness.	The study took place in Kenya and focused on medical doctors whereas this study was carried out in Jordan on medical students.
	Aswegen et al. (2018)	Investigating the correlation between personality factors and the chosen consulting speciality among doctors in Bloemfontein, South Africa	The consulting group displayed lower scores compared to the surgical group in impulsive sensation seeking. Conversely, they exhibited higher scores for neuroticism-anxiety	The research was done in South Africa, while this study was carried out in Kenya.
	Daniel Ganu (2014)	Impact of the Big Five Character attribute on satisfaction with current employment and organisational commitment among healthcare professionals: A study in Kenya	Openness, conscientiousness, and neuroticism demonstrated a positive correlation with organisational commitment, while extraversion and neuroticism also exhibited a positive correlation with satisfaction with prevailing employment	The study population included nurses, laboratory technicians and Pharmacists while this study focused on licensed medical doctors.

b) <b>Work engagement and medical doctors</b>	Torabinia, Mahmoudi, Mahmoudi and Mahmoudi (2015)	Examining nurse engagement assessing the psychometric properties of the Utrecht Engagement scale in Persia	Indicated that engagement exhibited a negative correlation with burnout and monthly overtime, while demonstrating a positive association with age and job expertise	The study population consisted of nurses from the Iran while this study focused on Kenyan medical doctors
	Zhang et al. (2020)	Explore the implications of satisfaction with employment, fortitude and engagement in the workplace on being fired among doctors in villages through a cross-sectional study	Found that work engagement had a direct negative implication on turnover intention, highlighting the early and influential role on the satisfaction with employment, resilience, and engagement for employees particularly among doctors.	Study context was the Chinese doctors as opposed to the Kenyan medical doctors
	Mahfouz, Ewis and Seedhom (2017)	Study the workforce engagement among healthcare providers in hospitals of Minia city.	A substantial correlation was established: the engagement of healthcare providers	The research took place in Egypt while this study was done in Kenya.
	Scott, Hogden, Taylor and Mauldon (2022)	Exploring the impact of employee engagement on patient safety in Australia, the study reviewed 15 articles, identifying a positive correlation between employee	There appeared to be a positive correlation between employee engagement and patient safety.	The research was done in Egypt, as opposed to Kenya for this study.

		engagement and patient safety.		
	Muchibi, Mutua and Juma (2022)	Influence of career development on employee engagement in the public health sector in Kenya.	The research undertaking concludes that when career development is low or not provided to medical actioners within the public health care sector, their engagement level will decrease	The target population included nurses and the study focused on career development. This study focused on medical doctors and their personality traits in relation to work engagement.
	Kangure (2014)	The correlation between work-life balance and engagement of the workforce in State corporations in Kenya	The research undertaking found out that workplace policy, supervisor support, co-worker support, and corporate culture contribute positively to employee engagement.	The study focused on the corporate sector while this study focused on the healthcare sector.
	Njuki, Nzulwa and Kwena (2017)	Factors influencing Nairobi's Women Hospital a case study to assess the engagement of its workforce	The independent variable displayed a significant negative correlation adversely affecting the engagement of the employees	The target population was managerial and non-managerial staff. This study focused on medical doctors and their relationship to character attributes and work engagement.

c) <b>Personality traits and work engagement</b>	Renée A. Scheepers (2017)	Physicians' professional performance: an occupational health psychology perspective	<p>Physician work engagement correlated with a decrease in medical linked to improved communication and higher levels of patient satisfaction</p> <p>Independence and opportunities from learning exhibited aa positive correlation with the work engagement of physicians</p> <p>The work engagement of physicians was predominantly bolstered by the personality trait of conscientiousness</p>	The study was conducted in Netherlands while this study was done in Kenya.
	Scheepers, Arah, Heineman and Lombarts (2016)	Explored the implications of personality traits on clinician-supervisors' work engagement and consequently, their teaching performance in residency training	The results indicated that conscientious, extraverted, and agreeable supervisors demonstrated more engagement with their teaching, making them more likely to deliver adequate residency training.	This study location was Netherlands. This study was done in Kenya
	Wildermuth (2008)	Engaged to serve: the relationship between employee engagement and the personality of human services professionals and paraprofessionals	Results showed that two personality traits were significant predictors of engagement: extraversion and consolidation and these two traits	The study was done in the USA and focused on the social services sector while this study focused on the Kenyan

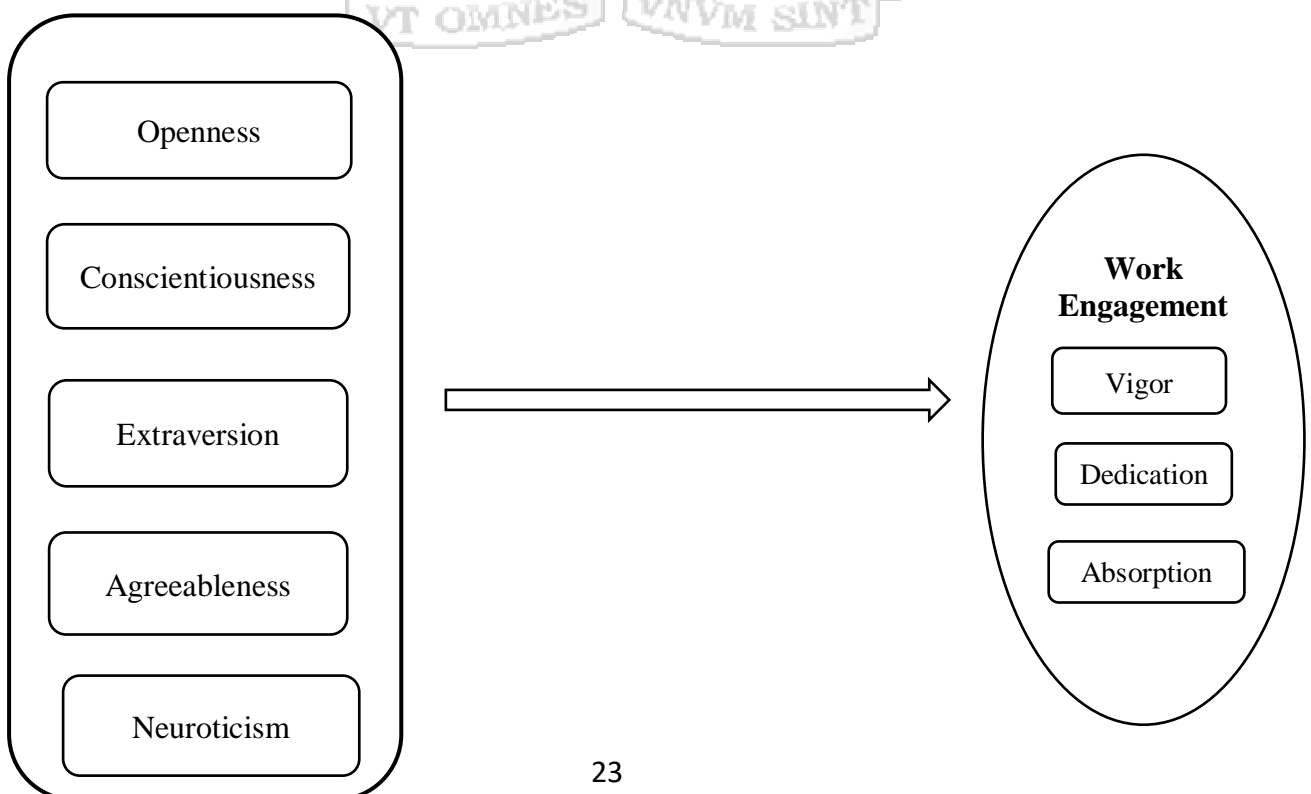
			were also positively correlated with engagement.	healthcare sector.
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## 2.5 Conceptual Framework

This theoretical/conceptual framework was formulated to explore the correlation between engagement of the workforce and the character attributes of medical doctors. Personality affects all aspects of our lives; it also affects who we are and how we respond to life’s challenges (Smith, Dennis, Masthoff & Tintarev, 2019). The assumption is that this will in turn impact the work engagement of medical doctors. An online questionnaire served as an extraction tool for data. On a scale of 1 to 5, one was asked to disagree or agree with each phrase. The answers reflected where one fell on the scale for each trait based on the responses. An example was one having high scores in conscientiousness and low in extraversion for personality traits.

