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RELATIONSHIP BETWEEN WORKING ENVIRONMENT AND WORK ENGAGEMENT AMONG HEALTHCARE WORKERS IN PUBLIC LEVEL 5 HOSPITALS IN KIAMBU COUNTY, KENYA

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A DISSERTATION PRESENTED TO THE SCHOOL OF BUSINESS AND LEADERSHIP STUDIES, ST PAUL'S UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

OCTOBER, 2026

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DECLARATION

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DEDICATION

I dedicate this dissertation to my parents and family for their endless support, encouragement, and sacrifices throughout my academic journey. I also dedicate this work to human resource scholars and to friends whose motivation and inspiration helped me complete this study successfully. Above all, I thank God for giving me strength, wisdom, and good health throughout this research.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
AOR	Adjusted Odds Ratio
APOR	Adjusted Prevalence Odds Ratio
ETB	Ethiopian Birr
EU	European Union
CGP	Community General Practitioners
CI	Confidence Interval
HCW	Healthcare Worker
JDC	Job Demand Control
KNBS	Kenya National Bureau of Statistics
MoH	Ministry of Health
OCB	Organizational Citizenship Behaviour
PPE	Personal Protective Equipment
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PROSPERO	Prospective Register of Systematic Reviews
RAND	Random Function
RN	Registered Nurse
SD	Standard Deviation
SET	Social Exchange Theory
SMD	Standardized Mean Difference
SPSS	Statistical Package for the Social Sciences
UWES	Utrecht Work Engagement Scale
WHO	World Health Organization

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ABSTRACT

Health workers' work engagement is linked to the quality of health services and organisational success. Despite various strategies and interventions, work engagement among healthcare workers in Kenya is low. The current study sought to determine how the working environment affected Kiambu County healthcare workers' job engagement. Organisational justice theory, expectancy theory, social exchange theory and job demand and control theories were chosen to inform this study. The correlational design was used to target 806 healthcare workers in public level 5 hospitals in Kiambu County, with 267. The questionnaire was structured and converted into a digital format, which was then self-administered. Descriptive, correlational, and regression analyses were conducted in SPSS. The data were presented as tables. Healthcare workers' perception of the interpersonal relationship was satisfactory. Physical working conditions ($r = .831$, $p < .001$), organizational policies ($r = .876$, $p < .001$), interpersonal relationships ($r = .612$, $p < .001$) and workload ($r = - .911$, $p < .001$) were positively and significantly correlated with job engagement. Regression analysis showed that the working environment accounted for 80.8% of the variation in job engagement. Physical working conditions ($p = 0.022$), organisational policies ($p = 0.008$), and workload ($p = 0.001$) significantly predicted job engagement. remained significant predictors of job engagement. The study concludes that the work engagement of healthcare workers in public level 5 hospitals in Kiambu County is low. It is also concluded that physical working conditions, organisational policies, and workload were related to job engagement, with workload showing the strongest association. The study recommends that the Kiambu County Government prioritise the procurement, maintenance, and prompt replacement of medical equipment. It is also recommended that the county recruit additional healthcare personnel.

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DEFINITIONS OF TERMS

Healthcare workers	Individuals trained and engaged in delivering health services to patients and communities (Afulani, 2021). This study included medical, clinical and nursing officers working in level 5 hospitals in Kiambu County
Interpersonal relationships	Quality of social and professional interactions among employees and between staff and management (Abate & Mekonnen, 2021). Relationships were assessed through evaluating teamwork, communication, mutual respect and support from colleagues and supervisors.
Level 5 hospitals	Major County referral hospitals offering specialized care, training, and research (MOH, 2021). The current study included the Kiambu County Referral Hospital, the Gatundu Level 5 Hospital, and the Thika Level 5 Hospital.
Organizational policies	Rules, procedures, and administrative guidelines that govern how work is organized and managed (Nawi, 2025). This was measured through leadership, staffing, supervision and compensation.
Physical working conditions	It means the physical and visible characteristics of the workplace which impact the way employees do their work (Tenaw et al., 2021). This study comprised the infrastructure, equipment and ergonomic aspects of the infrastructure.
Work engagement	Emotional connection and commitment employees have to their work and organization (Corbeanu & Iliescu, 2023). Work engagement was measured in this study by using the Utrecht Work Engagement Scale, which includes three components: vigour, dedication, and absorption.

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Working environment	The bigger picture of how the work is done by the employees (Conte, 2024). Physical working conditions, organizational policies, interpersonal relationships, and workload of HCWs in level 5 hospitals in Kiambu County were included in the current study.
Workload	The volume and nature of work required of workers in a specific time frame (Abate & Mekonnen, 2021). These were patient load, staffing adequacy, shift length and frequency of overtime in this study.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

This section seeks to establish the context, historical background, and current state of knowledge regarding the relationship between the working environment and work engagement among healthcare workers. In this section, the researcher sought to prove that the current research problem regarding poor work engagement in healthcare is real, timely, and worth investigating. The background information also explains why the topic is interesting or relevant.

1.1.1 Work Engagement

Work engagement remains a critical determinant of employee productivity, service quality, and organisational performance (Kaushik & Tiwari, 2023). Vigour, devotion, and absorption are characteristics of a pleasant, gratifying, and work-related frame of mind. Healthcare expenditures, quality, productivity, and overall organisational performance are significantly affected by the degree of work engagement among healthcare workers (Corbeanu & Iliescu, 2023). Because motivated workers are more likely to be engaged, the healthcare systems rely heavily on them to deliver safe, effective, and patient-centred care. Engaged healthcare workers show greater commitment and deliver safer, more consistent care because they experience fewer motivational disruptions (Mohamed & Salih, 2024). They stay longer in their jobs, reducing turnover and improving service continuity. High engagement also supports better patient interactions because workers maintain focus and emotional balance. Health systems also benefit from lower recruitment costs and stronger organisational performance, which make stable, engaged healthcare workers essential for service quality and patient outcomes (Çolak & Önder, 2024).

In the healthcare sector, work engagement among healthcare professionals is low. The global work engagement rate among healthcare professionals is 46.68 per cent, which is sometimes lower than that of other public servants due to difficult working conditions (Tesema et al., 2025). The World Health Organisation (WHO) estimates that 40% of medical professionals will leave their positions due to dissatisfaction with their profession (WHO, 2021). The professional group, institutional environment, and the parameters under investigation all significantly affected work engagement levels, according to a systematic review of work engagement among healthcare personnel in Gulf countries (Alkhateeb et al.,

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2025). Rostami et al. (2021) found that nearly two-thirds of Iranian healthcare professionals, particularly nurses and midwives, reported high levels of engagement.

Research indicates that high-income nations have substantially greater levels of work engagement than low- and middle-income nations (Isfahani et al., 2024). Studies across low- and middle-income settings show low work engagement among health workers. Engagement was 46% in Ethiopia, 34.9% in Nepal, and 41% in Pakistan, with disengagement reaching 65.1% in Nepal and 59% in Pakistan. Even though nurse engagement averaged 52.4%, it remained well below the institutional target of 90% (Hapsari, 2023). Due to several disparities, healthcare workers' work engagement is lower in African countries (Mohamed & Salih, 2024). According to a poll conducted in Somalia, 62.50% of healthcare personnel were engaged with their jobs overall, while 37.50% were not (Mohamed & Salih, 2024). Significant job disengagement (38.1%) was observed among healthcare workers in Ghana and Kenya, according to Afulani (2021).

The healthcare sector in Kenya has undergone substantial expansion in recent years. Public providers constitute 70% of healthcare consumption, whereas private, faith-based, and emergency service providers offer a variety of specialised patient services (MoH, 2024). Public hospitals are organised within a tiered system based on level of care and referral function. At the top are Level 6 national referral hospitals that provide highly specialised services, followed by Level 5 regional hospitals offering specialist care, and Level 4 county hospitals that deliver general inpatient and outpatient services. Over the past ten years, the number of active health professionals in the country has grown to approximately 190,000 across 13 primary health occupations. In addition to investments in oncology facilities, digital health initiatives, and medical infrastructure, the Ministry of Health (2021) reports progress in reducing HIV, managing malaria, and improving maternal health. However, the sector continues to grapple with workforce capacity gaps, infrastructure deficits, and the strain of emerging health threats such as COVID-19. While the workforce has grown steadily, demand for services continues to outpace supply, leaving persistent coverage gaps (National Council for Population and Development, 2023).

Studies in Kenya show low work engagement among healthcare workers. According to a cross-sectional survey of nurses working across different Kenyan healthcare facilities, just 24.5% were engaged, while 74.5% were neutral or disengaged (Kiptulon et al., 2025). Over

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70% of medical staff at Nairobi County's public hospitals reported being dissatisfied with their surroundings and working conditions, according to a study (Lifuleze et al., 2025). Just 21% of the medical staff at the Garissa County Referral Hospital were engaged in their work, according to Aden (2021). Approximately two-thirds of healthcare personnel in research conducted in a few public hospitals in Trans-Zoia County were engaged, while the remaining third reported varied degrees of discontent (Nyang'ori, 2021). Lolepo et al. (2025) found that only 19.4% of respondents in Turkana County were extremely engaged, compared with 26.7% who were very disengaged and 33.3% who were engaged.

1.1.1 Working Environment

Research across industries demonstrates a connection between employees' work engagement and their working environment. Aggarwal et al. (2023) found a link between an employee's job satisfaction and the workplace. A supportive working environment benefits both the company and its employees. According to Dumtriu et al. (2025), a supportive working environment that fosters intrinsic motivation provides employees with a sense of purpose and autonomy, thereby increasing work engagement and reducing turnover. A desk study by Mpoha (2024) found that organisational culture, management styles, and the physical workspace are major factors affecting employee job engagement. Research from the banking industry shows that a safe and supportive workplace increases work engagement and reduces stress-related turnover (Meku Lelo, 2024). There are, however, few studies in the healthcare industry that connect the workplace to job satisfaction. It is very important to understand how nurses' working environment affects their motivation to perform their jobs well, so that patients receive good care and achieve good outcomes. The goal of the current study was to determine how the working environment affects healthcare workers' work engagement in Kiambu County. The study was crucial in formulating policy recommendations that not only focus on possible pay increases for health sector players but also encompass the overall work environment of healthcare professionals in Kiambu County.

1.1.2 Public Level 5 Hospitals in Kiambu County

Kenya has 47 counties, including Kiambu County. As of the 2019 census, 2,417,735 people were living there, making it the second most populous county in Kenya (Kenya National Bureau of Statistics, 2019). Compared to many other counties, the county has a pretty good health infrastructure, though it is not evenly distributed. According to the County government of Kiambu (2023), the county has doctors, nurses, clinical officers, and community health

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workers, but the ratios for these positions remain below WHO recommendations. According to a study by Maina (2021), fewer than half of the sample of employees reported being happy with their jobs. In a related study, Githuthwa (2024). Upon examining the situation, it was found that nurses' work engagement was low, and that job satisfaction played a significant role in determining nurse retention. However, few studies have been conducted in private hospitals, and work engagement is not consistently assessed. Healthcare organisations have a unique work environment that can substantially affect employee engagement, productivity, and retention. The term working environment refers to the workplace setting and its effects on employees. In line with Conte (2024), positive working environments are those that allow for risk-taking, safety, trust, teamwork, equity, and responsibility. People can benefit from a healthy work environment in several ways, including increased vitality, better stress management, enhanced creativity, improved conflict resolution, improved teamwork and collaboration, greater resilience and adaptability, and improved performance. Employee engagement can be greatly impacted by a positive workplace (Billett, 2020). In the health care industry, a negative work context in hospitals is linked to reduced staff engagement (Mathisen et al., 2021).

1.2 Statement of the Problem

The effectiveness of healthcare delivery in public hospitals is directly correlated with the level of work engagement displayed by healthcare professionals. Higher levels of dedication, Vigor, and emotional connection to their work are exhibited by engaged healthcare professionals, thereby improving service delivery. Work engagement in the healthcare sector is a multifaceted and often problematic domain, characterised by substantial evidence of moderate-to-low engagement levels, primarily influenced by organisational and structural factors (Deng et al., 2024; Li et al., 2024; Yasin et al., 2024).

Despite several efforts and interventions, work engagement among healthcare providers in Kenya remains poor (Nyawira et al., 2022; Okoroafor et al., 2022). Per a review conducted by the MOH (2023), almost 34% of clinicians were dissatisfied with their present employment, and a further 23.4% were indifferent. In Kiambu County, health services have faced high health worker attrition, frequent strikes, and high levels of absenteeism (Maina, 2021; Maingi et al., 2025). In 2025, the County government of Kiambu warned HCWs about high absenteeism (7%) and late reporting, and transferred 103 HCWs for disciplinary action (Lidigu, 2025). The

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county has had at least 3 doctors' strikes in the past 10 years, and the last was in 2025, lasting 151 days from 26th May 2025 to 24th October 2025.

The county has experienced high employee turnover (11%), with over 500 HCWs leaving the county to seek employment in other counties and abroad in 2023 (Kiiru & Karanja, 2024). Citizens of Kiambu County have also expressed dissatisfaction with public health care services, citing long waiting times (above 2 hours), inadequate testing facilities, and drug shortages (Maina, 2021; Mbiyu, 2023). Particularly in level 5 health facilities, which are essential for specialised, comprehensive care and serve as training grounds for medical professionals, this issue is severe and persistent. Low work engagement among healthcare staff puts the training of future healthcare professionals, treatment continuity, and service delivery at risk.

Despite this, there is still a dearth of research on healthcare workers' engagement at work. Most earlier studies were conducted in countries and regions with health systems and needs that differ from those in Kenya, particularly in Kiambu County. Numerous studies focus on workload or financial incentives while ignoring the multifaceted character of the workplace. Additionally, most studies on work engagement have unfairly focused on nurses, overlooking other healthcare professionals who exhibit similar symptoms of poor or nonexistent job engagement. Despite Kiambu County's particular difficulties, few studies have examined it, even though dissatisfaction among healthcare personnel is well-documented nationwide. The present research sought to close these gaps by investigating how the working environment affects healthcare professionals' work engagement in Kiambu County.

1.3 Objectives of the Study

1.3.1 General Objective

To determine the effects of the work environment on the work engagement of healthcare workers in public Level 5 hospitals in Kiambu County.

1.3.2 Specific Objectives

i.) To determine the association of physical working conditions with work engagement of healthcare workers in public level 5 hospitals in Kiambu County.

ii.) To establish the relationship between organisational policies and work engagement of healthcare workers in public level 5 hospitals in Kiambu County.

iii.) To evaluate the association of interpersonal relationships with work engagement of healthcare workers in public level 5 hospitals in Kiambu County.

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iv.) To determine the relationship of workload on work engagement of healthcare workers in level 5 hospitals in public level 5 hospitals in Kiambu County.

1.4 Research Questions

i.) What is the association of physical working conditions and work engagement of healthcare workers in public level 5 hospitals in Kiambu County?

ii.) What is the association of organisational policies with work engagement of healthcare workers in public level 5 hospitals in Kiambu County?

iii.) What is the relationship between interpersonal relationships and the work engagement of healthcare workers in public level 5 hospitals in Kiambu County?

iv.) What is the association of workload with work engagement of healthcare workers in public level 5 hospitals in Kiambu County?

1.5 Significance of the Study

1.5.1 Practice

This study aimed to explore the work context and job involvement of healthcare workers. Job engagement is strongly associated with the responsiveness of the health system, safety, and health system efficiency, and is essential for realising universal health coverage. Unengaged health professionals pose a risk to service quality and patients' health outcomes. Less productive and less willing to provide care, disengaged healthcare workers together take up more days off, putting pressure on already scarce resources. They also tend to go the extra mile to leave work to attend to their own needs. As a result, disengaged health workers may. Moving to areas with professional shortages makes it not only hard and expensive but also a major challenge to fill vacant posts, especially in these disadvantaged areas. This research. Prevented the continuation of ineffective practices that could have led to increased absenteeism, turnover and even industrial action, which could prove to be extremely harmful in the near future to these services. These disruptions will continue to affect health services. Will result in reduced quality of care and public trust in the health system. The study, therefore, focused on modifying factors that are linked to job engagement. This will enable researchers to suggest targeted interventions to improve the work environment, human resource policies, team dynamics, and workloads, all of which will help reduce job disengagement**.**

1.5.2 Policy

The results are immediately applicable to health system managers, health policymakers, and training institutions. The study is important for healthcare workers as it offers evidence of the impact of the daily work environment on job engagement. The research is important for

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patients because health workers' involvement affects the quality of care. A committed and capable workforce facilitates continuity of services, safety and responding. The results can then be used to help the Ministry of Health and the Kiambu County Health Department make informed decisions about resource allocation to solve workplace problems and achieve tangible gains. Knowledge gained from this study can be applied to the design of interventions to increase the motivation, retention, and performance of health workers, and to improve service quality and continuity of care. In the interim, the outcomes may help reduce the number of times employees go on strike, which would help build public trust in the health system and reduce service disruptions. The study is also important to research, as it provides empirical evidence where data is scarce.

