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Flexible Work Arrangements and Employee Productivity in Murang'a Level 5 Hospital, Kenya

MARTIN MBAU[1], BEAUTTAH MWANGI[2], JEFF ARODI[3]
[1,2,3] *A Research Thesis Submitted to The School of Business and Economics in Fulfilment of The Degree of Master of Business Administration (Human Resource Management) of Zetech University*

ABSTRACT: This study examined the relationship between employee productivity and flexible work arrangements (FWAs), such as compressed workweeks, flextime, and telecommuting at Murang'a Level 5 Hospital, a Kenyan rural public healthcare facility dealing with a high patient load and staff shortage challenges. Job Demands-Resources (JD-R) Model, Herzberg's Two-Factor Theory, and Social Exchange Theory were used. A mixed-methods approach was utilised, surveying 205 employees from a population of 421 selected through stratified sampling. SPSS was used to perform analysis for both qualitative and quantitative data, including thematic coding and multiple regression. Key findings from 186 respondents (90.7% response rate) showed that telecommuting ($\beta = 0.176$, $p = 0.005$), flextime ($\beta = 0.421$, $p < 0.001$), and compressed workweeks ($\beta = 0.269$, $p < 0.001$) had positive effects on employee productivity. The regression analysis yielded R^2 values of 0.046, 0.236, and 0.107, accounting for approximately 4.6%, 23.6% and 10.7% of the employee productivity variance, respectively. In order to reduce social desirability biases, productivity was assessed using a combination of self-declared Likert scale responses and hospital data, for instance, patient load, attendance, and documentation processing rate. 24 semi-structured interviews were conducted under the qualitative phase, and were analysed thematically by Braun and Clarke (2006) six-phase framework. Qualitative findings explained how flextime helped employees become more productive as they could recover from shifts better. The participants felt less exhausted, and their work-life balance improved, especially those in the non-clinical and support roles. With longer off periods that lowered fatigue, compressed workweeks allowed for more focus and efficiency. Telecommuting did not help too much because there was not enough digital infrastructure and remote-access policies for the clinical staff. Thematic analysis implies that the mechanisms linking FWAs to higher productivity outcomes are employee autonomy, managerial trust, and organisational support. The findings informed hospital management, healthcare professionals, and policymakers on optimising hybrid FWAs to improve service delivery, aligning with Kenya's Vision 2030, Murang'a County 2022-2027 objectives, and Sustainable Development Goal 3. The study extended existing literature by demonstrating variations in FWA effectiveness across staff categories, with flextime showing stronger impacts in non-clinical roles compared to clinical ones, where physical presence limited telecommuting. This addressed a gap in Kenyan public hospitals, where previous research primarily focused on urban and non-healthcare settings, and highlighted the significance of applying the findings to similar rural facilities while cautioning against direct generalisation without considering local infrastructure.

Keywords: Flexible Work Arrangements, Public Healthcare, Murang'a Level 5 Hospital, Mixed-Methods Research, Job Demands-Resources, Model, Employee Productivity.

I. INTRODUCTION

1.0: Overview

This chapter presents the study's background, problem statement, purpose, research questions, objectives, significance, scope, and limitations. Specifically, it evaluates the impact of flexible work arrangements on staff productivity at Murang'a Level 5 Hospital. The background of the study provides a global, regional, and local context, highlighting the research gap in rural Kenyan hospitals. The statement of the problem addresses the limited adoption of FWA, which influences productivity metrics such as the number of patients served, wait time, and satisfaction scores. The significance of the research relays the benefits that employees, hospital management, and policymakers would derive by adopting FWAs, which align with Kenya's Vision 2030. The scope focuses on Murang'a Level 5 Hospital, while limitations address data constraints and employee willingness to participate in the research.

1.1: Background of the Study

The nature of workplaces around the globe is still changing because of a fast-moving technological world, demographic changes, and a growing need for work-life balance (Ahmadi et al., 2024). This places considerable pressure on the organisations to engage in strategies that can increase employee productivity and promote well-being (Ahmadi et al.,

2024). Flexible Work Arrangements (FWAs), which are telecommuting, flextime, and compressed workweeks, have been identified in the healthcare industry as the key mechanisms of ensuring that employees and organisations achieve better work outcomes despite challenges of high numbers of patients and limited resources in the healthcare sector (Walchek, 2023). Worldwide, FWAs are positively linked with employee satisfaction, a decrease in absenteeism, and an improvement in output, especially in the developed world (Gašić et al., 2024; Hariyanto et al., 2024). Flextime and telecommuting enable this since workers are allowed to adjust their work schedules, therefore boosting their effectiveness and productivity (Allen et al., 2015).