A validated work engagement tool will help identify opportunities for improvement at the workplace. It will ensure holistic development of employees and enhance the human resource decision-making process that will help achieve work goals, stimulate personal development and help cope with demands. A questionnaire was used to extract the data and a correlation was made with the results for personality traits.

**Figure 2. 1: Conceptual Framework of Personality Traits and Work Engagement**



## 2.6 Operationalization of the Study Variables

Figure 2.1 illustrates the implications of character attributes on the variables of work engagement: vigour, dedication, and absorption. The theory is to prove that an association is present between engagement of the work =force and character traits however, further research is needed to test and refine this model. The operationalization of these study variables has also been enhanced in Table 2.2.

**Table 2. 3: Operationalization of Study Variables**

Variable	Type of Variable	Constructs	Measurement	Source
Openness	Independent Variable	<ul style="list-style-type: none"> <li>- Creativity and Imagination</li> <li>- Appreciation for Aesthetics</li> <li>- Curiosity and Intellectual Interest</li> </ul>	5 Point Likert Scale	Cherry, (2022)
Conscientiousness	Independent Variable	<ul style="list-style-type: none"> <li>- Organization and Planning</li> <li>- Responsibility</li> <li>- Attention to Detail</li> </ul>	5 Point Likert Scale	Cherry, (2022)
Extraversion	Independent Variable	<ul style="list-style-type: none"> <li>- Sociability and Interpersonal Skills</li> <li>- Energetic and Enthusiastic</li> <li>- Assertiveness and Confidence</li> </ul>	5 Point Likert Scale	Cherry, (2022)
Agreeableness	Independent Variable	<ul style="list-style-type: none"> <li>- Empathy and Compassion</li> <li>- Cooperation and Teamwork</li> <li>- Tolerance and Patience</li> </ul>	5 Point Likert Scale	Cherry, (2022)
Neuroticism	Independent Variable	<ul style="list-style-type: none"> <li>- Emotional Stability</li> <li>- Anxiety and Worry</li> <li>- Mood Swings</li> </ul>	5 Point Likert Scale	Cherry, (2022)
Work Engagement	Dependent Variable	<ul style="list-style-type: none"> <li>- Vigor</li> <li>- Dedication</li> <li>- Absorption</li> </ul>	5 Point Likert Scale	Cherry, (2022)

Source: Author, (2024)

## 2.7 Summary

The study was anchored on the trait theory of personality that was originally discovered by Allport and eventually developed by Norman. The Big Five personality traits are the most widely used and validated, however, it has also faced some criticisms as well. Relevant past research that this study looked at proves that work engagement was influenced by personality traits positively or negatively.



## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Introduction**

In this chapter, the research methodology was presented, addressing the study objectives. The chapter covered the research design, target population, sample size determination, sampling methods, data collection methods, data analysis techniques, and ethical considerations.

### **3.2 Research Philosophy**

Research philosophy pertains to a set of beliefs concerning the collection, analysis, and interpretation of data in a study to derive meaningful inferences (Creswell & Clark, 2011). Pragmatism, interpretivism and positivism are some of the philosophies that could be used for this study. The study embraced the positivism philosophy, asserting that reality is a tangible entity that can be objectively gauged through the observational and experimental methodologies (Kielmann, Cataldo & Seeley, 2011).

### **3.3 Research Design**

Research design encompasses the strategies or approaches employed by a study to gather, measure, and analyse data (Kumar, 2018). It delineates the steps taken throughout the research process. Research undertakings can take the form of different research designs such as explanatory design, descriptive, longitudinal and case study design, among others.

A descriptive cross-sectional design was used in this study. This kind of study design entails studying the population's proportion that is representative of the population, at one point in time. The researchers aimed to capture a snapshot of the relationship between the study variables at a specific point in time. The study assessed a sample of medical doctors at MP SHAH Hospital at a single time point, collecting data on their personality traits and work engagement without manipulating any variables. The research design was considered to be the most effective approaches for doing human research since it provided for real-time data through use of surveys to collect data as well as identification of patterns, tendencies and variations among the doctors, and hence showing the comprehensive overview of personality traits and work engagement in the context of MP SHAH Hospital.

### **3.4 Population of the Study**

The study targeted medical doctors at M.P Shah Hospital. This particular group was chosen because they have always had challenging working conditions compared to workers in other

sectors. Their profession entails dealing with very stressful and emotional events like caring for the sick, witnessing human pain and death among many others.

There are 62 medical doctors currently working in M.P Shah as of March 2023. It is home to a variety of highly skilled and experienced specialists and professional medical staff.

### **3.5 Sampling Technique**

The study employed a case study, where there were only 62 medical doctors. The study therefore targeted all the 62 medical doctors, and therefore a census study was undertaken.

### **3.6 Inclusion criteria**

The study included licensed practicing medical doctors working at The M.P Shah hospital at the time of the study, who consented to participate in the study. They were general practitioners or residents or qualified consultants currently working at M.P Shah hospital.

### **3.7 Exclusion criteria**

Exclusion criteria for the study involved medical professionals who did not meet the inclusion criteria mentioned above. This included individuals who were not licensed practicing medical doctors at M.P Shah Hospital during the study period, those who did not provide consent to participate in the research, and individuals outside the specified roles of general practitioners, residents, or qualified consultants actively working at M.P Shah Hospital. Additionally, any medical doctors who were on leave or not actively practicing at M.P Shah Hospital during the study period were excluded from the research.

### **3.8 Data Collection Methods and Procedure**

An online adopted questionnaire was used to collect primary data (Schaufeli & Bakker, 2014).. The single questionnaire was divided into two parts: personality traits and work engagement. The questions comprised of background questions and ranking scale questions. Five-point Likert scales were used, with 1 representing strongly disagree and 5 being strongly agree. For inversely phrased items, 1 indicated strong agreement and 5 indicated strong disagreement.

### **3.9 Research Quality Standards**

#### **3.9.1 Validity**

Validity, according to Kumar (2011) is defined as the degree to which the designed questions or contents of the questionnaire tool accurately describe the instrument's precision. The

primary aim of this is to ensure validity is a guarantee that the questions are adequately formulated to measure the research objectives. Validity can take the form of face validity, content validity, and criterion validity. However, for this research undertaking, content validity was chosen. The researchers established the validity of the research instruments by seeking input from experts in this field of expertise including the research supervisors, quality experts, and lecturers (Cresswell & Plano Clark, 2011). These experts critically analysed the instrument and affirmed its adequacy and validity for collecting data to address the study objectives, thereby ensuring both face and content validity. Insights from those experts facilitated necessary revisions and modifications to enhance the accuracy of the questionnaire tool.

The personality assessment tool is based on the Big Five factors formulated by Costa and McCrae (1992), encompassing five dimensions and a total of 50 items. The scores range from 0 to 40, where a higher average score indicates a greater likelihood that the respondent or participant possesses a specific personality trait.

The UWES scale characterised by acceptable psychometric properties and comprises three engagement subscales, vigour (6 items), dedication (5 items) and absorption (6 items). The total engagement score is obtained by summing all items. The items are rated on a 7-point scale. Ranging from never to always. The average scores for each subscale item are calculated by adding the item scores and then dividing by the number of items in each subscale. Consequently, the potential range for each subscale and the total score is 0-6. Higher scores indicate higher levels of engagement. The UWES scores are categorised as very low, low, average, high, and very high. This classification aligns with the engagement scores derived from an international sample. As per the designers' guideline, scores below 3.07 are considered indicative of low work engagement (Torabian, Mahmoudi, Dolatshahi, and Abyaz, 2017).

To ensure the reliability and accuracy of the measurement tool, a pilot study involving 10% of the sampled population, approximately 7 participants, was conducted. Medical doctors from various hospitals participated in the pilot study, employing a purposive technique. The feedback obtained from the pilot study played a crucial role in refining the measurement tool for increased precision and consistency.

### **3.9.2 Reliability**

The researchers guaranteed the reliability of the instruments, assessing how consistently the designed data collection tool produces the same results when used repeatedly in the study or in other studies resembling the current one. Reliability, in this context, can manifest as the test-retest reliability, internal consistency and inter-rater reliability using the test-retest reliability was utilised (Cresswell & Clark, 2011)

So as to enhance the reliability of the instrument, pilot member-checking procedures were implemented to obtain objective opinions on the effectiveness of question design (Kombo & Tromp, 2011). This process aimed to ensure that the questions in the questionnaire were designed in a manner that was clear to respondents, avoiding biases, leading questions, and any other potential ambiguity (Kothari, 2012).