1.5.3 Theory

The research work helps to understand employee engagement and supports the theories developed so far. The study contributes to the reinforcement of existing theories of employee engagement by discussing workplace factors in the context of healthcare. The results support the theory of organisational justice, which relates employees' perceptions of fairness in the workplace to their commitment to the organisation's policies and working conditions. This working environment effect on engagement helps reinforce social exchange theory, in which a supportive working environment can create positive reactions from employees. Moreover, the association between workload and fit is consistent with the job demand-control theory, which explains the relationship between job demands and workers' motivation and involvement.

1.6 Scope of the Study

The goal of the current study was to assess the association between work engagement and the work environment. Work engagement was measured using happiness, commitment, and turnover intention. The working environment consisted of physical working conditions, organisational policies, interpersonal interactions, and workload. This was a correlational study of healthcare staff from public level 5 hospitals in Kiambu County. Kiambu County was chosen owing to the severity of the problem and a lack of studies. The county had an influx of patients visiting hospitals, primarily from Nairobi, Machakos, Murang'a, and Kajiado Counties. Healthcare workers were targeted because they provide medical services to the public and, therefore, are subject to the working conditions in their facilities. Specifically, this study targeted medical, clinical, and nursing officers. These HCWs were selected because they comprise the majority of the hospital's health staff in direct patient contact. Public level 5 health

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facilities were justified because they provide the most health services and therefore have the most healthcare workers compared to lower-level hospitals. A self-administered questionnaire was used to gather the data.

1.7 Limitations and Delimitations of the Study

The use of a correlational design in this study was a limitation, as it could not establish a causal relationship between the working environment and job engagement. The researcher therefore used regression and controlled for confounding variables to help separate the independent contributions of each workplace aspect, thereby reducing this. Because the research was limited to Kiambu County, the findings may not be fully relevant to other counties. To enable readers to make well-informed decisions about the transferability of the findings, the researcher included a thorough description of public level 5 hospitals in Kiambu County, including their institutional features and labour circumstances. The research was confined to public level 5 hospitals, which may have limited the application of the results to lower-level institutions or hospitals in different locations, even though multiple hospitals operated within the county. This limitation was addressed by explicitly situating the findings within the functional role of public level 5 facilities, acknowledging their distinct position as centres for specialised services and training.

In addition, the study population was limited to officers, clinical officers, nursing officers, and selected healthcare workers, excluding other hospital staff whose experiences may differ. The researcher ensured representation of these cadres that reflected differences in job roles, responsibilities, and exposure to workplace situations. The working environment and work engagement were assessed using self-administered questionnaires based on self-reported perceptions, rather than through direct observation in the workplace. The study thus used self-reported measures of objective variables (such as staff performance or staff retention), which may introduce bias into the self-reported findings. Moreover, an observation study cannot be used to reflect seasonal changes or changes over time on the level of commitment to the job, commitment to the working environment, and changes in working conditions; therefore, the researcher made the questions used in this study ask the participants to reflect on the changes that had occurred in the last few months, thus providing a temporal contrast in the cross-sectional design.

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CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review for the study, informed by theoretical and empirical literature on employee engagement and the workplace. The researcher examined theoretical literature to identify theories explaining how work engagement relates to the work environment and conducted an empirical literature review to assess empirical studies. Another conceptual design of the study was also discussed.

2.2 Theoretical Framework

Justice, expectancy, social exchange and job demand-control theories guided the study and explained how working conditions, organisational policies, interpersonal relationships, and workload affected healthcare workers' job engagement; the theoretical framework bridged the gap between the working environment and psychology and provided a more comprehensive explanation of work engagement than prior single-theory approaches.

2.2.1 Expectancy Theory

In 1964, Victor H. Vroom established the expectancy theory based on his inquiry into the factors that influence decision-making. Vroom et al. (2015) claimed that the relationship between workers' aims and their behaviour at work was more subtle than other academics had previously believed (Min et al., 2020). According to expectation theory, a person will perform better when they know that an additional effort will be valued and rewarded (Vroom, 1964). This is based on the principle that behaviour results from conscious decisions aimed at increasing enjoyment. Vroom believes that an employee's psychological beliefs about instrumentality, valence, and expectancy converge in a motivating force that influences people's behaviour to avoid unpleasantness and provide pleasure (Beckmann & Heckhausen, 2025).

Expectancy theory, as it relates to work engagement, posits that employees are motivated to engage in activities to receive rewards that meet their needs, and that working for those rewards is a result of achieving them, not necessarily the key to outstanding performance. When an individual has high and positive expectancy, instrumentality and valence, they feel motivated and content in their job because their efforts are likely to bring about their reward; and the reward is valued; in this case, they may be rewarded by bonuses, promotions, or recognition for their hard work (Patricia & Asoba, 2021). Thus, when HCWs believe their work

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will positively impact – for instance, by fostering a supportive working environment – they are more likely to feel engaged and satisfied, and to remain in their roles.

Finally, the physical working conditions variable was anchored in expectancy theory, which states that working in a safe, supportive, and conducive environment can enable employees to perform better and achieve valued outcomes. High levels of motivation, dedication, and work engagement are associated with good physical working conditions, which healthcare employees perceive as helping them perform effectively and reducing work-related stress. However, this theory has been criticised because its scope is very limited and it assumes only material rewards. It does not consider other factors, which is why they are also responsible for motivation (Chanez et al., 2014).

2.2.2 Organisational Justice Theory

Organisational Justice Theory was primarily developed by Greenberg (1987) to explain how employees perceive fairness within organisations and how such perceptions influence their attitudes and behaviours at work (Malhotra et al., 2022). John Stacey Adams's Equity Theory helped shape this theory. Equity Theory is about fairness, justification, and ensuring rewards match what employees receive in return. This theory says that employees feel a workplace is fair when they get treatment in many areas. These areas include how resources are shared, how work is organised, and how employees interact with managers. Equity Theory shows that these feelings of fairness affect employee motivation, commitment, trust, satisfaction, and engagement (Khaola & Rambe, 2021).

Organisational justice theory comprises four components: justice, procedural justice, interactional justice, and informational justice (Awwad & Adaileh, 2025). Distributive justice concerns how employees judge whether the results they receive—such as pay, recognition, workload, incentives, and promotions—are fair. Distributive justice shows that when employees feel their rewards match their effort and contribution, they stay more motivated. Procedural justice concerns how decisions are made within the organisation. It says that if the steps used to make decisions are clear, consistent, include employees, and are objective, then employees trust management and feel more committed. Interactional justice looks at how managers and supervisors treat employees. It says that when managers act professionally, treat people with dignity, show empathy, and respect, employees develop attitudes and become more engaged. Informational justice is about how employees are informed. It says that when

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employees get information about choices, rules and changes, they feel better about the organisation. Lönnqvist et al. (2022) found that providing employees with information improves their view of the organisation and their psychological bond with their workplace, which is particularly important in the healthcare sector.

Organisational justice theory has been used in studies examining employee engagement, job satisfaction, organisational commitment, turnover intention, burnout, and workplace performance. This theory has been applied in sectors such as manufacturing, public service, healthcare and education (Bekmezci et al., 2022; Malhotra et al., 2022; Ravina-Ripoll et al., 2024). This theory has been used in healthcare to understand the effects of equitable management practices on the quality of patient care, employee morale, retention, and turnover (Awwad & Adaileh, 2025; Lönnqvist et al., 2022; Ren et al., 2021). Studies have shown that when these workers believe that policies and managerial decisions within an organisation are fair, they have higher levels of job engagement. The theory was highly relevant to the present study as it explained how organisational policies can influence work engagement among healthcare workers of public hospitals. The rules of an organisation—whether for promotions, workload distribution, disciplinary action, communication channels, leave policies, or reward systems—shape how employees perceive fairness in the workplace. If these principles are applied consistently, fairly, and transparently, healthcare workers are likely to feel appreciated, inspired, and involved at work. Therefore, the theory is the foundation of organisational policies, the second variable. Despite their merits, critics such as Malhotra et al. (2022) of PODC argue that the sense of fairness is highly subjective and varies from employee to employee based on their expectations, culture, and experiences. Furthermore, it oversimplifies workplace behaviour by assuming that fairness is the only driver of employee attitudes, and that other factors such as personality, leadership style, organisational culture, and economic conditions can also affect their level of engagement (Awwad & Adaileh, 2025).

2.2.3 Social Exchange Theory

Homans (1958) created Social Exchange Theory, and later scholars such as Blau (1964) and Richard Emerson (1972a, 1972b) added detail to it. According to social exchange theory, people will engage in transactions only if it is advantageous to them and the costs are reasonable (Stafford & Kuiper, 2021). The ideas of cost-benefit analysis, reinforcement, and rewards are incorporated into social exchange theory, as well as into psychology and economic exchange theories. Interactions are governed by implicit assumptions of reciprocity, trust, mutual

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obligation, and reward, according to the Social Exchange Theory. According to Do et al. (2024), workers are more likely to support, respect, and acknowledge others when they feel their employers and teams treat them fairly. According to the Social Exchange Theory, relationships at work affect employee attitudes, motivation, and engagement. These components include reciprocity, rewards, cost, trust, commitment, and shared responsibilities (Stafford & Kuiper, 2021). Reciprocity is a fundamental tenet of social exchange theory that states that action is a result of one person's actions.

Social Exchange Theory has been applied to subjects as diverse as job satisfaction, turnover intentions, teamwork, trust, and employee engagement in areas of human resource management (Naim et al., 2022), education (Shin et al., 2022), healthcare management (Ren & Ma, 2021), and behaviour and leadership studies (Meira & Hancer, 2021). For example, previous studies have repeatedly shown that positive interpersonal relationships at work increase employee motivation, reduce burnout, and increase work engagement (Shin et al., 2022; Meira & Hancer, 2021; Zhang & Liu, 2022). For instance, in one study, Social Exchange Theory was applied to understand the interpersonal aspects of hospitals related to healthcare workers' work engagement—trust, support, and collaboration. One shortcoming of social exchange theory is that it may oversimplify interactions, reducing them to trade transactions (Naim et al., 2022).

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2.2.4 Job Demand Control Theory

The Job Demand-Control (JDC) hypothesis was created by Robert Karasek in 1979 to explain the relationship between job requirements and workers' degree of autonomy. Work interacts to impact employee well-being and workplace stress (Demerouti & Bakker, 2023). It is an evolution of health psychology, stress theories, and motivational theories that focus on how work environments affect employees' health. According to the hypothesis, stress and burnout result from high job expectations and little control over decision-making processes. Moreover, reduced employee engagement is likely to be present in the workplace. Conversely, workers whose work is characterised by working conditions are less engaged and less motivated. Have lower productivity, while workers who enjoy more autonomy and control are more engaged, more motivated, and more productive (Bakker et al., 2023).

Job demands and job control are the two aspects of the theory; social support was later introduced as a feature. Job demands are the emotional and cognitive aspects required to

perform a job (Bakker & De Vries, 2021). These can include workload, time pressures, long working hours, role conflict, emotional stress and high patient load, all of which are typical in the healthcare context. The greater the job demands, the higher the level of fatigue, stress and burnout if adequate coping resources are not available to employees.

Decision latitude (job control) refers to how much autonomy employees have in scheduling their work, in how they conduct it, and how they do their job. When employees have autonomy, they are better able to manage work-related stress and maintain engagement. Another aspect of the expanded version (Demerouti & Bakker, 2023) is support, defined as help and encouragement from colleagues and supervisors. Strong social support helps to protect workers' well-being. Buffers the effects of workloads. The theory says that high expectations with control can lead to learning, development and active participation. The same high expectations and control can create high-strain jobs that undermine employee motivation, health, and participation.

This study finds that the theory has been used in research on stress, burnout, absenteeism, job satisfaction, employee well-being, and employee involvement. Researchers have applied it in fields such as human resource management, organisational psychology, nursing and health. In the healthcare sector, the theory helps explain how staff can become emotionally exhausted, disengaged, and burned out when they face heavy workloads, insufficient staffing, shift work, and limited autonomy (Chowhan & Pike, 2023; De Vries et al., 2023). The research shows that healthcare workers who feel overloaded because of workloads or because they have no control over their tasks will experience emotional exhaustion, depression and low job engagement.

The study examines how workloads are linked to work engagement among hospital-based health care professionals. Constant stress among health workers in hospitals in developing countries such as Kenya can be attributed to high patient-to-staff ratios, understaffing, and a lack of resources. JDC says that when job demands are combined with a lack of control or support, employees' energy, motivation, and psychological attachment to their jobs decline. On the other hand, reasonable work demands and good working conditions can boost commitment and productivity.

The theory also oversimplifies work life by focusing on expectations and control. It ignores important factors such as organisational culture, leadership style, personality traits and

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emotional intelligence. The model has also faced criticism for focusing on work dimensions that are especially important in some jobs, such as healthcare, where emotional work is common (Bakker et al., 2023).

2.3 Conceptual Framework

The study has independent and dependent variables, as illustrated in Figure 1.

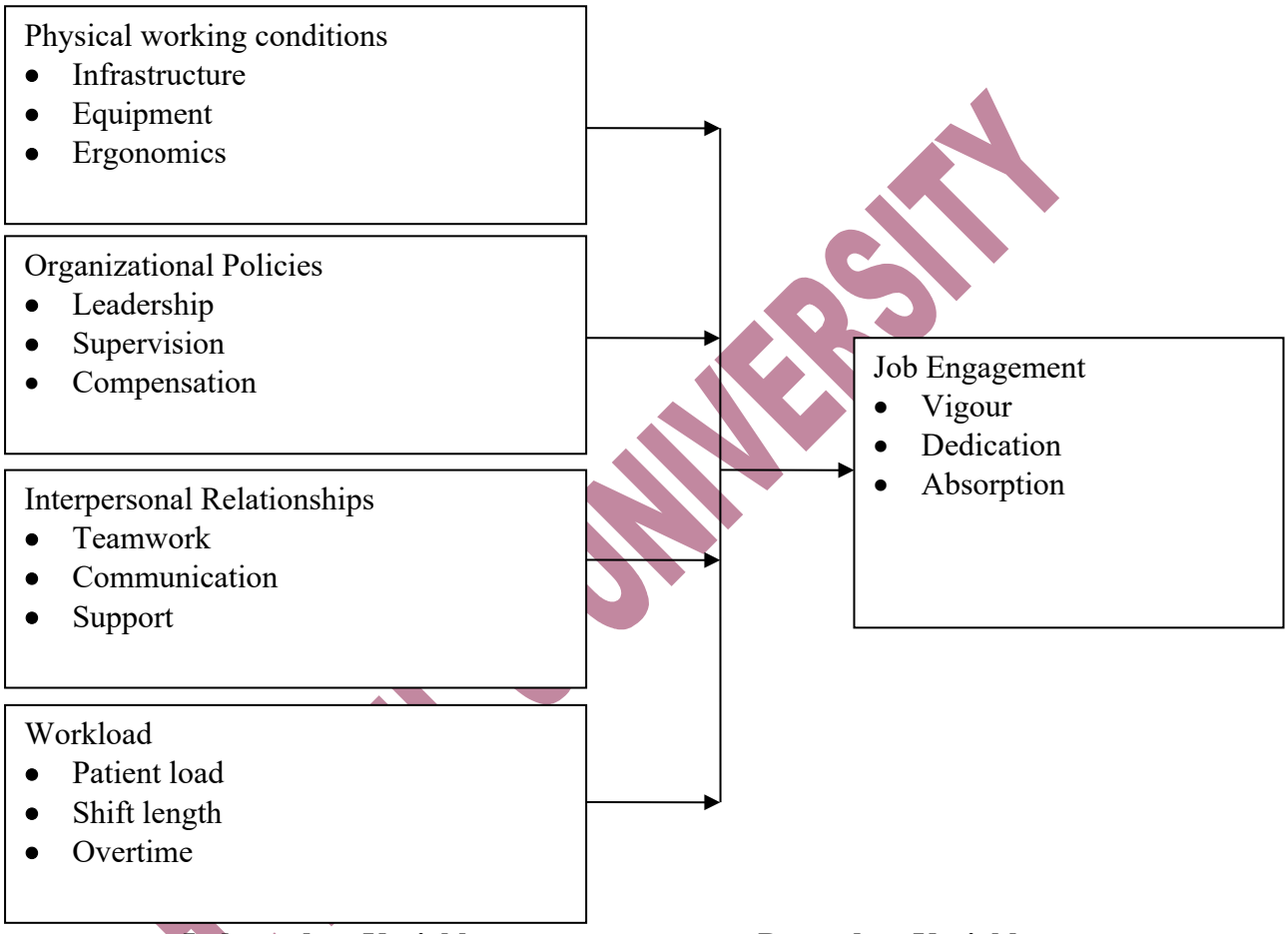


Figure 1: Conceptual Framework

Source: Author (2026)

The working environment in this study includes working conditions policies, interpersonal relationships and workload. The literature review shows that these four aspects of the work environment are consistently associated with work engagement in healthcare settings worldwide. The theoretical framework supports the selection of these factors by indicating that supportive working environments help increase motivation and job engagement.