This helps the employees to integrate work and family-related responsibilities, such as childcare, which is critical in driving their motivation and productivity (Golden & Veiga, 2018). As opposed to traditional workplace patterns, the application of FWAs has been made easier by the emergence of technological tools such as artificial intelligence, cloud-based collaboration, and telehealth, because communication is faster, and tasks can be executed remotely (Menezes & Kelliher, 2017). Globally, the increase of hybrid work highlights the significance of flexible work arrangements in catering to worker needs and also ensuring the organization remains innovative and competitive (Bloom, 2021). Countries with advanced economies, like the United Kingdom (UK), have adopted flexible approaches such as flexible rostering, job-sharing, part-time work, and telehealth administration in their healthcare systems. This is crucial in matching staff preferences while ensuring quality standards of patient care are achieved (Golden & Veiga, 2018). Equally, Scandinavian jurisdictions, which are known for adhering to work-life balance, have integrated flextime and compressed workweeks in their labour laws. Therefore, this ensures that these practices are made standard in all sectors, including healthcare systems (Agure et al., 2023).

In sub-Saharan Africa, the introduction of FWAs faces immense challenges. For instance, public hospitals in South Africa failed to achieve flexible shifts due to poor infrastructure and managerial limitations (Kossek et al., 2023). This has widely hindered the broader application of telecommuting. Parallel findings in Uganda and Tanzania show that while healthcare personnel strongly desire flextime, hospital managers frequently resist its implementation due to concerns surrounding the continuity of essential services (Mühl & Korunka, 2024). The healthcare sector in East Africa requires the adoption of FWAs due to its inherent challenges affecting service delivery. Public hospitals are overwhelmed by workforce shortages, large patient volumes, inadequate infrastructure, and resources, which require innovative labour strategies to sustain quality service delivery (K.P.M.G., 2019)**.** In Kenya, the public healthcare sector is characterized by chronic understaffing, overloaded facilities, and high levels of staff burnout, which compromise productivity and the quality of care (Agure et al., 2023).

The annual report from Murang'a Level 5 Hospital highlighted the need for strategic intervention due to challenges such as workforce shortages, problems in staff retention, and low service quality (Murang'a County Government, 2022). For instance, medical wards were under-resourced, with the nurse-to-patient ratio being 1:38 as compared to the required standards from the Ministry of Health to avoid burnout. According to Needleman (2024) study, an additional patient assigned to a registered nurse leads to an increase in the likelihood of death of an inpatient. Similarly, the annual employee turnover rate was 14% among clinical staff. Exit interviews indicated that fatigue, burnout, and tight schedules as the main reasons employees were exiting this facility. The effects of this internal strain were revealed by patient experience data, with the fourth quarter of 2024 showing that only 52% of surveyed patients rated waiting times as "acceptable." This rating is 18 percentage points below the national benchmark of 70% (Murang'a County Government, 2022). These studies' outcomes showed that workforce shortages and rigid systems are the main causes of an unconducive work environment, which negatively affects the capacity of the facility to attain the required standards for care delivery and patient satisfaction.

Kosgei & Maende (2024) research asserted that there is a high level of urgency for workforce innovations to eradicate these problems, as the introduction of FWAs in Kenyan public hospitals is not widespread and widely adopted. In contrast, private hospitals in urban areas like Nairobi County have adopted flexible work patterns, particularly in maternity and nursing wings, to address burnout, worker turnover, and absenteeism. In comparison, rural hospitals encounter challenges such as insufficient resources and bureaucracy, which hinder the implementation of FWAs (Kosgei & Maende, 2024). This has created a significant evidence-based gap in the literature regarding the impact of FWAs on employee productivity in rural Kenyan hospitals. This literature gap is of concern because productivity indicators like the number of patients attended to, the average patient waiting time, and patient satisfaction rates are key variables of healthcare improvement in resource-limited environments (Oreyo et al., 2021).

The idea of utilising flextime, telecommuting, and compressed workweeks is strategic because theoretical models support it, and they are suitable in the rural Kenyan public healthcare setting. The study omitted alternative FWAs such as part-time contracts and job sharing since their applicability is rare in the public health sector (Kossek et al., 2023; Nyambura, 2023). They would also not offer enough empirical data for analysis purposes. Unlike other FWAs, flextime, telecommuting, and compressed workweeks have formal approval from the Public Service Commission and have been piloted in different hospital administrative departments. Therefore, this validates them as legitimate avenues for HR policy evolution (Public Service Commission, 2021).