The overarching goal was to maintain consistency and alignment of the questionnaire questions with the study objectives.

### **3.10 Data Analysis and Presentation**

The study conducted quantitative analysis, focusing on numerical data to measure differences between groups, assess relationships between variables, and rigorously test hypotheses. This approach was employed to investigate the relationship between personality traits and work engagement among medical doctors practicing at the M.P Shah Hospital.

Data was checked for completeness and free of error prior to entry into the Statistical Package for Social Sciences version 24.0 for analysis. The characteristics of the participants, which included the demographic information, were analyzed and presented as frequencies and percentages for categorical data, and as means with standard deviation for continuous data. The pattern of personality traits and the work engagement of the medical doctors were analyzed and presented as frequencies and proportions. The association between personality traits and work engagement was assessed by the use of analysis of variance (ANOVA) test. Statistical significance was considered where the p-value < 0.05.

### **3.11 Ethical Clearance and Approval**

Prior to initiating the actual field study, the researcher sought ethical approval from the Strathmore University Ethics and Review Committee. In the consent from, the researcher

provided a comprehensive explanation of the study's purpose to the participants, outlining the associated benefits and risks. Each participant had the autonomy to decide whether to participate or decline, and they could withdraw said consent when they deem it fit.

In summary, the consent form included details such as the researcher's name and contact information for any further queries, the research undertaking's purpose, assurances of confidentiality and participant anonymity, and emphasis on voluntary participation. The study obtained necessary permissions from M.P Shah hospital, the university ethics department and the National Commission for Science, Technology, and Innovation research permit to proceed with the research.



## CHAPTER 4: ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

### 4.1 Introduction

The results of the study were presented in this chapter whose broad objective was to assess the relationship between personality traits and work engagement in medical doctors at the M.P. Shah Hospital. A total of 62 doctors were interviewed. This chapter presented the socio-demographic characteristics of the study participants, the descriptive statistics in relation to the variables of the study, correlation analysis results and regression analysis results. The chapter summary is also included.

### 4.2 Socio-Demographic Characteristics

The majority of the study participants were aged between 28 to 38 years (85.5%), were male (67.7%), and were residents (62.9%). For participants that were residents, majority were in year 5 (14.5%) of the study. The results are shown in Table 1.

**Table 4. 1: Socio-demographic characteristics of the study participants**

	Frequency ( <i>n</i> =62)	Percent
<b>Age in years</b>		
18 – 27	1	1.6
28 – 38	53	85.5
38 – 47	6	9.7
≥48	2	3.2
<b>Sex</b>		
Male	42	67.7
Female	20	32.3
<b>Speciality</b>		
General practitioner	9	14.5
Consultant	14	22.6
Resident	39	62.9
<b>Year of study</b>		
1	8	12.9
2	5	8.1
3	7	11.3
4	7	11.3
5	9	14.5
6	3	4.8
N/A (Cons. /Gen. Prac.)	23	37.1

### 4.3 Validity and Reliability Tests

The reliability of the data collection instrument was evaluated using Cronbach's alpha, a widely recognized measure for assessing instrument reliability. Cronbach's alpha provides researchers with insights into the internal consistency and coherence of the items, allowing them to gauge the proportion of variance attributed to the construct under study. This measure aids in determining whether items should be retained or discarded, as well as facilitating comparisons of reliability across different scales or instruments. By furnishing a dependable estimate of internal consistency, Cronbach's alpha enhances the validity and trustworthiness of the data garnered through the instrument (Bland & Altman, 1997).

Validity pertains to the extent to which a questionnaire accurately measures its intended constructs. The Kaiser-Meyer-Olkin (KMO) measure serves as a statistical tool for assessing sampling adequacy, gauging whether the data is conducive for factor analysis. Calculated on a scale from 0 to 1, a higher KMO value signifies better suitability for factor analysis. A commonly accepted criterion suggests that a KMO value exceeding 0.7 indicates adequate data for factor analysis, whereas values below 0.5 are deemed inadequate.

**Table 4. 2: Reliability and Validity Tests**

Variable	N of Items	Cronbach's Alpha	KMO Statistics	Decision Rule
Openness	7	.814	.781	Accept
Conscientiousness	10	.707	.666	Accept
Extraversion	10	.811	.759	Accept
Agreeableness	10	.772	.826	Accept
Neuroticism	10	.734	.806	Accept
Work Engagement	18	.907	.816	Accept

Source: Author, (2024)

Table 4.2 indicates that all the variables have Cronbach's Alpha above 0.7 showing internal consistency of the research instrument. Openness however, had Cronbach's Alpha below 0.7 that led to removal of 3 statements to ensure that the variable has acceptable internal consistency for undertaking analysis. The KMO values are also high indicating that the data is conducive for undertaking factor analysis.

#### 4.4 Descriptive Statistics

The descriptive statistics that were undertaken in the study sought to determine the manner in which the study respondents responded to each of the questions. The study therefore sought to determine the mean responses to determine in average the level of agreement or disagreement with the accuracy of each statement. The standard deviation was also determined to understand how the respondents differed from the mean of the responses. The higher the standard deviation, the higher the disparity from one respondent to the other. The mode was also determined to determine what majority of the respondents felt about each of the statement.

##### 4.4.1 Openness

There were initially 10 statements that sought to test openness as a personality trait among the respondents. However, there was no internal consistency among 3 statements that were removed from the study and therefore a prevailing 7 statements were assessed to determine openness of the study respondents. Table 4.3 indicated the descriptive statistics for this variable.

**Table 4. 3: Openness Among Medical Doctors at MP Shah Hospital**

		Statistics						
		Have a rich vocabulary	Have a vivid imagination	Have excellent ideas	Am quick to understand things	Use difficult words	Spend time reflecting on things	Am full of ideas
N	Valid	62	62	62	62	62	62	62
	Missing	0	0	0	0	0	0	0
Mean		3.61	3.97	4.02	4.10	2.45	4.10	3.68
Mode		4	5	4	5	1	5	4
Std. Deviation		1.136	1.008	.932	.953	1.289	1.051	1.083
Variance		1.290	1.015	.869	.909	1.662	1.105	1.173

Source: Researcher, (2024)

The mode of most of the statements was 5 and 4 indicating that majority of the respondents strongly agreed or agreed with the statements showing their personality in relation to openness. Majority of the respondents on the statement “use difficult words” had a mode of 1 indicating that they strongly disagreed indicating that the trait did not represent them. The statement with the highest standard deviation was “Have a rich vocabulary” indicating that majority of the respondents had a higher differing opinion in regard to this statement, and there was therefore a larger deviation from the mean. The statement with the smallest standard deviation was “Have

Excellent Ideas” Indicating that most of the respondents were in agreement that they had excellent ideas. The standard deviation was only 0.932 and therefore the responses were close to the mean of 4.02.

#### 4.4.2 Conscientiousness

There were 10 statements in regards to conscientiousness where the respondents were required to determine whether the statements accurately reflected their personality traits. Their responses for each of the statements are summarized in table 4.4, to determine their mean, mode and standard deviation.

**Table 4. 4: Conscientiousness Responses**

		Am always prepared	Leave my belonging s around	Pay attention to details	Make a mess of things	Get chores done right away	Often forget to put things back in their proper place	Like order	Shirk my duties	Follow a schedule	Am exacting in my work
N	Valid	62	62	62	62	62	62	62	62	62	62
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		3.66	3.81	4.35	4.16	3.00	3.68	4.11	4.31	3.61	3.65
Mode		4	5	5	5	4	5	5	5	4	4
Std. Deviation		1.007	1.252	.993	1.134	1.280	1.315	1.088	.879	1.107	1.073

Source: Researcher, (2024)

The summary of responses regarding conscientiousness shown in Table 4.4 reveals intriguing patterns within the dataset. The mode for several statements, such as "Pay attention to details," "Like order," and "Follow a schedule," predominantly centered around 5, indicating a strong agreement among respondents with these conscientious traits. Conversely, the mode for statements like "Leave my belongings around" and "Often forget to put things back in their proper place" gravitated towards 5, suggesting a tendency among some respondents to exhibit behaviours incongruent with conscientiousness. Notably, the statement with the highest mean, "Make a mess of things," indicates a relatively strong disagreement among respondents, suggesting that most do not perceive themselves as being prone to disorderliness. However, the varying standard deviations across statements underscore the diversity of perspectives within the sample, with some traits eliciting more consensus than others. This suggests a nuanced understanding of conscientiousness among respondents, wherein certain traits are

more universally embraced than others, highlighting the multidimensionality of this personality construct.