The independent variables—factors related to the working environment—were expected to affect job engagement. According to the literature, a positive relationship exists when physical conditions are good, policies are supportive, interpersonal relationships are healthy, and workloads are manageable. These conditions are expected to boost job engagement. On the other hand, poor conditions such as weak policies, strained relationships, and heavy workloads were expected to reduce engagement. This can lead to rates of turnover and absenteeism.

2.4 Review of Literature on Variables

This section discusses the variables and main concepts used in the study. Variables are explained by describing how they will be measured.

2.4.1 Working Conditions of Healthcare Workers

Working conditions are aspects of the work environment that affect employee well-being and productivity, such as noise levels, lighting, temperature, air quality, ergonomic design, necessary equipment, and access to resources (Lussier & Hendon, 2025). In the context of healthcare, working conditions are an aspect of employee engagement, job performance and health outcomes (Shetty et al., 2025). Dim lighting and a lack of temperature control can contribute to a working environment that causes fatigue, stress and discomfort. Physical issues, such as a lack of space and unsafe practices, contribute to workplace accidents, which can decrease morale and engagement (Boxall & Purcell, 2022). When healthcare workers feel safe and comfortable, they are more likely to be engaged in their jobs and to experience a sense of fulfilment and responsibility.

Healthcare is a challenging working environment. A healthcare worker must pay attention to detail. The job often requires strength, particularly in hospitals, clinics and emergency rooms. Workers may experience issues such as working long hours, exposure to infectious diseases, limited rest areas, and lifting or carrying patients. This can cause both mental fatigue (Lifuleze et al., 2025). In addition to the challenges of the working environment, healthcare workers experience an engagement rate because working longer hours in hazardous and inhospitable conditions, without being able to take breaks that make sense, and being subjected to noise and inadequate lighting, causes physical fatigue, burnout, and disengagement. The physical working environment for healthcare workers can pose health and safety challenges and contribute to high turnover, low engagement, and low satisfaction.

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2.4.2 Organisational Policies of Healthcare Workers

Formal guidelines and procedures that govern the organisation's actions are organisational policies, which fall into eight categories: safety precautions, communication, performance management, employee conduct and job standards, and how workers should manage their personal and professional lives (Boxall & Purcell, 2022). Organisational policies are particularly important in healthcare environments, as they set the tone for the type of care patients receive, how workers are treated, and the efficiency of business operations. Well-designed policies help promote fairness, transparency, and uniformity in the workplace, fostering a positive working environment for employees (Nawi, 2025). The main factors that affect the work engagement of healthcare workers are outlined in the policies for patient care, the guidelines for personnel staffing, and the regulations for personnel development. When policies and procedures are clearly defined and supportive, they help create a safe workplace where staff feel appreciated and supported by their organisation. A bad policy can cause chaos, confusion, and frustration in organisations, as well as a loss of trust between employees and their organisation, and lower work engagement and employee participation, according to Meku Lelo (2024). Work-life balance measures, professional development opportunities, and a fair compensation policy, when combined, improve the work engagement of healthcare workers. On the other hand, restrictive policies lacking clarity cause disengagement and burnout among employees (Jha et al., 2020).

In healthcare, policies are critical to addressing specific concerns among healthcare workers. Established policies guide aspects of work such as procedures for hiring employees, developing employee work schedules, implementing protective measures, and employee development programmes (Rika et al., 2023). When staffing is inadequate, or the number of staffed units exceeds the number of patients, healthcare workers' biggest struggle is working with unrealistically high patient-to-staff ratios. This situation creates undue work burdens for employees, leading to overload and a lack of interest in the job. The current scheduling policies leave workers too little time to rest and are inflexible in allowing them to work elsewhere. When procedural-level developments are lacking or not supportive of healthcare workers, they face challenges that hinder their career progression (Meku Lelo, 2024). The extent to which healthcare professionals are engaged in their jobs is a function of their daily engagement, which is shaped by organisational policies (Jha et al., 2020). As work engagement decreases, employees become less motivated and more irritated because policies do not address workload,

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resources, and professional growth, undermining a positive workplace culture and employee engagement.

2.4.3 Interpersonal Relationships of Healthcare Workers

Interpersonal relationships in the workplace are interactions, communication, and dynamics between colleagues, supervisors, and other stakeholders (Mahapatra, 2022). In healthcare, how people get along with each other is also important because these connections help build trust and create a good work environment. This shows that employees feel their jobs are treated well, that they can speak freely, and that they help each other. This helps all of us to work as a team. The way the workers communicate sets the tone for how they provide care, fix issues, and share information. Bad relationships can make the workplace a bad place to be. This leads to stress, anger and less interest in their jobs. Motivation can be increased by support from managers and co-workers. Maintain greater employee involvement in healthcare. This enhances not only their performance but also their job experience. Work culture and work engagement are higher in healthcare environments with high-quality relationships.

The healthcare industry requires its workers to operate in extremely stressful conditions and to engage in constant information sharing with colleagues to cope with that stress (Wang & Tang, 2024). Positive interpersonal relationships help team members achieve better outcomes with patients because they can handle issues and on-the-job emotional baggage more easily. Employee relations can be negatively affected by high turnover, hierarchical structures and understaffing (Aggarwal et al., 2023). Among the several challenges that healthcare professionals encounter is a lack of communication and support from peers and supervisors, as well as workplace bullying, which results in healthcare workers experiencing lower mental health and job satisfaction. When an employee in the healthcare industry cannot connect with and engage colleagues and supervisors, they may feel disengaged and demotivated, increasing the likelihood of leaving the job (Gustavson et al., 2023). Leadership that supports and fosters strong, respectful relationships and entities through team building and regular feedback will improve work engagement by creating a positive work climate that promotes collaboration and development.

2.4.4 Workload of Healthcare Workers

The amount of work assigned to a person or group within a given time frame is referred to as their workload (Meku Lelo, 2024). The basic obligations and functions of a health worker

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are stated in his/her job description. Workload is a key determinant of employees' satisfaction and significantly influences their involvement in healthcare settings. According to Abate and Mekonnen (2021), equitable task distribution and a workload commensurate with the team's capacity to deliver results will lead to accomplishment and contented work performance. If these responsibilities become too much for them, employees will experience stress, burnout, and job disengagement. With a heavy workload—particularly when practising in environments like hospitals and emergency rooms—health care workers lose the ability to do their jobs. Longer work hours, coupled with the ongoing need to work, often resulted in physical and emotional wear and tear, which in turn led to reduced job interest and higher turnover rates (Jung & Kim, 2025). Proper balance between work tasks and breaks, coupled with a support network, will help healthcare workers do more with less stress, leading to greater job engagement, improved productivity, and better work-life balance.

In healthcare settings, workload can pose a variety of challenges that affect healthcare workers' job engagement. People who need proper treatment from qualified healthcare workers are the most important problem in the world today due to insufficient staffing. With increased patient/staff ratios, health care workers are overloaded. Emotionally distressed and physically exhausted workers cannot devote time to their own and professional development when they are overworked. High work demands on healthcare workers lead them to neglect providing top-notch patient care, contributing to treatment errors and reducing treatment efficacy. Performance targets not only contribute to employee dissatisfaction but, when combined with expectations to generate administrative activity and respond to patients' demands within specific timeframes, are bound to lead to anger. Mathisen et al. (2021) highlighted that the higher the levels of work demands and the fewer support systems for healthcare workers during their work time, the more likely they are to experience burnout symptoms, which lead to reduced workplace and job engagement. More experienced HW workers keep their jobs when demands are minimised and time, resources, and necessary support are increased, which leads to greater work engagement and work-life balance.

2.5 Empirical Review

This section presents the empirical literature relevant to the problem being investigated. This includes a synthesis of available studies and identification of research gaps.

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2.5.1 Work Engagement among Healthcare Workers

Overall engagement levels vary significantly by region and specific profession, but many studies indicate moderate to low engagement globally, with a potential downward trend since the COVID-19 pandemic. Deng et al. (2024) searched for a total of 2,742 papers, from which 100 articles were identified as suitable for inclusion in the meta-analysis and 97 in the comparative analysis of influencing factors. The average score on a 5-point scale was 3.52, and the pooled work engagement percentage of all the CGPs was 70.82%. Subgroup analysis revealed that high-income countries were more engaged than upper-middle-income countries, and that participation declined significantly from 72.39 per cent prior to 2009 to 63.09 per cent after 2020.

According to the systematic review by Yasin et al. (2024), the literature shows job involvement of about 69.6 per cent, but individual studies reported rates ranging from 24-25 per cent to >70 per cent. Overall, engagement was higher in areas related to supportive supervision, adequate staffing, manageable workloads, resources, and strong collegial relationships, all of which positively impacted psychological well-being and organisational commitment. Disengagement was highly expressed in high workload, job insecurity, low salary, fear of infection, stigma of working in COVID-19 units and not enough psychological support, and all those were associated with burnout, turnover and anxiety and depression among employees. A related meta-analysis by Li et al. (2024) revealed that, in general, health care workers were unengaged and that a high prevalence of burnout negatively affected workplace engagement (mean prevalence 30.7% (SD 9.7%)). Generally, there was little engagement across all aspects, particularly regarding patient safety and the quality of care.

A systematic review of 73 studies on healthcare workers in Gulf Cooperation Council countries revealed that work engagement was mixed, with moderate levels overall rather than consistently high or low. Workers reported engagement in areas such as co-worker relationships (32 studies), supervision (26 studies), fringe benefits (34 studies), and the intrinsic nature of work (30 studies), all of which were positively associated with motivation and collegiality. Conversely, disengagement was frequently linked to pay (40 studies), promotion opportunities (20 studies), operating conditions (46 studies), and workload (8 studies), with heavy workloads and unclear promotion systems emerging as recurrent stressors (Alkhateeb et al., 2025). Similarly, Assele et al. (2025) revealed that work engagement among Ethiopian healthcare workers was generally low, with only 41.2% reporting engagement. Engagement

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was notably higher in areas where resources were adequately available, as workers with sufficient supplies and equipment had three times greater odds of being motivated, and in contexts where training opportunities were provided, which increased motivation by 2.6 times.

According to Mohamed and Salih (2024), 62.5% of people reported being engaged, and 37.5% reported being disengaged. Engagement varied by job type. Medical doctors had an engagement rate of 80 %, followed by midwives at 73 %. Pharmacists were lower, at 45 %, engaged, and other professionals were at 47 %. Nurses had engagement at 59 %. Laboratory technicians had 62 % engagement. In Kenya, Afulani et al. (2021) found that 38.1% were disengaged and 7.4% were very disengaged. The study found that 30.7 % were disengaged – a big drop from the 85 % engagement before the pandemic. Sixty-one point nine per cent had some level of engagement, with 52.3 % engaged and 9.6 % very engaged. However, high stress at 70.5 % and burnout at 69.4 %, along with a sense of preparedness at 62.2 %, weakened engagement. Workers were more engaged when they felt prepared (APOR = 2.83, CI [1.66, 4.84]), valued by managers, and supported by communication. Disengagement was closely linked to fear of infection, lack of preparedness, and high stress and burnout (APORs of 0.18 for stress and 0.38 for burnout).

In Kenya, Kiptulon and colleagues (2025) found that nurses' work engagement was very low. 24.5 % Reported engagement, 37.7 % were disengaged, and the remaining 37.7 % were neutral. Lifuleze et al. (2025) also reported moderate engagement, with only 42.3 % of respondents feeling engaged with their jobs. These results show that while healthcare workers value teamwork and their professional identity, ongoing problems with pay, supplies, and workplace conditions significantly undermine their job engagement. These issues point to areas where policy and management must act. In Nyang'ori's (2021) study, work engagement remained low, with 47.5 % engaged, while interviews with key informants revealed that 80 % reported widespread disengagement.

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2.5.2 Physical Working Conditions and HCWs' Work Engagement

2.5.2.1 Infrastructure

Alkhateeb et al. (2025) conducted a systematic review of five databases from 2012 to 2022, which found that infrastructure had a significant impact on the work engagement of healthcare professionals. Greater participation was associated with good physical infrastructure, such as well-maintained buildings, adequate space, and reliable utilities. In

contrast, challenging facilities, including waterfront infrastructure, crowded facilities, and negative physical layouts, led to pressure and disengagement, including poor efficiency and high workload pressures. This affirmed the importance of infrastructural adequacy, which was found not to be a passive factor but rather an important influence on job satisfaction and retention in healthcare settings.

Shetty et al. (2025) found that infrastructure and architectural design ideas, such as spatial layout, circulation paths, rooms, and relaxation areas, had a major influence on work engagement among hospital staff. Workers said that flexibility and efficiency mattered, and that good spatial design, along with enough personal space and privacy, helped them feel psychologically comfortable. They also noted a link between seeing views and feeling engaged, but many did not have access to more restorative spaces.

Using a design, Lifuleze et al. (2025) found that the physical parts of a workplace, such as proper Infrastructure, good Equipment, ergonomic design, and decent workspace conditions, strongly influenced how workers viewed their jobs. Not having these things left workers feeling detached from their work. In another study, Nyang'ori (2021) in Trans-Nzoia County found that the makeup of public hospital Infrastructure affected Work engagement among health workers. Bad Infrastructure – not space, poor lighting or ventilation, worn-out buildings – pushed workers away. Conversely, when hospital Infrastructure improved, workers' attitudes toward their work and morale improved.

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2.5.2.2 Equipment

Availability and quality of Equipment were seen as vital to Job Engagement. Health workers became more engaged when they had functional, sufficient equipment to do their jobs well. Missing Equipment caused frustration, low morale and bad patient care. Inspectors saw that when Equipment was missing, staff had to improvise, which increased pressure and lowered morale. Thus, having the right Equipment directly linked to Work engagement and the quality of care (Al-Maskari et al., 2022).

Nyang'ori (2021) found that having enough up-to-date Equipment was a predictor of Job Engagement. Healthcare providers said they felt less engaged when their Equipment was old or missing, which caused delays and frustration when treating patients. A logistic regression test showed a link between Equipment and overall Work engagement, proving that good Equipment boosted staff confidence and performance. In short, hospitals that had the resources

tended to show greater professional satisfaction and confidence, which lowered staff turnover and improved patient care.

Results of inferential statistics indicated a statistically significant correlation between availability and disengagement (at $P < 0.05$), and 43.1% of respondents considered the sufficiency of equipment insufficient. In particular, the OR for equipment adequacy was 2.871, meaning that when equipment was inadequate, healthcare personnel were almost three times as likely to be disengaged. Lack of personal protective equipment (PPE) also emerged as one of the most significant factors, with an OR of 2.394, suggesting it increased the risk of industrial unrest and disengagement.