Specifically, each selected FWA directly addresses a key operational or personnel challenge at Murang'a Level 5 Hospital. Telecommuting was included because the hospital had initiated the use of digital systems for tasks like medical records and patient follow-up, making remote work feasible for non-clinical personnel, such as records officers and ICT staff (Murang'a County Government, 2022). Flextime was a natural fit since nursing, clinical, and support departments already operated on shift systems that inherently accommodated scheduling variations (Kandie & Chepkilot, 2022). Finally, compressed workweeks were selected to align with staff transport difficulties and the urgent need to mitigate burnout by

providing longer recovery periods after intensive shifts, which also reduces the number of stressful, long-distance commutes on rural roads (Haleem et al., 2021; Mühl & Korunka, 2024).

Nonetheless, application of these strategies in rural places revealed some unique factors that both hindered and facilitated implementation of FWAs. One major challenge was technological limitations since the facility relied on a single shared low-latency internet connection. Although basic administrative duties could be done remotely, most employees resided in areas with unstable internet, making clinical work challenging (Menezes & Kelliher, 2017). The distance and commuting struggles made compressed workweeks more attractive because several workers lived far from the hospital, forcing them to travel long stretches on rough roads. Therefore, fewer travels saved them time and money. On the other hand, compressed workweeks were disadvantageous to clinical workers due to longer shifts (Kosgei & Maende, 2024). Third, most hospitals in rural places rely on generalist clinicians who provide critical services, making scheduling flextime challenging. However, its effective use can address issues of staff burnout (Muga & Senelwa, 2022). The culture of the hospital was hierarchical and slow to change. There was little utilisation of modern flexible HR policies that urban facilities use today (Adisa et al., 2016). This was a major impediment to the application of FWAs; however, positive change can still be achieved with good leadership (Mwiti & Mwirigi, 2025). The three FWAs were selected because they helped in improving policy and tackling specific challenges that employees experience (Oreyo et al., 2021). Local evidence showed serious workforce and service struggles at Murang'a Level 5 Hospital. Clinical workers had high turnover rates due to tight schedules, fatigue, and low nurse-to-patient ratios. It was evident that the existing system is unsustainable. These challenges fuelled the need for FWAs to address staff attrition and enhance the wellness and effectiveness of employees in this facility.

Murang'a Level 5 Hospital, a key referral facility in Kenya's Central region, is a suitable and strategically advantageous site for piloting Flexible Work Arrangements (FWAs) aimed at enhancing employee productivity. The hospital has served the central and eastern parts of Kenya since its upgrade in 2010. It provides critical advanced services, including emergency, paediatrics, internal medicine, and surgery (Murang'a County Government, 2022). The hospital continues to experience setbacks, including staff shortages, a high volume of patients, and staff burnout. However, the hospital has been able to overcome some challenges through infrastructure improvements and community outreach programmes, which are also evident in the Kenyan healthcare system. However, the implementation of Universal Health Coverage (UHC) has brought in contractual insecurities and wage gaps, which have adversely affected the morale and performance of staff members (Munyao & Mugo, 2025). These problems are further complicated by the hospital's location, which has limited access to advanced technology and flexible work models, compared to urban locations (Kosgei & Maende, 2024). Murang'a County CIDP 2023-2027 strategic objectives in healthcare focus on accessibility, affordability, responsiveness to the community's demands, automation, provision of UHC, and improving human resources (Government, 2023).

These strategic objectives align with the Kenya Vision 2030, which aims to achieve universal access to healthcare (Kenya, 2010). However, achieving these strategic objectives requires innovative workforce management strategies, including the potential adoption of FWAs, to maximize productivity and service delivery. In Kenya, occurrences such as frequent accidents, natural calamities, disease outbreaks, and the COVID-19 pandemic fuel the need for FWAs in public hospitals. Current trends, including the growth of digitalisation, artificial intelligence, the use of telehealth, and changes in employee preferences regarding work-life balance, also drive the necessity of FWAs (Wachira & Mwai, 2021). Flexible schedules are becoming a necessity for healthcare workers who need to balance pressure and personal commitments, especially in high-stress environments such as Murang'a Level 5 Hospital, where they are often expected to work long shifts and handle increased patient volumes (Agure et al., 2023). Telecommuting for administrative and clinical activities can be facilitated by the use of digital tools, including electronic health records and virtual consultation platforms. Flextime and compressed workweeks are used to alleviate staff burnout by enabling employees to make time adjustments (Menezes & Kelliher, 2017). The observed patterns align with the recent worldwide research that indicates that FWAs enhance organizational performance and work satisfaction, both of which are essential to maintaining productivity in a resource-limited healthcare environment (Allen et al., 2015).