#### 4.4.3 Extraversion

There were also 10 statements in regard to extraversion personality traits among medical doctors at MP Shah Hospital. The table below summarizes the responses of the study respondents in regard to each of the statements indicated.

**Table 4. 5: Extraversion Personality Traits Statements**

		Statistics									
		Am the life of the party	Don't talk a lot	Am interested in people	Keep in the background	Start conversations	Have little to say	Talk to a lot of different people at parties	Don't like to draw attention to myself	Don't mind being the centre of attention	Am quiet around strangers
N	Valid	62	62	62	62	62	62	62	62	62	62
	Missing	0	0	0	0	0	0	0	0	0	0
	Mean	2.40	2.73	3.82	2.77	3.39	3.00	2.26	2.13	2.10	2.19
	Mode	1	2	4	2	4	4	1	1	1	1
	Std. Deviation	1.348	1.308	1.109	1.207	1.272	1.318	1.254	1.194	1.197	1.128

Source: Researcher, (2024)

Table 4.5 presenting responses related to extraversion personality traits offers valuable insights into the tendencies of the surveyed doctors. Across various statements, such as "Am the life of the party," "Start conversations," and "Talk to a lot of different people at parties," the mode predominantly gravitates towards 1 or 2, indicating a tendency among respondents to express introverted traits or exhibit reserved behaviour in social settings.

Conversely, statements like "Am interested in people" and "Don't mind being the centre of attention" garnered modes closer to 4, suggesting a more balanced distribution of responses, with some respondents expressing extraverted inclinations. However, the relatively low means across most statements underscore a general inclination towards introverted traits within the sample, with respondents tending towards reticence and a preference for solitude rather than seeking out social stimulation. Additionally, the varying standard deviations highlight the diversity of perspectives within the dataset, indicating differing levels of agreement or

disagreement with each extraversion trait among respondents. This portrayal of extraversion traits among the surveyed individuals underscores the complexity and multidimensionality of personality characteristics within the context of social behavior.

#### 4.4.4 Agreeableness

The personality trait was assessed among the medical doctors at MP Shah hospital in 10 different statements. The respondents indicated the extent to which they agreed or disagreed with each statements. The summary of their responses is as indicated in Table 4.6.

**Table 4. 6: Summary of Responses on Agreeableness Personality Trait**

	Feel little concern for others	Feel comfortable around people	Do not Insult people	Sympathize with others' feelings	Am interested in other people's problems	Have a soft heart	Am really interested in others	Take time out for others	Feel others' emotions	Make people feel at ease
N Valid	62	62	62	62	62	62	62	62	62	62
Missing	0	0	0	0	0	0	0	0	0	0
Mean	1.45	3.45	4.73	4.19	4.16	3.94	4.15	3.74	3.89	3.77
Mode	1	4	5	5	5	4	5	4	5	5
Std. Deviation	1.035	1.169	.772	1.006	.944	1.022	.973	.991	1.057	1.165

Source: Researcher, (2024)

Table 4.6 elucidates the respondents' perspectives on various aspects of agreeableness, offering insights into their interpersonal tendencies and attitudes towards others. Notably, the mode for statements such as "Do not insult people," "Sympathize with others' feelings," and "Make people feel at ease" predominantly gravitates towards 5, indicating a strong agreement among respondents with these agreeable behaviours. Conversely, the mode for "Feel little concern for others" aligns with 1, suggesting a prevalent disagreement among respondents with this trait, emphasizing their inclination towards compassion and empathy. Furthermore, the relatively high means across most statements underscore a general propensity towards agreeable behaviours within the sample, reflecting a collective disposition towards kindness, understanding, and positive social interactions among the medical professionals surveyed.

Moreover, the standard deviations across the statements shed light on the diversity of perspectives within the dataset, revealing varying levels of agreement or disagreement with

each agreeableness trait among respondents. While some traits elicit more uniform responses, such as "Do not insult people" with a low standard deviation, others, like "Feel comfortable around people" or "Make people feel at ease," exhibit greater variability, indicating differing perceptions among respondents. This portrayal of agreeableness traits underscores the complexity of interpersonal dynamics and individual differences in social behavior among medical professionals, emphasizing the importance of understanding and fostering agreeable traits in healthcare settings to promote positive patient outcomes and professional collaboration.

#### 4.4.5 Neuroticism

Personality traits in regards to neuroticism among medical doctors at MP Shah Hospital were determined using 10 different statements. The summary of responses by the respondents is indicated in Table 4.7.

**Table 4. 7: Summary of Responses on Neuroticism**

	Am relaxed most of the time	Get stressed out easily	Worry about things	Seldom feel blue	Am easily disturbed	Get upset easily	Change my mood a lot	Have frequent mood swings	Get irritated easily	[4 feel blue]
N Valid	62	62	62	62	62	62	62	62	62	62
Missing	0	0	0	0	0	0	0	0	0	0
Mean	2.60	2.66	3.58	2.50	2.58	2.26	2.24	1.71	2.44	3.68
Mode	2	2	4	2	2	1	1	1	1	4
Std. Deviation	1.137	1.354	1.153	1.083	1.313	1.342	1.276	.998	1.263	1.212

Source: Researcher, (2024)

The table provides an insight into the neuroticism traits among medical doctors at MP Shah Hospital, offering a glimpse into their emotional stability and susceptibility to stressors. Notably, the mode for statements like "Get stressed out easily," "Worry about things," and "Get upset easily" predominantly aligns with 4, indicating a notable tendency among respondents to experience emotional distress and exhibit anxious tendencies. Conversely, the mode for "Am relaxed most of the time" and "Seldom feel blue" gravitates towards 2, suggesting a moderate level of agreement among respondents with these emotionally stable traits. The relatively high means across several statements, particularly "Worry about things" and "Get upset easily," underscore a prevalent disposition towards neuroticism among the surveyed medical

professionals, highlighting potential challenges in managing stress and maintaining emotional equilibrium within the demanding healthcare environment.

Moreover, the standard deviations across the statements reveal varying degrees of variability in responses, reflecting the diverse range of perspectives and experiences among respondents regarding neuroticism traits. While some statements elicit more consistent responses, such as "Change my mood a lot" with a relatively low standard deviation, others, like "Get upset easily" or "Have frequent mood swings," exhibit greater variability, indicating differing levels of emotional resilience among medical doctors. This understanding of neuroticism traits underscores the importance of addressing emotional well-being and providing adequate support systems for healthcare professionals to cope with stressors effectively and maintain optimal performance in their demanding roles.

#### 4.4.6 Work Engagement

Work engagement among doctors at MP Shah Hospital was assessed in three factors that comprised of vigour, dedication and absorption. It indicated the manner in which the doctors were engaged in the hospital. The level of engagement was assessed in a scale of 1 – 6 with 1 being almost never, while 6 being Always.

Vigour was assessed in a total of 7 statements while dedication was assessed in 4 statements and absorption in a total of 7 statements. The responses for vigour are as indicated.

**Table 4. 8: Vigour Summary of Responses**

		Statistics						
		Feel bursting with energy	Work full of meaning	Feel strong at job	Enthusiastic about job	Inspired with job	Like going to work in the morning	Immersing in work
N	Valid	62	62	62	62	62	62	62
	Missing	0	0	0	0	0	0	0
	Mean	3.69	4.15	4.15	4.35	4.34	3.56	4.10
	Mode	4	4	4	4	4	4	4
	Std. Deviation	1.049	1.291	1.171	1.319	1.330	1.276	1.277

Source: Researcher, (2024)

The responses regarding vigour among medical doctors at MP Shah Hospital depict a generally positive and engaged workforce. Across the seven statements assessing vigour, the mean scores

range from 3.56 to 4.35, indicating a consistent level of vigor among the respondents. The mode for each statement aligns closely with 4, suggesting that the majority of doctors frequently experience feelings of energy, meaning, strength, enthusiasm, inspiration, and enjoyment in their work. The relatively low standard deviations further indicate a degree of consensus among respondents, with minimal variability in their perceptions of vigour. Overall, these findings suggest a high level of work engagement characterized by energy, enthusiasm, and a sense of purpose among medical professionals at MP Shah Hospital.