2.5.2.3 Ergonomics

No question, using ergonomic techniques to improve the standard of living at work is associated with happier employees. The Turkish study discovered a significant positive correlation between ergonomics level and job and life engagement. Doğan and Altınbaş (2024) claim that ergonomics affects work engagement but not life engagement. Similarly, Monera et al. (2024) demonstrated that the quality of public hospitals in Metro Manila and the implementation of ergonomic policies influence the physical performance of the medical workforce and their well-being. Ramos-García's (2022) study also found that organisational and physical ergonomic factors have a significant impact on the work engagement and occupational health of university employees during the pandemic. However, in a physical ergonomic evaluation, where the impact on work performance depends on perceived temperature and workstation design, Gumasing et al. (2025) showed minimal impact on motivation.

In a study by Al-Maskari et al. (2022), ergonomics came up as an important factor affecting job engagement. Employees demonstrated greater engagement in a hygienic, well-maintained workplace with fewer hazards. Not only was ergonomics a marker of comfort and security, but also of pride and trust among patients and the healthcare workers. In contrast, environments that lacked adequate ergonomics negatively affected morale and led to disengagement. The review highlighted ergonomics as an intrinsic part of occupational health and the overall image of institutional quality, and consequently as an element that determines employees' commitment to work.

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The study by Shetty et al. (2025) found that ergonomics, as perceived through environmental parameters such as air, noise, and thermal comfort, has a significant effect on job engagement. Staff often spoke about how clean air and a low-noise environment help minimise stress and sustain wellbeing. Good lighting and room temperature were also appreciated, but depended on the season and personal job positions. Results highlighted the critical importance of ergonomics and environmental cleanliness, as a dirty environment can cause disengagement and fatigue. Therefore, in private hospitals, it proved to be essential to meet high standards in the areas of cleanliness and control of the environment, for staff satisfaction.

The data from 35 cross-sectional studies, published between 2011 and 2020 and involving 9090 health workers from various regions and professions, were synthesized through a systematic review and meta-analysis using PRISMA methodology (Tenaw et al., 2021). The data revealed that a secure working environment is a strong predictor of job engagement, with health workers who work in safe workplaces 6.5 times more likely to report work engagement when compared with workers in an insecure working environment.

2.5.3 Organisational Policies and HCWs' Work Engagement

2.5.3.1 Leadership

Employee work engagement is found to be significantly impacted by leadership style, with transformational leadership consistently receiving a high positive score because of its capacity to inspire and empower workers and foster a positive work environment. Notarnicola et al. (2024) investigated the relationship between various leadership philosophies and workplace wellness and professional growth. Results indicated that there was a positive correlation between work engagement and transformational leadership and a negative correlation between work engagement and laissez-faire leadership in some of the studies. While there were similar levels in both groups in relation to personal mastery, coordinators reported lower work engagement compared to those in higher organisational positions. The results indicate that trust, motivation, and engagement are higher under positive leadership styles, especially transformational leadership, whereas passive or autocratic leadership styles negatively affect staff performance and morale.

Nawi (2025) conducted a systematic review of organisational support, including leadership support, and found that a high degree of engagement was linked to team leadership,

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mentoring strategies, and regular management communication. Moderate engagement, on the other hand, was noted in settings with occasional or inconsistent leader participation. In contrast, poor leadership support, unclear priorities, and poor organisational governance were strongly associated with low engagement, and this was even more pronounced among rural physicians.

Deng et al. (2024) conducted a meta-analysis of 100 articles and a comparative analysis of 97 articles on influencing factors. One of the eight categories of variables examined was governance (institutional management practices, appraisal systems, and organisational support), which was found to be significantly associated with work engagement in 45 studies (45.0%). While not reported as frequently as remuneration or working conditions, governance was statistically significant, indicating the importance of institutional structures and managerial processes for work engagement.

2.5.3.2 Supervision

Supervision is a major factor in fostering work engagement, as it creates a positive work culture and a supportive, communicative, and respectful team. García-Cabrera et al. (2023) conducted a study in the European Union (EU) that revealed that work engagement was positively correlated with helpful behaviours, with respect being the most influential. However, unlike expected, the adverse effects of supervisor gender and gender similarity emerged on subordinate work engagement, and several supportive behaviours had negative modifiers on work engagement.

In the study by Richard et al. (2026), the researchers built on the Self-Verification theory by conducting a field study in the USA and China, surveying supervisor-subordinate dyads. The methodology was quantitative analysis based on dispositional traits and supervisory behaviours. Results showed that abusive supervision had a dampening effect on work engagement generally, but subordinates' negative affectivity moderated this effect. In other words, employees with negative self-assessments were more likely to behave tolerantly toward abusive supervision because it aligned with their worldview.

Rika et al. (2023) used a saturated sampling technique (52 employees), questionnaires and documentation as data collection tools, and analysed the data using SPSS. The intent was to answer whether OCB mediated the relationship between job engagement, supervision, and performance results. The findings demonstrated that while work engagement had a substantial

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impact on performance, supervision had no discernible effect on OCB or performance. Supportive supervisory practices may be indirectly linked to performance through engagement, as work engagement was found to be a crucial component of employee outcomes, even though there was no direct correlation between supervision and engagement or performance.

Another study was carried out in Ethiopia. Teshome et al. (2025) conducted a series of steps to gather literature and conduct a systematic literature search from 12 cross-sectional studies, including 3,736 participants. Overall results indicated that these employees had a relatively low level of work engagement (43.42%). Work engagement was significantly higher if healthcare professionals felt they had adequate supervision (1.44x higher).

2.5.3.3 Compensation

A global meta-analysis of community general practitioners by Deng et al. (2023) showed that remuneration and working conditions are predominant factors shaping engagement, with evidence showing a decline in engagement rates after 2020, coinciding with heightened workload demands and strained compensation structures. Diakos et al. (2022) reported that frontline healthcare staff expressed low engagement with pay, with physicians, in particular, scoring significantly lower on compensation than other staff categories, while workload pressures compounded disengagement across most domains.

Within the Gulf Cooperation Council countries, Alkhateeb et al. (2025) synthesised findings from 73 studies. They highlighted pay as a central determinant of job engagement, noting that compensation consistently emerged alongside promotion opportunities and fringe benefits as key influences on healthcare workers' perceptions of their roles. Similarly, a review of eight African countries (Muhula et al., 2025) found that among the best indicators of disengagement in primary care settings were low compensation and little recognition, which, combined with excessive workloads, lowered morale among surveyed healthcare professionals in Ethiopia. Tesema et al. (2025) observed that healthcare workers earning below 8,000 Ethiopian Birr (ETB) per month were significantly less likely to report job engagement. Adjusted odds ratios indicated reduced engagement across salary categories below 10,000 ETB, whereas those in higher-paying radiology positions demonstrated markedly greater engagement.

In Chhattisgarh, India, Deshmukh et al. (2023) reported that healthcare providers expressed notable disengagement from promotional opportunities, salary, and communication,

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with 42% of respondents identifying a lack of career advancement as a source of discontent. Diakos et al. (2022) observed that promotion scored poorly among frontline healthcare workers, with a mean engagement score of 11.22 ± 4.38, reflecting widespread disengagement from advancement prospects amid heightened workload. Similarly, in the Gulf Cooperation Council countries, Alkhateeb et al. (2025) highlighted promotion as one of the fourteen key determinants of job engagement, noting that limited opportunities for career progression were consistently associated with lower engagement across multiple studies.

In a multi-country study across eight African nations, Muhula et al. (2025) found that internal communication is important and can increase employee engagement, which in turn affects public health organisations' performance and governance. Heuss and Datta (2023) employed a survey-based approach to collect data from doctors across a range of healthcare settings regarding their perceptions of the quality of communication at work and how it related to their levels of engagement. The results showed that while leaders' communication styles were associated with work engagement and well-being, poor communication styles were associated with stress and unhappiness. The study's main conclusion is that, to promote a positive workplace culture and increase physician engagement and resilience, leadership communication is essential. found that promotional opportunities were among the factors influencing job engagement, with limited prospects for advancement contributing to disengagement, particularly in high-stress departments such as emergency and inpatient care.

2.5.4 Interpersonal Relationships and HCWs' Work Engagement

2.5.4.1 Teamwork

Gustavson et al.'s (2023) review demonstrated that collaborative teamwork was consistently associated with higher job engagement, as professionals reported that shared decision-making, mutual support among colleagues, and interdisciplinary cooperation enhanced their sense of competence and reduced feelings of isolation. Healthcare workers' intrinsic motivation and engagement were reinforced by teamwork, which also enhanced patient outcomes, built professional identities, and created a favourable working environment. With an adjusted odds ratio, Nyang'ori (2021) found that relationships with coworkers were a major predictor of work engagement in Kenya, suggesting that positive interpersonal relationships and collegial support significantly raised respondents' engagement levels.

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2.5.4.2 Communication

Communication has been statistically proven to impact job engagement. Pirrota et al. (2025) found that activities such as attending communication skills training and participating in regular internal meetings were key to improving communication quality, and that there was a clear positive correlation between communication scores and job satisfaction levels. The results showed how crucial internal communication is and how it can boost employee engagement, which in turn influences the governance and performance of public health organisations. Heuss and Datta (2023) used a survey-based method to gather information from physicians across various healthcare settings about how they perceived the quality of communication in their jobs and how it related to their engagement levels. The findings indicated that while poor communication styles were associated with stress and unhappiness, leaders' communication styles were associated with work engagement and well-being. The study's key finding is that leadership communication is necessary to foster a positive workplace culture and increase physician engagement and resilience.

Hahm et al. (2024) found that having patients rather than nurses hurt engagement. Feeling closer to the organisation was the important factor for job satisfaction followed by good communication skills and trust within the team. A study in the Gaza Strip by Dalal et al. (2023) Showed that all the variables were linked in a way. It showed that the connection between communication engagement and organisational commitment was partly explained by work engagement. The factors that lead to communication and work engagement together explain 61% of the change in organisational commitment making them very important in this model.

2.5.4.3 Support

Job support for example related to leadership culture and social networks is an important factor that explains work engagement in different healthcare jobs. Among the 14 factors found by Alkhateeb et al. (2025) The one common factor was relationships with co-workers. This was mentioned in 32 studies as co-workers, colleagues, and teamwork. The results showed that nurses and other health workers were more likely to report work engagement when they had good personal relationships, teamwork and support from peers. However, bad relationships with colleagues were linked to engagement.

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A study was conducted in China to examine how hospital staff perceived leadership support and engagement. The results showed a link between work engagement and leadership support, highlighting the role that support from job institutions or managers plays in the healthcare setting (Zhao et al., 2024). Another study looked at medical social workers and how professional identity and organisational support affected their job engagement. Using numerical analyses, the researchers analysed data from 218 participants in the China Social Work Longitudinal Study. The results showed that work engagement was strongly linked to identity, especially regarding passion for the job. Also, the link between identity and engagement was helped by organisational support, which had a direct positive effect. These results showed that both professional identities and organisational structures were important to social workers' engagement levels (Wang & Tang, 2024).

A review of the literature brought together evidence on support and its effects on work engagement among nurses. The articles in this study were found by searching databases from 2015 to 2020. Ten articles were picked for analysis from more than 457,000 articles to create the initial group. The findings showed that, regardless of the type of support, it was always linked to higher work engagement, helped reduce the effect of stress on work engagement, and lowered the likelihood of nurses leaving their jobs. According to the authors, a lack of support could cause patients to leave the hospital, which would lower the standard of care and possibly result in fatalities. This highlights the critical role of social support in nursing work (Istichomah et al., 2021).

According to Abate and Mekonnen (2021), interpersonal connections, effective teamwork, supervisor support, and the quality of communication in healthcare facilities were significant factors in engagement. Bad relationships with bosses, lack of teamwork, and problems between patients and providers were consistently associated with lower engagement, whereas good relationships were associated with higher motivation to stay in the job and overall engagement.

2.5.5 Workload and Healthcare Workers' Job Engagement

2.5.5.1 Patient load

Yasin et al. (2024) conducted a study that synthesised findings from 23 studies across 20 countries, involving more than 17,000 participants. The study showed that workload was a factor in nurses' work engagement. Manageable work, staff, and fair workload distribution

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were connected to engagement, better mental health, and greater loyalty to the organisation. However, high acuity COVID-19 units, workloads and extra hours were all linked to lower involvement, leading to burnout, wanting to leave and higher stress and anxiety.

In this review, Alkhateeb et al. (2025) reported that stress factors such as excessive workload and insufficient staffing were the most common factors associated with low engagement, especially among nurses and frontline workers, across the studies. On the other hand, smaller patient numbers and shared work helped improve morale and retain staff. Many studies have found that much work leads to disengagement, burnout, and a desire to quit.

Olaniyan et al. (2023). Used an experimental survey method where 143 of 154 questionnaires were returned and used. It was found that workload plays a significant role in disengagement, with many nurses reporting being overloaded and lacking sufficient responsibility and authority to provide optimal service. The participant responses showed that job overload, coupled with a lack of support and incentives, would make them less committed and less effective, leading them to associate the workload with reduced job engagement.

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2.5.5.2 Shift Length

Shift arrangements, particularly rotating and night shifts, generally decrease work engagement among healthcare workers due to increased fatigue, poor work-life balance, and, in some cases, burnout. Sánchez-Sellero et al. (2025) used cross-sectional and longitudinal methods to analyse data from the European Working Conditions Survey, employing logistic regression, correlation matrices, and correspondence analysis. The results showed that occasional job involvement was associated with a self-evaluation of very exceptional health, a relative risk of 4.757. The lowest results were found among employees who worked shifts, which is the rotating group, who reported workplace engagement 1.321 times less often than the non-shift workers. They are far more likely than the reference group to report feeling attached to their jobs.

Zangiabadi and Ali-Hassan (2023) conducted a comparable study, revealing that nurses who provided online or mixed healthcare services had a significantly lower likelihood of resigning due to job disengagement than those who provided only in-person treatment. According to Jung and Kim's (2025) study, nurses who worked in a pattern-based shift system reported significantly higher levels of workplace engagement and quality of life than those who worked rotating shifts, and there was no appreciable difference in the two groups' intentions to

quit. The results demonstrated that while regular, planned scheduling improved nurses' well-being, broader organisational and psychosocial factors continued to affect turnover intentions.

2.5.5.3 Overtime

In their secondary survey data from 403 subjects, Park et al. (2024) employed linear mixed-effects regression to explore the relationships. The results showed a strong correlation between stress symptoms and forced overtime. The study found that forced overtime was significantly and negatively associated with work engagement and well-being, whereas optional overtime was not significantly correlated in the Lee et al. study. (2022) to examine working hours in various categories for American stone, sand, and gravel mining workers, the category response results were analysed using ANOVA. Those who worked more than 60 hours per week also reported much higher levels of stress and burnout, and gave their health a lower rating than those who worked fewer hours. To examine how long-term changes in working hours affect burnout, a study was conducted in Taiwan over four years among healthcare workers. The results showed that the more overtime people worked, the more their burnout increased. As burnout grew, their sense of engagement and satisfaction with their jobs decreased. This study focused on how long-term overtime can harm employee well-being (Chen et al., 2021). In a similar vein, another study of nurses found that long working hours and insufficient staffing made it difficult for them to find meaning in their work, which, in turn, decreased their work engagement (Dall'Ora et al., 2020).

2.6 Research Gaps

There are certain gaps in the current research on working environment and job engagement, such as the lack of information on how work conditions affect job commitment, the paucity of studies on the impact of work environments on work engagement in various healthcare settings, the paucity of research on the relationship between workplace environment and work engagement in African nations like Kenya, and the fact that the majority of research during the COVID-19 pandemic focused on the pandemic itself rather than the role of workplace conditions for those who were not infected. The primary focus of nursing research often ignores the effects of the environment on health care workers, who are also involved in vital work. Furthermore, much research on work engagement relies on unvalidated instruments, leading to inconsistent results across studies and undermining the validity of comparisons. These flaws are shown in Table 2.1.

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Table CHAPTER TWO: LITERATURE REVIEW.1

Research Gaps Table

Year	Author	Title	Gaps	Addressing the gaps
2021	Abate and Mekonnen	Job engagement and associated factors among health care professionals working in public health facilities in Ethiopia: a systematic review.	The study relied on secondary data from past studies	Used primary data collected from HCWs
2021	Aden	Factors influencing motivation and job engagement among healthcare workers at Garissa County Referral Hospital	Focused on Garissa County	Focused on Kiambu County
2021	Afulani, NutorAgbadi, Gyamerah, Musana, Aborigo and Awoonor-Williams.	Job engagement among healthcare workers in Ghana and Kenya during the COVID-19 pandemic: Role of perceived preparedness, stress, and burnout.	Study was carried out during a pandemic	Study carried out in ordinary times
2023	Al Badi, Cherian, Farouk and Al Nahyan	Work engagement and job performance among nurses in the public healthcare sector in the United Arab Emirates.	Study conducted UAE	Conducted in Kenya
2025	Alkhateeb, Althabaiti, Ahmed, Lövestad and Khan	A systematic review of the determinants of job engagement in healthcare workers in health facilities in Gulf Cooperation Council countries.	Only gulf countries were included in the review	Study provided data for Kenya
2023	Chowhan and Pike	Workload, work–life interface, stress, job engagement and job performance: a job demand–resource model study during COVID-19.	Conducted in the education sector	Conducted in the health sector
2023	Çolak and Önder	Evaluation of Job Engagement and Quality of Life Among Employees of a University Hospital During the Pandemic.	Conducted in the education sector	Conducted in the health sector
2024	Deng, Liu, Cheng, Wang and Liu	Global job engagement and fluctuation among community general practitioners: a systematic review and meta-analysis.	The study relied on secondary data from past studies	Used primary data collected from HCWs
2024	Deng, Liu, Cheng, Wang and Liu	Global job engagement and fluctuation among community general practitioners: a systematic review and meta-analysis.	Only doctors were included	Study population comprised medical, nursing and clinical officers
2024	Githuthwa, Karimi and King'ori	Determination of the influence of working conditions on the retention of registered nurses in public hospitals in Kiambu County, Kenya.	Focus on job retention	Focused on job engagement
2023	Gustavsson, van Diepen, Fors, Axelsson, Bertilsson, & Hensing	Healthcare professionals' experiences of job engagement when providing person-centred care: a systematic review of qualitative studies	Only qualitative studies	This was a quantitative study
2023	Hapsari Murti and Tamtomo.	Meta Analysis of Factors Associated with Job Engagement in Health Workers.	No Kenyan studies were included	Conducted in Kenya
2020	Hee, Shi, Kowang, Fei and Ping	Factors Influencing Job Engagement among Academic Staffs.	Conducted in the education sector	Conducted in the health sector
2025	Kiptulon, Szöllősi Miklós and Siket	Organisational Culture Predictors of Job Engagement Among Nurses in Kenya, Sub-Sahara Africa: A Cross-Sectional Study.	Only nurses were included	Study population comprised medical, nursing and clinical officers
2024	Li, Yang, Singer, Pfeffer, Mathur and Shanafelt	Nurse burnout and patient safety, engagement, and quality of care: a systematic review and meta-analysis.	Only nurses were included	Study population comprised medical, nursing and clinical officers
2025	Lifuleze, Muhonja and Muchiri	Assessment of factors influencing job engagement among healthcare workers in public hospitals in Nairobi County, Kenya	Focused on Nairobi City County	Focused on Kiambu county
2021	Maina	Compensation Strategies and Employee Job Engagement in the Health Sector in Kiambu County, Kenya	Only focused on compensation	In addition to workload, the study includes physical conditions, organisational policies and interpersonal relationships
2024	Meku lelo	The Effect of Working environment on Employees' Job Engagement:	Conducted in the banking sector	Conducted in the health sector
2024	Mohamed and Salih	Health Workers' Job Engagement and Associated Factors at Public Primary Healthcare Centers in Hargeisa, Somaliland: A Cross-Sectional Study.	Study was carried out in public primary healthcare centers	Focused on referral hospitals

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2024	Mpoha	Impact of Workplace Environment on Employee Job Engagement in Zambia.	Conducted in Zambia	Conducted in Kenya
2025	Nawi	Job engagement among public health and primary care physicians: A systematic review.	Only doctors were included	Study population comprised medical, nursing and clinical officers
2021	Nyang'ori	Job engagement among healthcare professionals in selected public hospitals in Trans-Nzoia County, Kenya	Focused on Trans-Nzoia County	Focused on Kiambu county
2023	Olaniyan, Adetunji and Adetunji	Factors affecting job engagement among nurses working in Ondo state.	Only nurses were included	Study population comprised medical, nursing and clinical officers
2025	Pirrotta, Ferrar, Cantarelli and Belle	Communication and job engagement among public employees: evidence from large-scale surveys with healthcare professionals	Conducted in Italy	Conducted in Kenya
2026	Richard, Yang and Triana	The impact of abusive supervision on subordinate job engagement: The moderating role of subordinate negative affectivity.	Conducted in the education sector	Conducted in the health sector
2021	Rostami, Babaei-Pouya, Teimori-Boghsani, Jahangiri Mehr, Mehri and Feiz-Arefi	Mental workload and job engagement in healthcare workers: the moderating role of job control.	Only the workload was studied	In addition to workload, the study includes physical conditions, organisational policies and interpersonal relationships
2025	Sánchez-Sellero, Sánchez-Sellero and Fernández-Sánchez	Effect of shift work on health and job engagement of European workers (EU-28). A cross-sectional and longitudinal study	The study was carried out in Europe	Study provided data for Kenya
2025	Shetty, Kamath, Rodrigues, Devi, and Shetty	Impact of the Physical Environment on Employee Engagement in Private Hospitals.	Focused was private hospitals	Carried out in public hospitals
2021	Tenaw, Siyoum, Tsegaye, Werba, and Bitew.	Health professionals job engagement and associated factors in Ethiopia: a systematic review and meta-analysis.	The study relied on secondary data from past studies	Used primary data collected from HCWs
2025	Tesema, Wolde Amanuel, Lopiso and Beyene,	Job engagement and its associated factors among health care workers in Saint Paul's Hospital Millennium Medical College, Ethiopia.	Carried out in a college	Carried out in hospitals
2025	Teshome, Hunie, Gelaw, Chekol, Alebachew, Belay, Getnet, Zewdu, Hailu, Kibret, and Fenta	Healthcare Professionals' Job Engagement and Its Determinants in Ethiopia: A Systematic Review and Meta-Analysis.	The study relied on secondary data from past studies	Used primary data collected from HCWs
2023	Tria	Job engagement among educators: A systematic review.	Conducted in the education sector	Conducted in the health sector
2024	Wang and Tang	Effects of organizational support and professional identity on job engagement among medical social workers in China.	Used medical social workers	Used healthcare workers
2020	Wang, Jin, Wang, Zhao, Sang and Yuan	Job engagement, burnout, and turnover intention among primary care providers in rural China	This was a modelling study	This was a descriptive study
2024	Yasin, Alomari, Al-Hamad and Kehyayan	The impact of COVID-19 on nurses' job engagement: a systematic review and meta-analysis.	Study was carried out during a pandemic	Study carried out in ordinary times
2024	Yasin, Alomari, Al-Hamad and Kehyayan	The impact of COVID-19 on nurses' job engagement: a systematic review and meta-analysis.	Study was carried out during a pandemic	Study carried out in ordinary times
2023	Zangiabadi and Ali-Hassan	Effect of mode of healthcare delivery on job engagement and intention to quit among nurses in Canada during the COVID-19 pandemic.	Only nurses were included	Study population comprised medical, nursing and clinical officers
2025	Zhao, Lu, Xu and Lu	Analysis of nursing staff job engagement and its influencing factors: a cross-sectional study of 38 hospitals/nursing homes in China.	Study conducted in China	Conducted in Kenya

2.7 Summary of Reviewed Literature

The literature review says that the work environment is very important to employee happiness. Many studies show that nurses and doctors worldwide are often unhappy and that their interest in their work has decreased (Aggarwal et al., 2023; Boxall & Purcell, 2022; Shetty et al., 2025). The results show that both positive and negative experiences at work affect how much people want to do their jobs. When managers support staff, the workload is fair, there are people to help, and coworkers get along; people feel more engaged. However, when the workload is heavy, jobs feel unsafe, resources are missing, and the place is dangerous, many people feel disconnected. Burnout is a sign that people will not stay engaged. Higher burnout means people care less about patient safety and service quality. Poor physical conditions, such as building conditions or missing tools, increase stress and pull people away from work (Alkhateeb et al., 2025; Notarnicola et al., 2024). Studies on inspiring leaders and good bosses show how companies are run and how bosses shape engagement (Gustavson et al., 2023; Abate & Mekonnen, 2021). For hospital staff, engagement stems from how they talk to one another and work as a team. Talking helps people feel less lonely. Engagement also comes from the amount of work. If a nurse sees many patients or works long shifts, they may feel overworked and burn out, which hurts morale and leads them to leave.

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CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains how the workplace influences healthcare professionals' feelings about their jobs. The way the study was set up, the people who took part, and how they were chosen are all discussed in this chapter. The tool used to collect information, how the information was gathered, and how it was analysed are also discussed in this chapter.

3.2 Research Design

Research design is a plan that specifies what the study aims to do, how it will do it, and what data it will collect (Ghauri et al., 2020). This research used a design. A correlational design is a type of non-experimental research in which the researcher examines relationships between variables without manipulating any (Walliman, 2021). Because the study sought to determine which workplace factors influence employees' work engagement, a correlational design is well-suited. The study aimed to gather health workers' thoughts and feelings about their work environment and job engagement. Therefore, this design is suitable. By using this design, the study was able to collect numbers that show patterns, differences and links. It included many points of view from staff at different levels.

3.3 Population

The target population for this study is healthcare workers at public level 5 hospitals in Kiambu County. These hospitals are justified because they provide the most health services and therefore have the most healthcare workers compared to lower-level hospitals. There were 3 public Level 5 hospitals in Kiambu County: Kiambu County Referral Hospital, Gatundu Level 5 Hospital, and Thika Level 5 Hospital. A total of 806 healthcare workers were targeted because they provide medical services to the public and, therefore, are subject to the working conditions in their facilities. This study targeted medical, clinical, and nursing officers. These HCWs were selected because they comprise the majority of the hospital's health staff in direct patient contact.

3.4 Sampling Frame

HCWs from public level 5 hospitals in Kiambu County, including medical, clinical, and nursing officers, made up the sampling frame for this study. The sampling frame consisted of 806 HCWs, as indicated in Table 3.1.

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Table CHAPTER THREE: RESEARCH METHODOLOGY .2

Sampling Frame

Hospital	Medical officers	Clinical Officers	Nursing Officers	Total
Gatundu	11	45	111	167
Kiambu county referral	21	66	198	285
Thika level 5	46	84	224	354
Total	78	195	533	806

Source: County Government of Kiambu (2026)

3.5 Sample Size and Sampling Techniques

3.5.1 Sample Size

The sample size was determined using Slovin's formula. Slovin's method enabled the creation of a sample that strikes a balance between accuracy and practicality, ensuring the results represent the larger population without requiring a census, which would be time-consuming and resource-intensive. Because Slovin's formula offers a simple way to calculate a representative sample size when the population as a whole is known but the variability within it is not exactly specified, it was suitable for our investigation (Althubaiti, 2023).

$$n = N / (1 + N e2)$$

where "n" represents the sample size, "N" represents the population, and e is the margin of error. Therefore, in a population of 806 HCWs, $n = 806/(1+806*0.05^2) = 267$

The study, therefore, used a sample of 267 respondents. This sample was distributed across the three cadres of HCWs proportionally, as shown in Table 3.2

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Table CHAPTER THREE: RESEARCH METHODOLOGY .3

Distribution of Sample Size

Hospital	Medical officers		Clinical Officers		Nursing Officers		Total	
	N	s	N	S	N	s	N	s
Gatundu	11	4	45	15	111	37	167	55
Kiambu County referral	21	7	66	22	198	66	285	94
Thika level 5	46	15	84	28	224	74	354	118
Total	78	26	195	65	533	177	806	267

Source: Author (2026)

3.5.1 Sampling Technique

The study's respondents were sampled using simple random sampling. Microsoft Excel's random function was used for this. This was accomplished by using the RAND function (Lindquist & Sulewski, 2024). The RAND function produces random numbers. Making a numbered list of HCWs in Microsoft Excel was the first step. Thereafter, the researcher sorted the list using the RAND function. The first HCWs on the new list, corresponding to the population in Table 3.2, were the study respondents. This will ensure that the study sample is truly random, allowing for generalisation. This strategy also enabled representation of all 3 HCW cadres.

3.6 Data Collection Instrument

A digital, self-administered, and structured questionnaire was used to collect data. The questionnaire consisted of three sections (A-C) to collect data on the study's variables. Section A collected information on respondents' demographic characteristics and the features of their facilities. Data on the independent variable, working environment, was gathered in Section B, whilst Section C encompassed enquiries pertaining to job engagement, the dependent variable. The questionnaire included multiple-choice and Likert-scale items to collect data. In the questionnaire, the Utrecht Work Engagement Scale (UWES-9) was used to measure job engagement.

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3.7 Data Collection Procedure

Once the study was approved and the research permit was received, data collection began. The researcher contacted the study's participating sites to inform them. The researcher obtained a list of HCWs to sample from the human resource managers at the facilities. They then contacted the sampled HCWs to inform them about the study and obtain their consent. If people agreed, a link to the form was sent to them so they could complete it. The researcher contacted potential respondents again to ensure a high response rate. It took two weeks to gather all the data.

3.8 Pilot Test

A pilot study was conducted in Murang'a County to assess the instrument's validity and reliability. Murang'a County was selected as the pilot County because its public level 5 hospitals are similar in services and catchment population to those in the County of Kiambu. As advised by Walliman (2021), 27 HCWs (10% of the sample) participated in the pilot. Piloting helped the researcher identify technological issues, ambiguous terminology, or difficult-to-follow instructions that might degrade response quality. The researcher determined whether the questions were good and whether people consistently interpreted the items by testing the questionnaire with a small group. It also showed real-world problems, such as how long it takes to fill out the form.

3.8.1 Reliability Test

Reliability includes both the accuracy of the results produced by a particular measuring device and the extent to which it controls random error (Ahmed & Ishtiaq, 2021). The internal consistency of the questionnaire items was confirmed in this study to guarantee reliability. According to Adams and McGuire (2021), a reliability metric that assesses the interdependence of items is the internal consistency of a multi-item measure or tool. This was accomplished by analysing the data gathered during the pilot. Cronbach's alpha coefficient was used to measure internal consistency; a score of 0.7 or higher was deemed acceptable. Piloting data analysis produced a coefficient of 0.85, which, as Table 3.3 illustrates, indicates a high degree of reliability.

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Table CHAPTER THREE: RESEARCH METHODOLOGY .4 Reliability Test Results

Reliability Test Results

Construct	Number of items	Cronbach's alpha coefficient	Result
Physical Working Conditions	5	0.910	Reliable
Organizational Policies	7	0.831	Reliable
Interpersonal Relationships	6	0.850	Reliable
Workload	7	0.792	Reliable
Work engagement	9	0.810	Reliable
Total	34	0.838	Reliable

Source: Research Survey Data (2026)

3.8.2 Validity Test

Validity is the extent to which a measuring tool accurately evaluates the target variable (Ahmed & Ishtiaq, 2021). Construct, content, and face validity were guaranteed by the researcher. Face validity, content validity, and construct validity are the three categories of validity in an assessment tool, according to Sürücü and Maslakci (2020). While content validity assesses whether the tool covers all pertinent facets of the construct, face validity concerns how well the tool appears to measure the target. Conversely, construct validity assesses how well the instrument measures the theoretical idea that it is intended to assess. This was achieved by developing questions based on constructs identified through an extensive literature review. The researcher endeavoured to make questions clear, specific, and concise to avoid confusion. In the pilot study, the researcher asked respondents to indicate whether each question was clear, relevant, and appropriate to the study objectives to identify and revise ambiguous items, remove irrelevant questions, and ensure the instrument adequately measured the intended constructs before the main study.