**Table 4. 9: Summary of Responses on Dedication**

		<b>Statistics</b>			
		Proud of the work	Job is challenging	Resilient at job	Persevere at work
N	Valid	62	62	62	62
	Missing	0	0	0	0
Mean		4.61	4.21	4.42	4.34
Mode		6	3	4	4
Std. Deviation		1.371	1.256	1.167	1.318

Source: researcher, (2024)

Table 4.9 reveals a high level of dedication among doctors at the hospital, with mean scores ranging from 4.21 to 4.61 across the four statements assessing dedication. The mode for each statement reflects a consistent tendency towards agreement, with the majority of respondents indicating strong feelings of pride in their work, perceiving their job as challenging, demonstrating resilience, and persevering in the face of difficulties. The relatively low standard deviations suggest a degree of uniformity in respondents' perceptions, indicating a shared sense of dedication and commitment to their roles. Overall, these findings suggest that medical doctors exhibit a robust dedication to their work, finding pride and resilience in their professional endeavours, even in the face of challenges.

**Table 4. 10: Summary of Responses on Absorption**

		Time flies when working	Forgetting around when working	Feel happy when working intensely	Can work for long periods	Carried away when working	Difficult to detach from job	Total Engagement Scale
N	Valid	62	62	62	62	62	62	62
	Missing	0	0	0	0	0	0	0
Mean		4.65	3.55	4.13	4.37	4.08	3.50	4.32
Mode		6	3	4	6	4	3	4
Std. Deviation		1.392	1.363	1.385	1.462	1.474	1.607	1.225

Source: Researcher, (2024)

Table 4.10 illustrates a high level of absorption among medical doctors, with mean scores ranging from 3.50 to 4.65 across the seven statements assessing absorption. The mode for each statement suggests a consistent pattern of agreement, with the majority of respondents reporting that time flies when working, feeling happy when intensely engaged in work, and being carried away by their tasks. Additionally, respondents indicate a propensity for working long periods and experiencing difficulty detaching from their job, as reflected in the mode and mean scores. The relatively high standard deviations across statements indicate some variability in respondents' experiences of absorption, with certain individuals reporting more intense absorption in their work than others. These findings thereby suggest a high level of absorption among medical doctors at MP Shah Hospital, characterized by deep involvement and immersion in their professional tasks, which may have implications for their overall work engagement and job satisfaction.

#### **4.5 Association between Personality Traits and Work Engagement**

The association between personality traits and work engagement was assessed by both correlation and regression analysis.

##### **4.5.1 Correlation Analysis**

Pearson's correlation was undertaken in the study. It assessed how each personality trait was correlated to work engagement.

Table 4.11 reveals several noteworthy relationships between personality traits and work engagement among medical doctors at the hospital. Openness exhibits a moderate positive

correlation with work engagement ( $r = 0.429$ ,  $p < 0.01$ ), suggesting that individuals who are more open to new experiences, ideas, and perspectives are more likely to be engaged in their work. Similarly, conscientiousness demonstrates a significant positive correlation with work engagement ( $r = 0.335$ ,  $p < 0.01$ ), indicating that doctors who are more diligent, organized, and responsible tend to exhibit higher levels of work engagement.

**Table 4. 11: Correlation Table**

	Work Engagement	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Work Engagement	1					
Openness	.429**	1				
Conscientiousness	.335**	.852**	1			
Extraversion	.168	.019	.030	1		
Agreeableness	.384**	.521**	.432**	.268*	1	
Neuroticism	.131	.063	-.113	-.121	-.045	1
N	62	62	62	62	62	62

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

On the other hand, extraversion, agreeableness, and neuroticism show weaker correlations with work engagement, with coefficients ranging from small to negligible. While agreeableness exhibits a moderate positive correlation ( $r = 0.384$ ,  $p < 0.01$ ), extraversion ( $r = 0.168$ ,  $p > 0.05$ ) and neuroticism ( $r = 0.131$ ,  $p > 0.05$ ) show weak and non-significant relationships, respectively.

These findings suggest that certain personality traits, particularly openness and conscientiousness, play a more influential role in predicting work engagement among medical doctors at the hospital. Medical professionals who possess traits associated with openness to new experiences and conscientiousness in their approach to work are more likely to demonstrate higher levels of engagement in their professional duties. However, the weaker correlations observed for extraversion, agreeableness, and neuroticism imply that these personality factors may have less direct influence on work engagement among medical doctors. Therefore, understanding the interplay between personality traits and work engagement can inform strategies for optimizing workplace environments and supporting medical professionals in enhancing their job satisfaction, performance, and overall well-being within the hospital setting.

#### 4.5.2 Regression Analysis

The regression analysis of the study sought to determine the influence of the 5 personality traits on work engagement of medical doctors at the hospital. The regression model had R squared of 24.9% and an adjusted R of 18.2%. The model's R-square value of 0.249 indicates that approximately 24.9% of the variability in work engagement can be explained by the included personality traits. This suggests that while these personality factors collectively contribute to work engagement, there are other factors not accounted for in the model that also influence doctors' levels of engagement in their professional roles. The adjusted R-square value of 0.182 indicates that after adjusting for the number of predictors in the model, the proportion of variance in work engagement explained by the personality traits decreases slightly, suggesting that the model may be slightly overfit. Nonetheless, the significant relationship between the included personality traits and work engagement highlights the importance of considering individual differences in personality when examining factors that contribute to doctors' engagement in their work at the hospital.

**Table 4. 12: ANOVA TABLE**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3340.514	5	668.103	3.711	.006 <sup>b</sup>
	Residual	10080.970	56	180.017		
	Total	13421.484	61			

a. Dependent Variable: Work Engagement

b. Predictors: (Constant), Neuroticism, Agreeableness, Extraversion, Conscientiousness, Openness

Table 4.12 indicates that the regression model, significantly explains a portion of the variance in work engagement among medical doctors at the hospital. The significant F-value of 3.711 ( $p = 0.006$ ) suggests that the regression model as a whole is statistically significant, indicating that the included personality traits collectively contribute to predicting work engagement. The findings suggest that the combination of personality traits examined in the study plays a meaningful role in shaping medical doctors' engagement in their professional roles at the hospital.

**Table 4. 13: Co-efficients Table**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	9.028	16.348		.552	.583
	Openness	.558	.402	.344	1.389	.017
	Conscientiousness	-.073	.590	-.029	-.124	.902
	Extraversion	.249	.241	.126	1.035	.305
	Agreeableness	.483	.363	.190	1.330	.189
	Neuroticism	.291	.277	.130	1.050	.298

a. Dependent Variable: Work Engagement

Source: Researcher, (2024)

Table 4.12 provides insights into the relationship between each personality trait (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and work engagement among medical doctors at the hospital. The unstandardized coefficients indicate the magnitude and direction of the relationship between each predictor variable and work engagement. Among the personality traits, only Openness demonstrated a positive and statistically significant relationship with work engagement, with a standardized coefficient (Beta) of 0.344. Conversely, Conscientiousness, Extraversion, Agreeableness, and Neuroticism showed weak and statistically non-significant relationships with work engagement, suggesting limited predictive power of these personality factors on doctors' engagement in their professional roles. The findings suggested that while Openness may have some influence on work engagement, the other examined personality traits may not play significant roles in shaping doctors' levels of engagement at the hospital.

#### **4.6 Discussion of Findings and Chapter Summary**

The chapter explored the personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism, providing detailed summaries of respondents' responses to various statements assessing each trait. Notably, traits like conscientiousness and agreeableness exhibited strong internal consistency, with respondents generally endorsing behaviours associated with diligence, organization, kindness, and empathy. However, variability in responses highlighted the multidimensionality of personality constructs, with certain traits eliciting more consensus than others. The analysis of work engagement revealed a generally

positive and engaged workforce, with medical doctors reporting high levels of vigor, dedication, and absorption in their professional roles. These findings underscored the importance of understanding individual differences in personality and work engagement within the healthcare context, offering valuable insights for optimizing workplace environments and supporting medical professionals' well-being and performance.

It also chapter explored the association between personality traits and work engagement through correlation and regression analyses. While traits like openness and conscientiousness demonstrated significant positive correlations with work engagement, other traits like extraversion, agreeableness, and neuroticism showed weaker and non-significant relationships. The regression analysis underscored the prognostic significance of openness for work engagement, indicating that individuals with a greater inclination toward new experiences are highly likely to demonstrate elevated levels of engagement in their professional responsibilities. However, the limited influence of other personality traits implied that additional factors may also contribute to doctors' levels of engagement at the hospital.

Studies that indicated similar findings include studies by Hau & Bing (2018) who illuminated the significance of personality traits in fostering work engagement among academic staff in Malaysia, particularly emphasizing the positive influence of agreeableness, conscientiousness, and openness to experience. Similarly, Mullola et al. (2018) revealed how distinctive personality traits, notably openness, were associated with career choices among Finnish physicians, indicating the nuanced interplay between individual traits and professional pathways. Additionally, Stienen et al. (2016) identified a distinct "physician personality" characterized by higher levels of conscientiousness, extraversion, and agreeableness but lower neuroticism among board-certified physicians, underscoring the relevance of personality profiles in shaping medical careers.

Conversely, studies by Bogacheva, Kornilova, and Pavlova (2019) in Russia and Aswegen et al. (2018) in South Africa presented contrasting findings, highlighting the variability in personality trait profiles and their impact on professional risk perception and specialty preferences within the medical field. Moreover, research by Nawaiseh et al. (2020) in Jordan and Ganu (2014) in Kenya underscored the relation between character attributes and preferences among students in the medical field and healthcare workers, underscoring the role of individual traits in career decision-making within the healthcare domain.

## **CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

The chapter was summarized, and the conclusion of the study highlighted. The recommendation of the study is also discussed the study limitations as well as area for future study.

### **5.2 Summary**

The study delved into the intricate association between character traits and engagement of the work force among medical professionals at M.P Shah Hospital, offering valuable insights into this dynamic interplay within the healthcare domain. One notable finding of the study was the significant positive influence of conscientiousness on work engagement among the surveyed medical professionals. This aligns with previous research, such as the study by Stienen et al. (2016). Conscientious individuals, characterised by traits such as organisation, reliability, and diligence, tend to demonstrate higher levels of engagement in their work. This alignment between conscientiousness and work engagement is evident in studies by Hau & Bing (2018) as well as Stienen et al. (2016).

The study also highlighted the role of openness to experience in shaping work engagement among medical professionals. While previous studies, like those by Hau & Bing (2018) and Mullola et al. (2018), also identified openness as a positive influence on work engagement in academic and clinical settings, the findings of the current study provide additional context specific to the healthcare environment at M.P Shah Hospital. The propensity for exploration, creativity, and adaptability inherent in individuals high in openness may contribute to their heightened engagement with the challenges and complexities of medical practice, emphasizing the importance of fostering an environment that encourages innovation and learning within healthcare organizations.

The influence of extraversion on work engagement among medical professionals was also highlighted, echoing findings from previous research by Nawaiseh et al. (2020). While extraversion was not specifically examined in the context of specialty preferences in the current study, the positive association between extraversion and engagement observed in previous studies suggests that sociable and outgoing individuals may derive fulfilment from interpersonal interactions and collaborative teamwork in their professional roles. By recognizing the differential impact of personality traits on work engagement, healthcare

organizations like M.P Shah Hospital can tailor strategies to optimize employee engagement and well-being, ultimately enhancing the quality of patient care and organizational performance.

### **5.3 Conclusion**

The research undertaken drew several conclusions based on its findings, providing valuable insights into the association between character attributes and engagement of the workforce among medical professionals at M.P. Shah Hospital. It firstly emphasizes the significant positive influence of conscientiousness on work engagement, highlighting the importance of traits such as organization, reliability, and diligence in fostering an engaged and dedicated workforce in the healthcare setting. This underscores the need for healthcare organizations to recognize and cultivate these traits among their staff to enhance overall engagement and performance.

The study also reveals the role of openness to experience in shaping work engagement among medical professionals. Individuals high in openness, characterized by their propensity for exploration, creativity, and adaptability, demonstrated heightened engagement with the challenges and complexities of medical practice. This suggested that fostering an environment that encourages innovation and learning can contribute to higher levels of engagement among healthcare professionals, ultimately benefiting both staff and patients.

Lastly, the study highlighted the influence of extraversion on work engagement among medical professionals, indicating that sociable and outgoing individuals may derive fulfillment from interpersonal interactions and collaborative teamwork in their professional roles. By recognizing the differential impact of personality traits on work engagement, healthcare organisations could tailor strategies to optimize employee engagement and well-being, thereby improving patient care and organizational outcomes.

### **5.4 Recommendations**

In light of the research undertaken's, various recommendations can be suggested to augment the engagement of the workforce among medical professionals. For instance, recognizing the pivotal role of conscientiousness in fostering engagement, hospital management should implement strategies to identify, recruit, and retain individuals with high levels of conscientiousness. This may involve integrating personality assessments into the recruitment process to ensure alignment between candidate traits and organizational needs. Additionally,

providing ongoing training and support to cultivate and reinforce conscientious behaviours among existing staff can contribute to sustained engagement and performance.

Furthermore, considering the influence of openness to experience on work engagement, hospitals could foster a culture of innovation and continuous learning to capitalize on the strengths of individuals high in openness. Encouraging interdisciplinary collaboration, promoting participation in professional development activities, and providing opportunities for staff to contribute ideas and feedback could stimulate engagement and creativity among healthcare professionals. Moreover, creating platforms for knowledge sharing and mentorship could facilitate the exchange of ideas and best practices, nurturing a dynamic and forward-thinking workforce.

In light of the impact of extraversion on work engagement, hospitals should consider implementing initiatives to leverage the sociable and outgoing nature of extraverted individuals. This could involve fostering a supportive team environment that encourages collaboration, communication, and relationship-building among staff. Organizing team-building activities, promoting open communication channels, and facilitating regular meetings and forums for staff interaction to enhance social connectivity and engagement. Additionally, providing opportunities for leadership development and recognizing and rewarding contributions to team success could further motivate extraverted individuals and foster a culture of engagement and camaraderie within the hospital.

### **5.5 Limitations of the Study**

Despite the study providing insightful conclusions into the correlation connecting character attributes and work engagement among medical professionals at M.P Shah Hospital, several limitations warranted consideration. The research firstly, relied on measures such as self-reporting for assessing character attributes and work engagement had the potential of introducing response biases and social desirability effects, potentially impacting the accuracy and reliability of the data collected. To address this limitation, measures were taken to guarantee the anonymity and confidentiality of participants' responses, thereby reducing concerns related to social desirability bias.

Another potential limitation is the cross-sectional design of the study, which limited the ability to establish causality or temporality in the observed relationships between personality traits and work engagement. Longitudinal or experimental designs could offer a more robust

evidence of causality and help elucidate the directionality of effects over time. Despite this limitation, the study employed rigorous statistical analyses to explore the associations between personality traits and work engagement, controlling for relevant demographic variables to enhance the internal validity of the findings. Moreover, the use of a diverse and representative sample of medical professionals at M.P Shah Hospital enhanced the generalizability of the results to similar healthcare settings.

### **5.6 Areas for Future Research**

Assessing the implications of organisational factors, including leadership styles and organisational culture, on the connection between personality traits and engagement of the workforce could present a promising direction for future research. Understanding how different leadership approaches and organizational climates impact the expression of personality traits and subsequent engagement levels among medical professionals could offer valuable insights for healthcare management and policy development. Moreover, investigating the role of individual coping strategies and resilience in moderating the relationship between personality traits and work engagement may provide a deeper understanding of the mechanisms underlying these associations and inform targeted interventions to enhance healthcare professionals' well-being and performance.

Furthermore, future research could extend beyond traditional personality frameworks to explore alternative conceptualizations of personality that may better capture the unique dynamics of work engagement in the healthcare context. For instance, examining the role of cultural factors and societal norms in shaping personality expression and work engagement among medical professionals from diverse backgrounds could offer a better understanding of these phenomena. Furthermore, incorporating qualitative methodologies like in-depth interviews or focus groups could offer deeper insights into the subjective experience and the perceptions of healthcare professionals concerning character attributes and engagement of the workforce. This would complement quantitative findings and provide a more comprehensive perspective into how this nuanced constructs

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## APPENDICES

### Appendix A: Letter of Introduction

#### APPENDICES

##### Appendix A: Letter of Introduction

Dr Carol Yvonne ~~Tanagusa~~  
Strathmore Business School  
Institute of Healthcare Management  
Email: [carol.tanagusa@strathmore.edu](mailto:carol.tanagusa@strathmore.edu)

Dear Sir/Madam,

#### RE: LETTER OF INTRODUCTION

I am a student in Strathmore University hospital – Healthcare Management, currently pursuing a Masters in Business Administration. I am researching the ‘The Relationship Between Personality Traits and Work Engagement in Medical Doctors at The M.P Shah Hospital.