Content validity is the degree to which the content of a measurement tool accurately reflects the outcome being measured. Conversely, the degree to which test or instrument scores reflect the particular dimension (construct) that they are intended to assess is known as construct validity (Ahmed & Ishtiaq, 2021). The questionnaire was examined by the research supervisors, who also provided feedback on its validity. Factor analysis was employed to guarantee construct validity. The dimensions underlying the group-related items were found using factor analysis. Only items that load highly (high factor loadings of 0.40 or more) onto

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the factors to which they belong were retained, allowing the researcher to eliminate less useful items that load insufficiently (or very slightly) onto their own factors.

3.9 Data Analysis and Presentation

Upon completion of data collection, the researcher reviewed all questionnaires to verify their completeness and clarity. Data were encoded, entered, sanitised, and analysed using the Statistical Package for the Social Sciences (SPSS) version 29. The working environment, job engagement, and demographic information were all examined using descriptive statistics. To ascertain the relationship between the work environment and the dimensions of work engagement, a correlation analysis was conducted. A regression analysis was then made to assess the relationship between work engagement and the work environment. The results were presented in tabular form.

3.9.1 Measurement of Variables

Table 3.4 shows the measurement of variables in the study.

Table CHAPTER THREE: RESEARCH METHODOLOGY .5 Measurement of Variables

Measurement of Variables

Objective	Indicators	Measurement	Data sources	Data analysis
To determine the influence of physical working conditions on job engagement of healthcare workers in public level 5 hospitals in Kiambu County.	Infrastructure, equipment & ergonomics	Ordinal (Likert scale: agree/disagree)	Questionnaire	Descriptive, statistics & Correlation
To establish the influence of organizational policies on job engagement of healthcare workers in public level 5 hospitals in Kiambu County.	Leadership, supervision & training	Ordinal (Likert scale: agree/disagree)	Questionnaire	Descriptive, statistics & Correlation
To evaluate the influence of interpersonal relationships on job engagement of healthcare workers in public level 5 hospitals in Kiambu County.	Teamwork, communication & support	Ordinal (Likert scale: agree/disagree)	Questionnaire	Descriptive, statistics & Correlation
To determine the influence of workload on job engagement of healthcare workers in public level 5 hospitals in Kiambu County.	Patient load, shift length & overtime	Ordinal (Likert scale: agree/disagree)	Questionnaire	Descriptive, statistics & Correlation
To establish the influence of working environment on job engagement of healthcare workers in public level 5 hospitals in Kiambu County.	Physical working conditions, organizational policies, interpersonal relationships and workload	Ordinal	Questionnaire	Regression analysis

Source: Author (2026)

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3.9.2 Empirical Model

The following model was used in regression analysis in the study:

$Y = C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta 4\ X_4 + \varepsilon$

Where: Y = Job engagement, C = Constant, $B_1 - \beta_4$ = Coefficient, X_1 = physical working conditions, X_2 = organisational policies, X_3 = interpersonal relationships, X_4 = workload and ε = error term.

3.9.3 Diagnostic Tests

Prior to regression analysis, the researcher conducted diagnostic tests to assess the data's normality, multicollinearity, and homoscedasticity. The normality assumption, crucial for parametric analysis, posits that the data follow a normal distribution. Data is deemed normal if the skewness is between -2 and +2 and the kurtosis is between -7 and +7, as stated by Iheaka (2025), and this criterion was utilised to evaluate normality in this study. The idea that the variances of the groups being compared are equal or similar is called homogeneity of variances, or homoscedasticity. The assumption that the residual variance is uniform across all values of the independent variable is violated in the presence of heteroscedasticity (Đalić & Terzić, 2021). If k samples have the same variance, Levene's test detects it. Heteroscedasticity is present if the variances differ significantly, as indicated by a p-value. When numerous explanatory variables exhibit strong relationships, this phenomenon is called multicollinearity. This study assessed multicollinearity using variance inflation factors (VIFs). Multicollinearity is apparent when condition indices range from 10 to 30 or when VIFs range from 5 to 10 (Tsagris & Pandis, 2021). At the 95% confidence level, a P-value below 0.05 is deemed significant.

3.10 Ethical Considerations

Ethical approval for the study was obtained from St. Paul's University. A research permit from the National Commission for Science, Technology and Innovation (NACOSTI) was also obtained. Permission to collect data was obtained from the Health Department of the County Government of Kiambu. The researcher considered informed consent, participant privacy and confidentiality, and the avoidance of discrimination. In addition, the investigator treated participants with respect, considered their privacy and autonomy, and informed participants of the benefits and burdens of the research. The respondents participated voluntarily after giving informed consent. Through a participant information sheet, respondents were advised on the purpose of the study, their role, procedures, benefits, and risks. Thereafter,

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the investigator sought participants' consent and ensured that each participant understood they could withdraw from the research at any point during the process.

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CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the results of a study that sought to establish the influence of the working environment on the work engagement of healthcare workers in public level 5 hospitals in Kiambu County. The results are presented in tables. The researcher also discusses the results, including their interpretation and their connection to the literature.

4.2 Response Rate

A total of 267 respondents were sent questionnaires as part of the study. A majority of respondents (88%) completed the questionnaires, as indicated in Table 4.1. The number of participants is considered sufficient because the response rate in this study exceeds the 70% recommended by Walliman (2021).

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.6 Response Rate

Response Rate

Hospital	Medical officers		Clinical Officers		Nursing Officers		Response rate		
	S	A	S	A	S	A	S	A	%
Gatundu	4	2	15	11	37	33	55	46	83.6
Kiambu County referral	7	4	22	19	66	61	94	84	89.4
Thika level 5	15	11	28	25	74	69	118	105	89.0
Total	26	17	65	55	177	163	267	235	88.0

S= Sample, A= Actual

Source: Research Survey Data (2026)

4.3 Respondents' Demographic Characteristics

The findings indicate that 41.3% of respondents were men and 58.7% of respondents were women. By age, the largest proportion of healthcare workers (34.5%) was in the 31–40 age range. Results indicate that 23.0% of respondents were between 21 and 30, 25.1% between 41 and 50, and 17.4% between 51 and 60. A diploma was the most common educational achievement, held by 30.2% of participants. A bachelor's degree was held by 25.1% of respondents, and a higher degree by 23.0%. 0.9% had a PhD, while another 20.9% had a master's degree. In terms of work experience, 34.5% of respondents reported working for six

to ten years, while 29.4% reported working for eleven to fifteen years. As shown in Table 4.2, 13.6% of the sample had between 16 and 20 years of experience, whilst 17.9% had less than 5 years of experience. Of those surveyed, 4.7% had worked for more than 20 years. As a result, the majority of respondents in the sample were female and primarily in the 31–40 age range. As a result, the study's sample comprised individuals with a variety of educational backgrounds, ranging from a diploma to a PhD. A notable proportion of healthcare professionals with six to fifteen years of work experience sets it apart.

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.7

Respondents' Demographic Characteristics

Demographic	Categories	N	%
Gender	Male	97	41.3
	Female	138	58.7
Age	21- 30 years	54	23.0
	31- 40 years	81	34.5
	41 – 50 years	59	25.1
	51-60 years	41	17.4
Education	Diploma	71	30.2
	Higher diploma	54	23.0
	Bachelor's degree	59	25.1
	Masters	49	20.9
	Doctorate	2	0.9
Working experience	Less than 5 years	42	17.9
	6-10 years	81	34.5
	11-15 years	69	29.4
	16-20 years	32	13.6
	Over 20 years	11	4.7

Source: Research Survey Data (2026)

4.4 Work Engagement

A third (34.5%) of respondents reported rarely feeling bursting with energy, while 28.9% reported this rarely happened. Regarding energy at work, the largest proportion of respondents reported rarely feeling bursting with energy (34.5%), followed by those who reported almost never experiencing this feeling (28.9%). Similarly, 37.4% of respondents reported almost never feeling strong and vigorous at work, while 23.8% reported feeling this way rarely. Equal proportions of respondents indicated that they almost never (25.1%) and

rarely (25.1%) felt like going to work. Regarding enthusiasm, 23.8% reported sometimes being enthusiastic about their job, while 19.1% reported always being enthusiastic.

The most common answer was sometimes (34.5%), while 24.3% said they never found their work inspiring. Another trend was observed regarding pride in work: 26.8% reported always being proud of their work, while 25.1% reported often being proud of their work. Regarding feeling happy when working intensely, the largest proportion of people reported sometimes feeling this way (34.5%), followed by never (26.0%). In terms of absorption in work, 38.7% indicated that they were rarely immersed in their work, while 28.5% reported being immersed almost never. Lastly, for being carried away in work, 40.4% of the respondents answered Sometimes, and 17.4% answered Rarely.

These results suggest that overall work engagement was relatively low. The strongest aspect was dedication, particularly reflected in the high levels of pride respondents expressed in their work. The weakest dimension, Vigour, on the other hand, was characterised by low energy, diminished strength and vigour, and a diminished desire to go to work. Absorption was also relatively low because many respondents reported seldom immersing themselves in their work. These findings were consistent with those of Li et al. (2024), who found that healthcare workers typically had low levels of engagement and that burnout negatively affected job engagement. The findings were consistent with those of Assele et al. (2025), who found that just 41.2% of Ethiopian healthcare professionals were engaged, indicating comparatively low involvement in healthcare settings.

Likewise, the findings concurred with Kiptulon et al. (2025), who reported critically low work engagement among Kenyan nurses, with only 24.5% reporting engagement, and with Lifuleze et al. (2025), whose study revealed moderate-to-low work engagement among healthcare workers due to deficiencies in workplace conditions and resources. Conversely, the findings differed from those of Deng et al. (2024), who reported a pooled global work engagement rate of 70.82% among community general practitioners, suggesting considerably higher engagement levels than those observed in the present study. The results also differed from those of Mohamed and Salih (2024), who found that 62.5 per cent of healthcare workers were engaged in their work, indicating a more engaged workforce than the current findings.

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Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.8

Work Engagement

	Never	Almost never	Rarely	Sometimes	Often	Very often	Always
At my work, I feel bursting with energy	9.4%	28.9%	34.5%	13.6%	5.1%	3.8%	4.7%
At my job, I feel strong and vigorous	7.7%	37.4%	23.8%	9.4%	8.1%	11.1%	2.6%
When I get up in the morning, I feel like going to work	18.7%	25.1%	25.1%	8.9%	4.7%	3.8%	13.6%
I am enthusiastic about my job	16.6%	8.9%	7.7%	23.8%	9.8%	14.0%	19.1%
I find my work inspiring	24.3%	14.0%	6.8%	34.5%	8.9%	4.7%	6.8%
I am proud of the work that I do	5.1%	3.8%	0.0%	20.0%	25.1%	19.1%	26.8%
I feel happy when I am working intensely	26.0%	18.7%	34.5%	9.4%	4.7%	3.8%	3.0%
I am immersed in my work	9.8%	28.5%	38.7%	23.0%	0.0%	0.0%	0.0%
I get carried away when I am working	8.1%	15.7%	17.4%	40.4%	8.1%	0.0%	10.2%

Source: Research Survey Data (2026)

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4.5 Physical Working Conditions

Results show that 37% of the respondents disagreed and 28.5% strongly disagreed that the infrastructure in their workplace supported effective delivery of healthcare services. A similar pattern emerged regarding the availability of patient care equipment: 37.0% strongly disagreed that the required equipment was available when needed, compared with 27.2% who strongly agreed. Slightly more than a third (40.9%) of respondents strongly disagreed that the equipment functioned properly, while 28.1% disagreed. However, there was a mixed pattern of opinions on the subject, with 26.8% strongly disagreeing and nearly a third strongly agreeing that the working environments at their institution were kept hygienic. The highest percentages were found among those who strongly disagreed (25.5%) and those who agreed or disagreed (23.4%) that the physical condition of the rooms and buildings supported safe patient care.

The results suggest that ergonomics was viewed positively, whereas most respondents disagreed with the adequacy of infrastructure, equipment availability, and equipment functionality. These results aligned with the findings of Alkhateeb et al. (2025), who reported that inadequate physical infrastructure, including overcrowded facilities and poor physical layouts, contributed to stress and disengagement among healthcare workers. The findings were also consistent with those of Lifuleze et al. (2025), who found that deficiencies in infrastructure, equipment availability, ergonomics and workspace conditions negatively affected healthcare workers' perceptions of their jobs and contributed to disengagement.

The findings also supported Nyang'ori's (2021) findings that poor facility conditions, space constraints, and insufficient hospital infrastructure decreased healthcare workers' job engagement. In addition, the results aligned with those obtained by Lifuleze et al. (2021), indicating that especially limited access to resources and equipment significantly increased the risk of disengagement among healthcare workers. Compare Shetty et al.'s findings with the favourable reactions to ergonomics. (2025), who emphasized the significance of ergonomics and environmental quality for maintaining employee engagement, as well as Al-Maskari et al. (2022), who found that a tidy and well-kept workplace increased healthcare workers' comfort, safety, and engagement. Stated differently, the findings corroborate those of Tenaw et al. (2021), who discovered that when healthcare workers were in secure and encouraging physical settings, they were much more likely to perceive high levels of job engagement.

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.9

Physical Working Conditions

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
The infrastructure in my workplace supports the effective delivery of healthservices.	19.1%	9.8%	5.5%	37.0%	28.5%
Patient care equipment required for my duties is available when needed.	27.2%	8.9%	3.8%	23.0%	37.0%
The equipment used in my unit functions properly during routine work.	17.0%	14.0%	0.0%	28.1%	40.9%
The working areas in my facility	32.8%	18.7%	1.7%	20.0%	26.8%

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are kept hygienic.					
The physical condition of buildings and rooms supports safe patient care.	21.7%	23.4%	6.0%	23.4%	25.5%

Source: Research Survey Data (2026)

4.6 Organizational Policies

Regarding leadership direction, the largest proportion of respondents strongly disagreed that the facility's leadership provided clear direction to staff (31.1%), while 24.3% strongly agreed. Similarly, 34.0% strongly disagreed that supervisors provided guidance that supported their work, compared to 20.0% who strongly agreed. Nearly half of the respondents (47.2%) strongly disagreed that supervisors treated staff fairly and respectfully, while 16.6% agreed.

Communication of organisational policies elicited considerable dissatisfaction: 36.6% strongly disagreed that leadership communicated policies clearly to staff, 21.7% disagreed, and 17.4% strongly agreed. A substantial proportion of respondents strongly disagreed that they were adequately compensated for their work (44.3%), while 36.6% disagreed. Similarly, 40.4% strongly disagreed that the benefits they received motivated them to continue working in the facility, and an additional 32.8% disagreed. Nearly half of the respondents (46.0%) strongly disagreed that healthcare workers were promoted promptly once they met the required qualifications, while a further 43.0% disagreed.

The results show that respondents expressed unfavourable views regarding leadership direction and supervisory guidance. Negative perceptions were particularly pronounced regarding the fairness of supervision, compensation, benefits, policy communication, and promotion practices. The results on organisational policies showed that healthcare workers held negative perceptions of leadership direction, supervisory support, fairness in treatment, communication of organisational policies, compensation, benefits, and promotion practices, and these results are consistent with the findings of Nawi (2025) that poor leadership support, unclear priorities, and inadequate organisational governance were significantly related to low levels of employee engagement in healthcare settings. The results also agreed with those of Deng et al. (2024), who highlighted that deficiencies in organisational systems and support structures were linked to lower levels of engagement, identified institutional management practices and governance as important determinants of job engagement.

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Similarly, the results were consistent with García-Cabrera et al. (2023), who discovered that while the absence of such behaviours reduced employee engagement, supportive and courteous supervisory behaviours had a positive impact. The unfavourable opinions of pay and benefits further corroborated the findings of Diakos et al. (2022), who noted that healthcare workers were not very engaged with their compensation, and of Muhula et al. (2025), who found that one of the best indicators of disengagement in healthcare settings is insufficient compensation. The results also supported the ideas of Organisational Justice Theory, which holds that workers are more likely to stay motivated.