The data provided will be used for academic purposes only and will be treated with confidentiality and the privacy it deserves. You are kindly requested to answer the questions in the questionnaire most honestly and as objectively as possible. Your participation in the study is highly appreciated.

Thank you in advance.

Carol Yvonne ~~Tanagusa~~

## Appendix B: Introduction Letter from SBS

One Strathairn Rd, Wacoala Estate,  
P.O. Box 01857, 00200, Nairobi, Kenya.  
Cell: 054 703 414/407, Tel: 011 254 203 414  
Email: info@sbs.co.ke or via: www.sbs@strathmore.edu



12<sup>th</sup> January 2023

To Whom It May Concern,

**RE: FACILITATION OF RESEARCH – TANAGUZA CAROL YVONNE**

This is to introduce Tanaguza Carol Yvonne, a Master of Business Administration in Healthcare Management (MBAHCM) student at Strathmore University Business School, student number 110234/20. As part of our MBAHCM Programme, Carol is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MBAHCM course. To this effect, she would like to request for appropriate data from your organization.

Carol is undertaking a research paper on "Relationship Between Personality Traits and Work Engagement in Medical Doctors at M.P Shah Hospital." The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MBA-HCM Programme seeks to establish links with industry, and one of the ways of doing so is directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Njoki K. Igiri".

Njoki K. Igiri  
Manager – Graduate Programmes

## **Appendix C: Informed Consent**

### **Part 1: Information sheet**

**Researcher:** Dr. Carol Yvonne Tanaguza

**Institutional Affiliation:** Strathmore Business School (SBS)

**Title of the Study:** An assessment of the relationship between personality traits and work engagement in medical doctors at The M.P Shah Hospital

#### **Study Objectives:**

- i. To determine the pattern of personality traits amongst medical doctors at M.P Shah.
- ii. To assess the work engagement of medical doctors at M.P Shah.
- iii. To determine the association between personality traits and work engagement among medical doctors at M.P Shah

### **Part 2: Information sheet – The Study**

#### **2.1: Why is this research study being carried out?**

To evaluate the relationship between personality traits and work engagement in medical doctors practicing at The M.P Shah Hospital

#### **2.2: Do I have to take part?**

No. This study is optional, and the decision rests only with you. If you decide to participate, you will be asked to complete a questionnaire to get the study's required information. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

#### **2.3: Who is eligible to take part in this study?**

Licensed medical doctors, including general practitioners, residents, and qualified consultants, currently working at The M.P Shah hospital.

**2.4: Who is not eligible to take part in this study?**

Anyone below the age of 18 years.

**2.5: What will taking part in this study involve for me?**

You will be approached by the researcher and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

**2.6: Duration expected to complete the questionnaire**

15 – 20 minutes

**2.7: Are there any risks or dangers in taking part in this study?**

There are no risk in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

**2.8: Are there any benefits/reimbursement of taking part in this study?**

The information will be used to improve research study change management and effects on information technology implementation and inform policymakers, academicians, and other stakeholders in the area of study. Therefore, your input in this study will have benefits for the common cause of improving and enhancing change management strategies in information technology implementation. However, there will be no financial or any other form of reimbursement given for participation in this research study.

**2.9: What will happen to me if I refuse to take part in this study?**

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

**2.10: Who will have access to my information during this research?**

Only the people who are closely concerned with this study will have access to your information. All your information will be strictly confidential.

## 2.11 Ethical approval

Ethical approval for the study was obtained from the relevant local ethics committees.

## 2.12: Who can I contact in case I have further questions?

You can contact me, Carol Yvonne ~~Tanaguzza~~, at SBS, or by e-mail [carol.tanaguzza@strathmore.edu](mailto:carol.tanaguzza@strathmore.edu). You can also contact my supervisor, Dr. Ben ~~Ngoye~~ at the Strathmore Business School, Nairobi, or by e-mail [BNgoye@strathmore.edu](mailto:BNgoye@strathmore.edu).

If you would like to ask someone independent anything about this research, please contact: The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, or by email [ethicsreview@strathmore.edu](mailto:ethicsreview@strathmore.edu) ;Tel number: +254 703 034 375

I, \_\_\_\_\_, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

I give consent to take part in the study.

Participant's name: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

## Declaration by the principal investigator

I have clearly explained to the participant the purpose and expected benefits of this study and have answered his/her questions regarding this research on the date on this consent form.

Investigator's name: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix D: Research Tool

Dear Respondent,

This study will assess the relationship between personality traits and work engagement in medical doctors at The M.P Shah Hospital. You are requested to participate by filling out this questionnaire. Kindly respond to the questions as honestly as possible. All information given will be treated with confidentiality and your kind cooperation will be highly appreciated. Do NOT write your name to enhance confidentiality. Tick (✓) against the correct response using the scale provided for each question and comment where necessary.

### Demographics

Please indicate your age

1. 18 – 27 [  ]    2. 28 – 37 [  ]    3. 38 – 47 [  ]    4. >48 [  ]

Please indicate your sex

1. M [  ]                      2. F [  ]

Please write out your specialty

[  ]

Year of Study (If Applicable)

[  ]

### Test 1: Personality

#### Instructions

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate for each statement whether it is:

- 1- Very Inaccurate      2- Moderately Inaccurate      3- Neither Accurate Nor Inaccurate  
 4- Moderately Accurate      5- Very Accurate

Indicate your response on the box to the right.

Rating	I.....	Rating	I.....
	1. Am the life of the party.		26. Have little to say.
	2. Feel little concern for others.		27. Have a soft heart.
	3. Am always prepared.		28. Often forget to put things back in their proper place.
	4. Get stressed out easily.		29. Get upset easily.
	5. Have a rich vocabulary.		30. Do not have a good imagination.
	6. Don't talk a lot.		31. Talk to a lot of different people at parties.
	7. Am interested in people.		32. Am not really interested in others.
	8. Leave my belongings around.		33. Like order.
	9. Am relaxed most of the time.		34. Change my mood a lot.
	10. Have difficulty understanding abstract ideas.		35. Am quick to understand things.
	11. Feel comfortable around people.		36. Don't like to draw attention to myself.
	12. Insult people.		37. Take time out for others.
	13. Pay attention to details.		38. Shirk my duties.
	14. Worry about things.		39. Have frequent mood swings.
	15. Have a vivid imagination.		40. Use difficult words.
	16. Keep in the background.		41. Don't mind being the center of attention.
	17. Sympathize with others' feelings.		42. Feel others' emotions.
	18. Make a mess of things.		43. Follow a schedule.
	19. Seldom feel blue.		44. Get irritated easily.
	20. Am not interested in abstract ideas.		45. Spend time reflecting on things.
	21. Start conversations.		46. Am quiet around strangers.
	22. Am not interested in other people's problems.		47. Make people feel at ease.

	23. Get chores done right away.		48. Am exacting in my work.
	24. Am easily disturbed.		49. Often feel blue.
	25. Have excellent ideas.		50. Am full of ideas.

### Test 2: Work Engagement

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the '0' (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Almost      Never      Rarely      Sometimes      Often Very      often  
 Always

0            1            2            3            4            5            6

I.....	Rating
<b>Factor 1: Vigor</b>	
1. Feel bursting with energy	
2. Work full of meaning	
3. Feel strong at job	
4. Enthusiastic about job	
5. Inspires with job	
6. Like going to work in the morning	
7. Immersing in work	
<b>Factor 2: Dedication</b>	
8. Proud of the work	
9. Job is challenging	
10. Resilient at job	
11. Persevere at work	
<b>Factor 3: Absorption</b>	
12. Time flies when working	

13. Forgetting around when working	
14. Feel happy when working intensely	
15. Can work for long periods	
16. Carried away when working	
17. Difficult to detach from job	
18. Total Engagement Scale	

Schaufeli & Bakker (2014). Utrecht Work Engagement Scale

**\*\*\*THANK YOU FOR YOUR PARTICIPATION\*\*\***



## Appendix E: Approval for Research at Study Location



20<sup>th</sup> February, 2023

REF: MD2302010

**Dr. Carol Yvonne Tanaguza**  
General Practitioner  
P.O. Box 37575- 00100  
Nairobi  
Kenya

Dear Dr. Tanaguza,

**RE: APPROVAL FOR RESEARCH AT THE M.P. SHAH HOSPITAL**

I am pleased to inform you that your application for collecting data from M.P. Shah Hospital for your research project “**Relationship between Personality Traits & Work Engagement in Medical Doctors at M.P Shah Hospital**” has been approved.

You may proceed to collect the data required, kindly sign the attached Non-Disclosure Agreement.

I wish you all the best in your project and urge you to share your findings with us.

Yours sincerely,

**Dr. Vishal Patel**  
**CHIEF MEDICAL OFFICER**

MD2302010





## RESEARCHER NON-DISCLOSURE AGREEMENT

This Agreement is made and entered into by and between M.P. Shah Hospital (hereinafter referred to as "Hospital") and Dr. Carol Yvonne Tanaguza of ID/Passport No: 32564443 (hereinafter referred to as "Researcher") for the purpose of receiving certain confidential information of the Hospital to enable the Researcher to undertake the project described at the end of this Agreement.

Hospital and Researcher hereby agree as follows:

1. "Confidential Information" means proprietary and confidential information of Hospital marked or identified as such in accordance with Section 2 below.
2. To be treated as Confidential Information, any information provided by Hospital to Researcher in tangible form shall be marked "Proprietary and Confidential" or similar markings. Information disclosed orally must be identified orally as confidential at the time of disclosure and summarized in writing within 30 days of disclosure.
3. No information will be Confidential Information that: (i) is already known to Researcher, or (ii) is or becomes publicly known through no wrongful act of Researcher, or (iii) is received by Researcher from a third party without similar restrictions and without breach of this Agreement.
4. Except as provided herein, Researcher will not disclose any Confidential Information to any other person. Researcher will not use any Confidential Information other than in connection with the Project.
5. Researcher may disclose Confidential Information (i) to other Researchers who have executed non-disclosure agreements with Hospital, (ii) in response to the lawful request or requirement of a governmental agency or by requirement of law.
6. Hospital understands that to complete the requirements of the course in which he or she is enrolled, Researcher must give a substantive presentation concerning the Project to an audience that will not have signed non-disclosure agreements, and that such presentation will include information about the Hospital. Hospital will work with Researcher to prevent the inclusion of Confidential Information in the presentation and any written materials prepared by the Researcher.



7. All Confidential Information delivered by Hospital to Researcher will be and remain property of Hospital. All Confidential Information, and any copies thereof, will be promptly returned to Hospital or destroyed by Researcher upon Hospital's request.
8. The obligations of Researcher under this Agreement shall be terminated if the Hospital deems it necessary.
9. This Agreement may not be modified except by written instrument signed on behalf of each party. Either party may assign this Agreement to a parent corporation, to a wholly owned subsidiary or a successor of substantially all of the business or assets of the party. This Agreement embodies the entire agreement and understanding of the parties and terminates and supersedes all prior independent agreements and understandings between the parties.

**Description of Project:**

Relationship between Personality Traits & Work engagement in Medical Doctors at M.P Shah Hospital

Researcher's Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**For M.P. Shah Hospital**

Name: Dr. Vishal Patel

Designation: Chief Medical Officer

Signature: \_\_\_\_\_



Date: 22.02.23

## Appendix F: Ethical Approval Letter



4<sup>th</sup> April 2023

Dr Tanaguza Carol Yvonne,  
carol.tanaguza@strathmore.edu

Dear Dr Tanaguza,

**RE: Relationship between Personality Traits and Work Engagement in Medical Doctors at the M.P Shah Hospital**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU- master's** research proposal. Your application reference number is **SU-ISERC1468/22**. The approval period is from **4<sup>th</sup> April 2023 to 3<sup>th</sup> April 2024**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, and MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

for: **Dr Ben Ngoye,**  
**Secretary; SU-ISERC**

**Cc: Mr Ambrose Rachier,**  
**Chairperson; SU-ISERC**



# Appendix G: NACOSTI Permit

  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

**RESEARCH LICENSE**  
**RefNo: 167472**  
**Date of Issue: 26/April/2023**



**This is to Certify that Dr.. Carol Yvonne Tangaza of Strathmore University, has been licensed to conduct research as per the provisions of the Science, Technology and Innovation Act, 2013 (Rev 2019) in Nairobi for the topic: 'RELATIONSHIP BETWEEN PERSONALITY TRAITS AND WORK ENGAGEMENT IN MEDICAL DOCTORS AT THE M.P SHAH HOSPITAL for the period ending : 26/April/2024.**

**LicenseNo: NACOSTI/P/23/25125**

**Applicant Identification Number**  
167472

**Director General**  
Walter Kibet

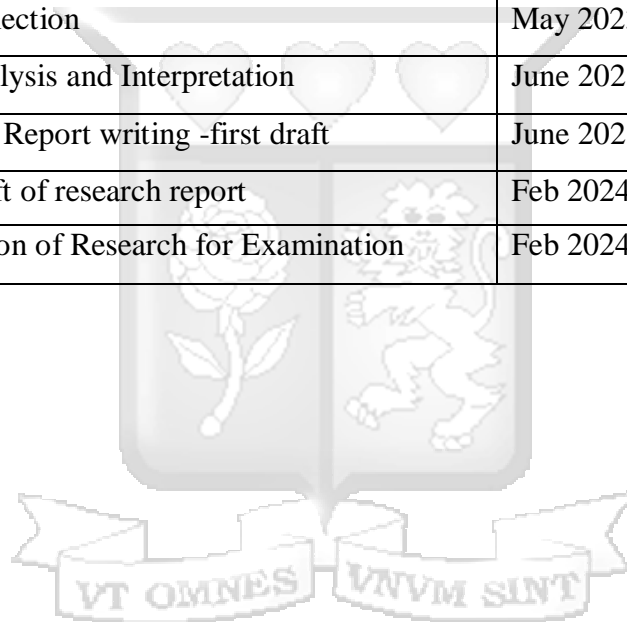
**Verification QR Code**



**NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR Scanner application.**  
**See overleaf for conditions**

## Appendix H: Work plan

Progress Stage	Stage Description	Proposed dates
1.	Scoping of the Research study	April - July 2021
2.	Choice of Research Topic	August 2021 - February 2022
3.	Research Problem clarification, Research objectives, Purpose and Significance	March 2022
4.	Literature review	April 2022
5.	Research Methodology	April/May 2022
6.	Completing and submitting the proposal	May 2022
7.	Proposal Defense	October 2022
8.	Data Collection	May 2023
9.	Data Analysis and Interpretation	June 2023
10.	Research Report writing -first draft	June 2023
11.	Final draft of research report	Feb 2024
12.	Submission of Research for Examination	Feb 2024



## Appendix I: Budget

Item	Ksh
Internet subscriptions	6,300.00
Data collection (including printing of questionnaires)	12,000.00
Logistics, communication and transport	8,000.00
Printing, photocopying and binding (drafts and final documents)	10,000.00
Aid of statistician	20,000.00
Miscellaneous	10,000.00
<b>TOTAL</b>	<b>66,300.00</b>



## Appendix J: 5 Point Likert Scale

1-Strongly Disagree	If you strongly disagree or if the statement is definitely false
2-Disagree	If you disagree or if the statement is mostly false
3-Neutral	If you are neutral about the statement, if you cannot decide, or if the statement is about equality true and false
4-Agree	If you agree or if the statement is mostly true
5-Strongly Agree	If you strongly agree or if the statement is definitely true



Appendix K: Sixteen factors of Personality, all bipolar

reserved	outgoing
less intelligent	more intelligent
affected by feelings	emotionally stable
submissive	dominant
serious	happy-go-lucky
expedient	conscientious
timid	venturesome
tough-minded	sensitive
trusting	suspicious
practical	imaginative
forthright	shrewd
self-assured	apprehensive
conservative	experimenting
group dependent	self-sufficient
uncontrolled	controlled
relaxed	tense

Source: Hayes & Orell (1993)