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.10

Organizational Policies

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Leadership in this facility provides clear direction for staff.	24.3%	13.6%	17.0%	14.0%	31.1%
Supervisors provide guidance that supports my work.	20.0%	19.1%	9.4%	17.4%	34.0%
Supervisors treat staff fairly and respectfully.	9.8%	16.6%	11.1%	15.3%	47.2%
Leadership communicates organizational policies clearly to staff.	17.4%	7.7%	16.6%	21.7%	36.6%
I am adequately compensated for my work	5.1%	8.9%	5.1%	36.6%	44.3%
The benefits I receive motivate me to continue working here	8.1%	10.2%	8.5%	32.8%	40.4%
Healthcare workers are promoted promptly once they meet the requirements	3.8%	4.7%	2.6%	43.0%	46.0%

Source: Research Survey Data (2026)

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4.7 Interpersonal Relationships

Slightly more than a third (42.1%) of respondents strongly agreed that healthcare workers in their department worked together as a team to provide patient care, while 23.0% agreed. Although 28.5% strongly agreed that communication within the facility was clear and effective, an even larger proportion (44.3%) strongly disagreed. Nearly half of the respondents (43.0%) strongly agreed that colleagues treated each other with respect, while a further 37.4%

agreed. Similarly, 34.5% agreed that staff shared information that improved patient care, and 28.5% strongly agreed. Almost half of the respondents (48.5%) strongly agreed that they received support from colleagues when workloads increased, while 20.9% agreed. In addition, 34.5% agreed that such communication supported effective service delivery, and 26.4% strongly agreed.

The results, therefore, suggested generally positive perceptions of interpersonal relationships within healthcare facilities. Higher proportions of respondents reported favourable experiences relating to teamwork, mutual respect, information sharing, collegial support, and communication between staff and supervisors. However, communication among healthcare workers themselves attracted comparatively more mixed views. This resonated with the results of Gustavasson et al. (2023), who discovered that healthcare workers' competence and work engagement were positively impacted by collegial support, teamwork, and shared decision-making. Similarly, the findings were consistent with those of Nyang'ori (2021). Gustavasson et al. (2023) also found that healthcare workers' competence and work engagement were positively affected by collegial support, teamwork, and shared decision-making. Similarly, the findings were consistent with those of Nyang'ori's (2021) study, which found that the commissioner–staff relationship positively influenced work engagement among healthcare professionals in Kenya.

Positive interpersonal relationships, teamwork and peer support were also highly correlated with higher engagement among health workers. There was a high level of agreement on respect for colleagues and support during high workloads, as reported by Alkhateeb et al. (2025). The findings also matched those of Istichomah et al. (2021), who found that social support reduced the negative effects of workplace stress and had a favourable impact on job engagement. The results also support the assumptions of social exchange theory, which posits that supportive workplace relationships characterised by trust, respect, cooperation, and reciprocity encourage employees to reciprocate by increasing their commitment, motivation, and engagement. The positive perceptions observed in the present study, therefore, corresponded to the theory's proposition that beneficial social exchanges foster positive work attitudes and behaviours.

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Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.11

Interpersonal Relationships

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
The healthcare workers in my department work together as a team to provide patient care.	42.1%	23.0%	0.0%	13.6%	21.3%
Communication among healthcare workers in this facility is clear and effective.	28.5%	14.0%	5.1%	8.1%	44.3%
Colleagues in my workplace treat each other with respect.	43.0%	37.4%	1.7%	5.5%	12.3%
Staff in this facility share information that helps improve patient care.	28.5%	34.5%	4.3%	14.0%	18.7%
I receive support from colleagues when work demands increase.	48.5%	20.9%	0.0%	9.4%	21.3%
Communication between staff and supervisors supports effective service delivery.	26.4%	34.5%	9.4%	21.7%	8.1%

Source: Research Survey Data (2026)

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4.8 Workload

When asked whether staffing levels in their department supported a manageable workload, the largest proportion of respondents strongly disagreed (43.8%), while a further 36.2% disagreed. Similarly, nearly half of the respondents (48.9%) disagreed that the number of patients assigned to them during a shift was reasonable, and 40.4% strongly disagreed. Almost half of the respondents (46.0%) strongly disagreed that their shift length allowed them to perform their duties effectively, while 33.2% disagreed. The largest proportion of respondents (34.0%) disagreed that they could complete their tasks within the assigned working hours, followed by 29.4% who strongly disagreed, while 17.4% strongly agreed. Nearly one-half of the respondents (49.4%) strongly disagreed that overtime occurred at a manageable

level, while 28.1% disagreed. Likewise, 47.2% disagreed that work schedules allowed adequate time for rest between shifts, and a further 41.7% strongly disagreed. A similar pattern was observed regarding the distribution of duties among staff: 38.7% of respondents disagreed, and 36.2% strongly disagreed, that duties were distributed in a manner that supported efficient patient care.

The results, therefore, show that respondents consistently reported dissatisfaction with staffing levels, patient assignments, shift length, overtime demands, rest periods, and the distribution of duties. At the same time, positive responses were comparatively less common across the workload measures. These outcomes were consistent with Yasin et al.'s findings. (2024), who found that high workloads, demands for overtime, and insufficient staffing had a negative correlation with work engagement and increased stress, burnout, and intentions to leave the healthcare industry. The results also aligned with those of Alkhateeb et al. (2025), who found that low engagement was consistently associated with heavy workloads, long workdays, and staff shortages, particularly among frontline healthcare workers. Similarly, the outcomes were in agreement. Abate and Mekonnen (2021) identified high patient volumes, long working hours, and workload pressures as key contributors to disengagement among healthcare professionals in referral hospitals.

The negative perceptions regarding shift length and inadequate rest periods further supported the findings of Sánchez-Sellero et al. (2025), who found that rotating and demanding shift arrangements reduced work engagement by increasing fatigue and disrupting work-life balance. The results also aligned with those of Chen et al. (2021), who found that sustained overtime contributed to burnout and diminished professional fulfilment, and with Dall'Ora et al. (2020), who reported that overtime and staffing constraints reduced opportunities for meaningful engagement at work. Furthermore, the findings reflected the assumptions of Job Demand-Control Theory, which posits that excessive job demands, such as heavy workloads, staff shortages, long working hours, and high patient volumes, reduce employee energy, motivation, and engagement when not accompanied by adequate support or control.

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Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.12

Workload

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Staffing levels in my department support a manageable workload.	9.4%	8.1%	2.6%	36.2%	43.8%
The number of patients assigned to me during a shift is reasonable	4.7%	6.0%	0.0%	48.9%	40.4%
My shift length allows me to perform my duties effectively.	8.1%	8.9%	3.8%	33.2%	46.0%
I can complete my tasks within the assigned working hours.	17.4%	14.0%	5.1%	34.0%	29.4%
Overtime in my unit occurs at a manageable level.	17.0%	5.5%	0.0%	28.1%	49.4%
Work schedules in my unit allow adequate time for rest between shifts.	3.8%	5.5%	1.7%	47.2%	41.7%
The distribution of duties among staff supports efficient patient care.	13.2%	7.2%	4.7%	38.7%	36.2%

Source: Research Survey Data (2026)

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4.9 Diagnostic Results

Before conducting the regression analysis, diagnostic tests were conducted to assess whether the data met the assumptions of normality, homoscedasticity, multicollinearity, and independence of residuals. The normality assessment indicated that skewness values ranged from -0.684 to 0.421, and kurtosis values from -0.936 to 1.274, indicating that the variables were normally distributed. Levene's test was insignificant ($F(3,196) = 1.284$, $p = 0.281$), confirming homogeneity of variance. Multicollinearity assessment showed acceptable VIF values ranging from 1.214 to 2.846 and condition indices below 10, indicating no multicollinearity among predictor variables. The Durbin-Watson statistic of 1.874 confirmed residual independence. Therefore, the data met all regression assumptions and were suitable for further inferential analysis.

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.13

Diagnostic Results

Assumption Tested	Test Used	Statistical Result (Desirable Outcome)	Interpretation / Outcome
Normality of data	Skewness and Kurtosis Tests	Skewness (-0.684 to 0.421) & kurtosis (-0.936 to 1.274)	The normality assumption was satisfied; therefore, the data were considered normally distributed and suitable for regression analysis.
Homoscedasticity (Equal variance of residuals)	Levene's Test of Homogeneity of Variances	p=0.281	The variance of residuals was homogeneous, indicating that heteroscedasticity was not present.
Multicollinearity among independent variables	Variance Inflation Factor (VIF) and Condition Index	VIF (1.214-2.846, tolerance (0.351-0.824)	No evidence of multicollinearity was detected; therefore, independent variables were suitable for regression analysis.
Independence and suitability of regression residuals	Durbin-Watson Test	D=1.8245	The residuals were independent, indicating that the regression model met the independence assumption.

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4.10 Correlation Results

Physical working conditions were positively and significantly correlated with work engagement ($r = .831$, $p < .001$), indicating a strong association between the two variables. Similarly, organisational policies showed a strong, positive, and statistically significant correlation with work engagement ($r = .876$, $p < .001$). Interpersonal relationships were positively and significantly associated with work engagement ($r = .612$, $p < .001$). Workload also correlated with work engagement ($r = - .911$, $p < .001$). The results, therefore, showed that workplace environmental factors were associated with higher levels of work engagement among healthcare workers. The results, therefore, showed that higher scores on workplace environment factors were associated with higher levels of work engagement among healthcare workers. These results corroborate expectation theory's claim that workers are more likely to be engaged when they believe that favourable working conditions enable them to perform well and produce desired results. The findings were consistent with those of Lifuleze et al. (2025),

who found that ergonomics and other workplace physical factors had a major impact on healthcare professionals' levels of involvement. The results also supported Nyang'ori's (2021) conclusion that healthcare workers' work engagement was positively correlated with sufficient infrastructure and equipment.

The strong positive relationship between organisational policies and work engagement also agrees with organisational justice theory, which posits that employees become more engaged when organisational procedures, rewards, promotions, and managerial decisions are perceived as fair and transparent. Deng et al. (2024) identified governance and organisational support as significant factors affecting healthcare workers' engagement, and Teshome et al. (2025) found that when healthcare workers had appropriate supervisory support, they were more likely to be engaged. The Social Exchange Theory approach, which contends that positive attitudes and behaviours, such as work engagement, are correlated with supportive workplace relationships, is also consistent with the relationship between interpersonal relationships and job engagement. Thus, these outcomes were comparable to those of Gustavsson et al. (2023), who found that health care professionals' engagement was significantly impacted by their ability to collaborate and work as a team, as well as those of Abate et al. (2021), who stated that workplace communication, teamwork, and supervisor support were crucial components of engagement.

Also, assumptions related to Job Demand-Control Theory, which emphasises the effect of job demands on employees' well-being and job engagement, were justified by the high correlation between workload and job engagement. These findings support Yasin et al. (2024), who found that reasonable workload, adequate staffing, and equitable workload had a significant positive effect on the engagement of health care workers, and Alkhateeb et al. (2025), who identified a significant effect of workload conditions on healthcare workers' engagement.

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Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.14

Correlation Results

		Conditions	Policies	Relationships	Workload	Engagement
Conditions	Pearson Correlation	1	.546**	.476**	.638**	.831**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	235	235	235	235	235
Policies	Pearson Correlation	.546**	1	.586**	.750**	.876**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	235	235	235	235	235
Relationships	Pearson Correlation	.476**	.586**	1	.537**	.612**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	235	235	235	235	235
Workload	Pearson Correlation	.638**	.750**	.537**	1	.911**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	235	235	235	235	235
Engagement	Pearson Correlation	.831**	.876**	.612**	.911**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	235	235	235	235	235

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

Source: Research Survey Data (2026)

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4.11 Regression Results

4.11.1 Model Summary

The independent variables showed a strong relationship with job engagement, as reflected in a correlation coefficient (R) of 0.899. The coefficient of determination (R Square) was 0.808, indicating that the four workplace environment factors in the regression model accounted for 80.8% of the variation in job engagement. After adjusting for the number of predictors, the Adjusted R Square was 0.800, suggesting that the model's explanatory power remained largely unchanged. The small difference between the R Square and Adjusted R Square values indicates consistent explanatory power. This shows that physical working conditions, organisational policies, interpersonal relationships, and workload jointly explained a substantial proportion of the variation in work engagement among healthcare workers, with the model demonstrating a strong overall fit to the data. These findings aligned with the study's theoretical propositions. Expectancy theory suggests that employees become more engaged when workplace conditions enable them to perform effectively and attain valued outcomes. In contrast, organisational justice theory posits that fair organisational policies and practices strengthen employees' commitment and engagement. Similarly, social exchange theory argues

that supportive workplace relationships foster reciprocal positive attitudes. In contrast, job demand-control theory emphasises that manageable workloads and supportive work conditions enhance employee well-being and engagement.

The findings were consistent with Yasin et al. (2024), who found that supportive supervision, adequate staffing, manageable workloads, resource availability, and strong collegial relationships positively influenced healthcare workers' engagement. Similarly, the results aligned with Alkhateeb et al. (2025), who found that multiple workplace factors, including working conditions, leadership support, co-worker relationships, workload, compensation, and promotion opportunities, shaped healthcare workers' engagement. The findings also aligned with those of Lifuleze et al. (2025), who reported that workplace conditions, resource adequacy, and organisational factors substantially influenced healthcare workers' engagement levels. However, the findings differed from those of Rika et al. (2023), who found that supervision had an insignificant direct association with employee outcomes, suggesting a weaker contribution of organisational factors than in the current study. They also contrasted with Gumasing et al. (2025), who reported that physical ergonomic conditions had a limited influence on employee motivation despite improving work performance.

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.15

Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.899[a]	.808	.800	.25806

a. Predictors: (Constant), Workload, Relationships, Conditions, Policies
Source: Research Survey Data (2026)

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4.11.2 Analysis of Variance

The ANOVA table refers to the overall multiple regression model, and the F-test evaluates whether the predictor set improves on an intercept-only model. The significance value associated with the F-statistic was .000 ($p < .001$), indicating that the regression model was statistically significant. This result showed that physical working conditions, organisational policies, interpersonal relationships, and workload collectively affected job engagement. Therefore, the regression model fit the data significantly, and the predictor

variables jointly explained variation in work engagement among healthcare workers. The findings concurred with those of Deng et al. (2024), who identified governance, working conditions, and organisational support as significant determinants of healthcare workers' work engagement across contexts. Likewise, the results aligned with those of Yasin et al. (2024), who found that workplace factors such as supportive supervision, adequate staffing, manageable workloads, and positive collegial relationships significantly influenced healthcare workers' engagement.

The overall model also aligned with Alkhateeb et al. (2025), who reported that multiple workplace dimensions, including workload, leadership, co-worker relationships, working conditions, and organisational practices, collectively shaped healthcare workers' engagement levels. Similarly, the findings aligned with Lifuleze et al. (2025), who found that workplace resources, infrastructure, organisational support, and working conditions were important predictors of healthcare workers' engagement. However, the findings differed from those of Rika et al. (2023), who reported that supervision did not significantly influence employee outcomes, suggesting a weaker role of workplace factors than that observed in the present study. The results also contrasted with those of Gumasing et al. (2025), who found that certain physical ergonomic factors had a limited influence on employee motivation despite contributing to improved work performance.

Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.16

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	685.305	4	171.326	19.827	.000[b]
	Residual	1987.461	230	8.641		
	Total	2672.766	234			

a. Dependent Variable: Engagement
b. Predictors: (Constant), Relationships, Conditions, Policies, Workload

Source: Research Survey Data (2026)

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4.11.3 Coefficients

Physical working conditions (p = 0.022), organisational policies (p = 0.008), and workload (p = 0.001) significantly predicted job engagement as depicted in Table 4.13. In contrast, interpersonal relationships (p = 0.180) did not have a statistically significant association when controlling for the other predictors in the model. Workload (β = -0.204) had the largest association with job engagement, followed by organisational policies (β = 0.161) and physical conditions (β = 0.115). These findings concur with organisational justice theory, which posits that employees are more likely to be motivated and engaged when organisational policies, reward systems, promotion procedures, and managerial decisions are perceived as fair and transparent.

This aligns with Deng et al. (2024), who found that governance and institutional support significantly influenced healthcare workers' engagement, and with Nawi (2025), who reported that leadership support and organisational governance were key determinants of job engagement. Results on physical conditions align with Lifuleze et al. (2025), who found that infrastructure, equipment availability, and workplace conditions significantly influenced healthcare workers' engagement, and with Nyang'ori (2021), who reported that adequate infrastructure and resources enhanced work engagement among healthcare professionals. The significant contribution of workload further supported the job demand-control theory, which argues that job demands influence work engagement and well-being.

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Table CHAPTER FOUR: RESULTS, FINDINGS AND DISCUSSION.17

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.033	.084		.391	.696
	Conditions	.115	.050	.196	2.307	.022
	Policies	.161	.060	.274	2.678	.008
	Relationships	.055	.041	.109	1.343	.180
	Workload	-.204	.060	-.364	-3.420	.001

a. Dependent Variable: Engagement

Source: Research Survey Data (2026)

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CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The findings of the study, which aimed to determine the impact of the working environment on the work engagement of healthcare workers in public level 5 hospitals in Kiambu County, are summarised in this chapter. Additionally, the researcher's conclusions and suggestions are provided.

5.2 Summary

The first objective of the study was to determine the association between physical working conditions and work engagement among healthcare workers in public level 5 hospitals in Kiambu County. The study found that healthcare workers generally held unfavourable views of several aspects of their physical working environment, particularly the adequacy of infrastructure, the availability and functionality of equipment, and the condition of buildings and rooms. However, workplace ergonomics received relatively more positive ratings. Correlation analysis revealed a strong, positive relationship between physical working conditions and work engagement ($r = .831$, $p < .001$), suggesting that improvements in the physical working environment were associated with higher engagement. The regression results also demonstrated that physical working conditions significantly predicted work engagement ($\beta = .115$, $p = .022$).

The study sought to establish the relationship between organisational policies and work engagement of healthcare workers in public level 5 hospitals in Kiambu County. Respondents expressed considerable dissatisfaction with organisational policies, particularly regarding supervisory fairness, compensation, benefits, promotion practices, and policy communication. In the correlation analysis, organisational policies showed a strong positive correlation with work engagement ($r = .876$, $p < .001$), indicating that more favourable perceptions of organisational policies were associated with higher engagement. Organisational policies also emerged as a strong predictor of work engagement ($\beta = .161$, $p = .008$) in the regression analysis.

The third objective aimed to evaluate the association between interpersonal relationships and work engagement among healthcare workers in public level 5 hospitals in Kiambu County. Descriptive results showed that respondents generally viewed interpersonal relationships positively, reporting favourable experiences related to teamwork, mutual respect,

collegial support, information sharing, and communication between staff and supervisors. The correlation analysis showed a significant positive relationship between interpersonal relationships and work engagement ($r = .612$, $p < .001$), indicating that stronger workplace relationships were associated with higher engagement levels. However, when considered alongside the other workplace factors in the regression model, interpersonal relationships did not significantly predict work engagement ($\beta = .055$, $p = .180$). This difference may be due to the correlation examining only the direct relationship. At the same time, regression assessed each independent variable's unique contribution while controlling for the effects of the other variables in the model.

The study also aimed to determine the relationship between workload and work engagement of healthcare workers in public level 5 hospitals in Kiambu County. The study found widespread dissatisfaction with workload-related factors, including staffing levels, patient assignments, shift length, overtime demands, rest periods between shifts, and duty distribution. Correlation analysis showed a strong, significant negative correlation between workload and work engagement across all independent variables ($r = -0.911$, $p < .001$), indicating a very strong association between perceptions of workload and work engagement levels. This relationship remained significant in the regression analysis, where workload emerged as the strongest predictor of work engagement ($\beta = -.204$, $p = .001$).

5.3 Conclusions

The study reveals that work engagement among healthcare workers at level 5 hospitals in Kiambu County is low, with participants reporting lower levels of energy, vigour, and absorption. In addition, working conditions, organisational policies, and workload were found to affect work engagement, with workload being the most significant factor, and all links were positive, indicating that improvements in these areas would enhance job engagement. The findings underscore the need to address issues when hospitals seek to enhance employee engagement and performance.

5.4 Recommendations

The Kiambu County Health Department ought to prioritise the procurement, maintenance and timely replacement of equipment to ensure that healthcare workers have access to the functional tools required for effective service delivery. Supervisors and managers

should undergo leadership and people-management training focused on fairness, respect, communication and employee relations to foster a more supportive workplace culture. It is recommended that hospitals should introduce communication skills training programs to strengthen collaboration, conflict resolution and teamwork among healthcare workers. The County government of Kiambu should also recruit healthcare personnel to address staffing shortages and reduce excessive workloads, thereby improving patient-to-staff ratios.

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APPENDICES

Appendix I: Questionnaire

You are requested to respond to **ALL** the questions by ticking or writing in the provided spaces.

DO NOT indicate your name or that of your facility.

A: Demographic Factors

1. Indicate your gender

Male [ ] Female [ ]

2. In which of the following bands does your age fall?

21- 30 years [ ] 31- 40 years [ ] 41 – 50 years [ ] 51-60 years [ ]

61-70 years [ ] Over 70 years [ ]

3. What is your highest level of training that you have completed?

Certificate [ ] Diploma [ ] Higher diploma [ ] Bachelor's degree [ ]

Masters [ ] Doctorate [ ]

4. a.) Indicate your profession

Medical officer [ ] Clinical officer [ ] Nursing officer [ ]

b.) How long have you been employed in your capacity?

Less than 5 years [ ] 6-10 years [ ] 11-15 years [ ] 16-20 years [ ] Over 20 years [ ]

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B: Job Engagement

5. The following 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.						
	5	4	3	2	1	
At my work, I feel bursting with energy						
At my job, I feel strong and vigorous						
When I get up in the morning, I feel like going to work						
I am enthusiastic about my job						
I find my work inspiring						
I am proud of the work that I do						
I feel happy when I am working intensely						
I am immersed in my work						
I get carried away when I am working						

C: Physical Working Conditions

6. The statements in the table below describe the ideal physical working conditions in a hospital. Indicate whether they apply to your facility by ticking in the appropriate box using the scale 5=strongly agree, 4= agree, 3= uncertain, 2= disagree and 1 = strongly disagree.

	5	4	3	2	1
The infrastructure in my workplace supports effective delivery of healthcare services.					
Patient care equipment required for my duties is available when needed.					
The equipment used in my unit functions properly during routine work.					
The working areas in my facility are kept clean and hygienic.					
The physical condition of buildings and rooms supports safe patient care.					

D: Organizational Policies

7. The statements in the table below describe the ideal policies in a hospital. Indicate whether they apply to your facility by ticking in the appropriate box using the scale 5=strongly agree, 4= agree, 3= uncertain, 2= disagree and 1 = strongly disagree.

	5	4	3	2	1
Leadership in this facility provides clear direction for staff.					
Supervisors provide guidance that supports my work.					
Supervisors treat staff fairly and respectfully.					
Leadership communicates organizational policies clearly to staff.					
I am adequately compensated for my work					
The benefits I receive motivate me to continue working here					
Healthcare workers are promoted promptly once they meet the requirements					

E: Interpersonal Relationships

8. The statements in the table below describe the ideal interpersonal relationships among healthcare workers in a hospital. Indicate whether they apply to your facility by ticking in the appropriate box using the scale 5=strongly agree, 4= agree, 3= uncertain, 2= disagree and 1 = strongly disagree.

	5	4	3	2	1
The healthcare workers in my department work together as a team to provide patient care.					
Communication among healthcare workers in this facility is clear and effective.					
Colleagues in my workplace treat each other with respect.					
Staff in this facility share information that helps improve patient care.					
I receive support from colleagues when work demands increase.					
Communication between staff and supervisors supports effective service delivery.					

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F: Workload

9. The statements in the table below describe the ideal workload for a healthcare worker. Indicate whether they apply to your facility by ticking in the appropriate box using the scale 5=strongly agree, 4= agree, 3= uncertain, 2= disagree and 1 = strongly disagree.

	1	2	3	4	5
Staffing levels in my department support a manageable workload.					

The number of patients assigned to me during a shift is reasonable					
My shift length allows me to perform my duties effectively.					
I can complete my tasks within the assigned working hours.					
Overtime in my unit occurs at a manageable level.					
Work schedules in my unit allow adequate time for rest between shifts.					
The distribution of duties among staff supports efficient patient care.					

~Thankyou~

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Appendix II: Ethical Approval

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Private Bag 00217 LIMURU, KENYA
Email:office@spu.ac.ke
Website: www.spu.ac.ke

Tel Office: +254 (0) 20-2020505/10
mobile:+254(0) 728 - 669000
(0) 736 - 424440

BOARD OF POSTGRADUATE STUDIES

4th June, 2026

National Commission for Science and Technology,
P.O. BOX 30623-00100,
Nairobi.

Dear Sir/Madam,

RE: RECOMMENDATION FOR HARRISON KABURI THUMBI – MBANRB209925 TO CONDUCT RESEARCH

This letter confirms the above-named person is a student in the Master of Business Administration (MBA) Program at St. Paul's University.

After completion of the course work, the student is engaged in major research work leading to a Thesis/Dissertation writing. The student's selected topic is:

"Working environment and job engagement of healthcare workers in public level 5 hospitals in Kiambu County, Kenya."

The SPU-Institutional Scientific Ethics Review Committee has reviewed the above-named research proposal and granted the ERB approval number 778, for the period between 4th June, 2026 – 4th June, 2027 (1 Year).

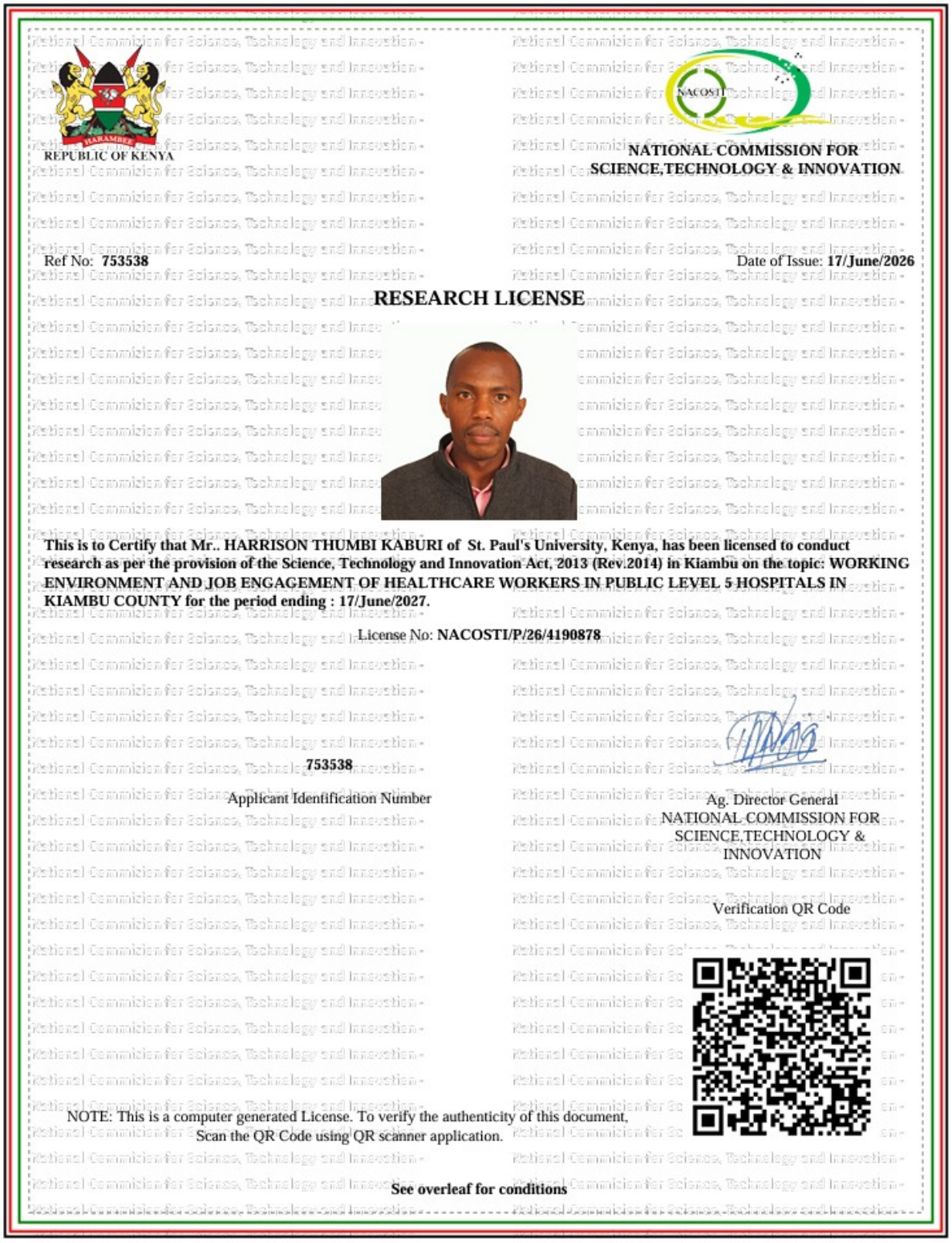
Kindly grant this student the required permit. For further information, please contact the undersigned through postgraduatestudies@spu.ac.ke

Yours Faithfully,

04 JUN 2026

Dr. John Muhoho Kimani
Director Postgraduate Studies
postgraduatestudies@spu.ac.ke

Appendix III: Research Permit



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **753538**

Date of Issue: **17/June/2026**

RESEARCH LICENSE

This is to Certify that Mr.. HARRISON THUMBI KABURI of St. Paul's University, Kenya, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu on the topic: WORKING ENVIRONMENT AND JOB ENGAGEMENT OF HEALTHCARE WORKERS IN PUBLIC LEVEL 5 HOSPITALS IN KIAMBU COUNTY for the period ending : 17/June/2027.

License No: **NACOSTI/P/26/4190878**

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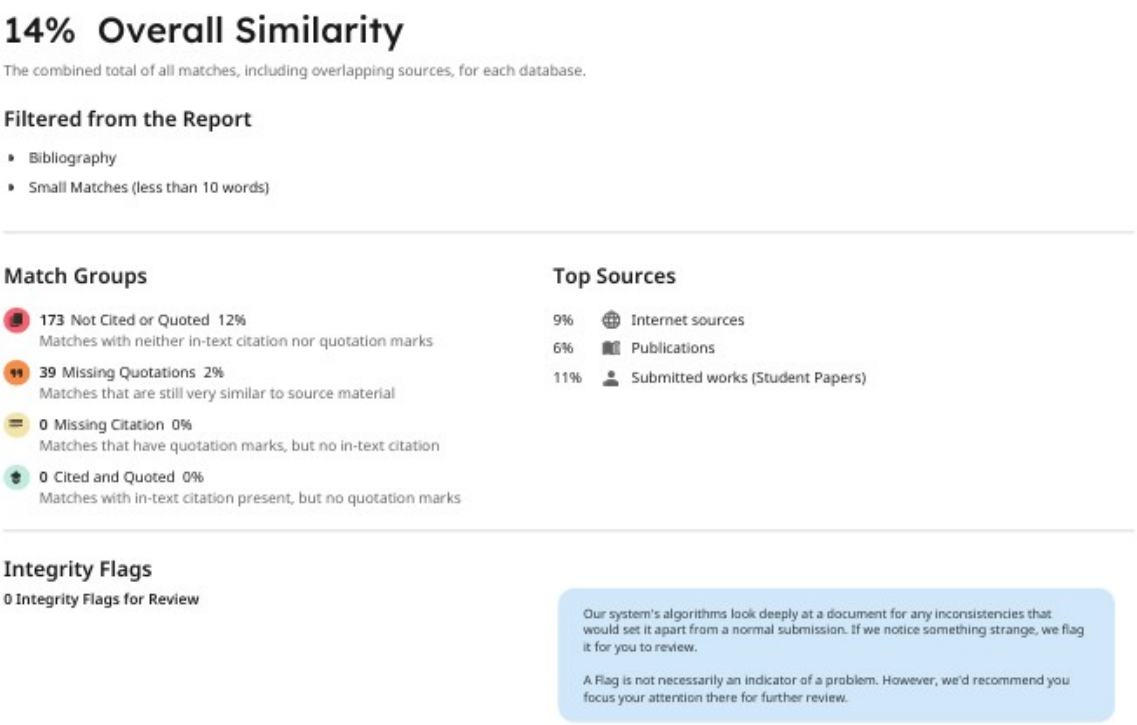
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NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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Appendix IV: Similarity Report



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