The application of FWAs in rural Kenya is still underexplored, whereas it has been established that they are advantageous in the industrialized world and the urban centres. Oreyo et al., (2021) and Mwiti & Mwirigi, (2025) studies focused on the adoption of FWAs in Kenyan public organisations. However, it did not examine rural hospitals and healthcare-specific productivity indicators, such as patient wait times and satisfaction rates. The study bridges the literature gap by evaluating the link between FWAs (telecommuting, flextime, and compressed workweeks) and employee productivity at Murang'a Level 5 Hospital. This is achieved by checking the number of patients served, wait times, and level of satisfaction. The significance of this research filled the knowledge gap on the implementation of FWAs, shaping management practices in hospitals and healthcare policy in Kenya.

The study provided evidence-based knowledge to Murang'a Level 5 Hospital, enhancing workforce productivity with limited resources and a large patient volume, by investigating the influence of FWAs on employee productivity. Kenya's Vision 2030 highlights the need for high-quality and easily accessible medical care as a key pillar of national growth. Also, Sustainable Development Goal (SDG) number three emphasizes on promotion of sustainable workforce practices across all sectors (Government of Kenya). The human cost of inaction is substantial: without flexible arrangements, healthcare workers may continue to face burnout, compromising their ability to serve patients effectively (Mwiti & Mwirigi, 2025). For instance, a nurse working consecutive long shifts may struggle to maintain focus, leading to delays in patient care. At the same time, an ICT officer without telecommuting options cannot fully leverage digital tools to streamline administrative tasks.

This study focused on the 421 professional staff at Murang'a Level 5 Hospital, including clinical and administrative employees, whose productivity directly influenced healthcare delivery. By employing a mixed-methods approach, the research investigated how telecommuting, flextime, and compressed workweeks influenced productivity metrics, drawing on both quantitative surveys and qualitative interviews to analyse measurable outcomes and lived experiences. The integration of digital tools, such as telehealth platforms, reflected current trends in healthcare delivery, while addressing employee expectations for flexibility ensured relevance to modern workforce dynamics. Grounding the study in theoretical frameworks such as JD-R, Herzberg's Two-Factor Theory, and Social Exchange Theory provided a robust lens to understand the interplay of flexibility, support, and engagement in a resource-constrained setting, thereby contributing to both academic discourse and practical policy solutions for rural Kenyan healthcare.

1.2: Statement of the Problem

The right to quality healthcare for Kenyan citizens is emphasized by the Constitution, Article 43, the Health Amendment Act 2021, the Social Health Insurance Act 2023, and the Quality Healthcare and Patient Safety Act 2025 (Government, 2023; Health, 2023; Kenya, 2010; Murang'a County Government, 2022). According to the Kenya Journal of Nursing & Midwifery (2024), nearly 47.1 percent of nurses and more than 60 percent of clinical personnel in state-owned hospitals are found to have high levels of emotional burnout and signs of stress (Owuor et al., 2025). The significant challenges that have continued to affect the public healthcare system in Kenya include workforce shortages, overwhelmed facilities, and workforce burnout, which have substantial consequences for the productivity of workers and the quality of service delivery, particularly in rural areas such as Murang'a Level 5 Hospital (Owuor et al., 2025).

The Murang'a Level 5 Hospital Annual Report (2024) revealed workforce and services challenges. Compared to the recommended nurse-to-patient ratio of 1:25, the ratio was 1:38 (Murang'a County Government, 2024). This put additional pressure on clinical workers to meet patient demands. Clinical staff were exiting their roles at a rate of 14% every year, while the absenteeism rate among nurses was 19%. This was mostly contributed to by fatigue and inflexible schedules. The consequences were felt by patients, with only 52% reporting waiting times as acceptable, a decrease from 63% in 2022 (Murang'a County Government, 2024). The internal HR reports revealed these challenges, indicating that less than 10% of employees used any type of FWAs. These findings demonstrated a growing performance gap in productivity levels, patient satisfaction, and the motivation of employees. Increased burnout, low morale, and absenteeism were driven by rigid work schedules, fixed shifts, and long commutes to work. This hospital setup slowed down the global trend towards FWAs, especially after the COVID-19 pandemic (Bloom, 2021). Because few studies have been performed on the effectiveness of FWAs in Kenyan rural healthcare institutions, research was necessary to guide future policies and management approaches for introducing flexibility.

Globally, scientific research places FWAs (telecommuting, flextime, and compressed workweeks) as critical tools for addressing employee burnout and reduced productivity levels. FWAs ensure that workers are flexible in rearranging their work schedules and locations, which is crucial for motivation and achieving a work-life balance. However, in Kenya's public health sector, FWAs remain underutilized, largely due to bureaucratic barriers, lack of technological infrastructure, and rigid institutional cultures (Government, 2023). This underutilization results in reduced morale, high absenteeism, and inefficiencies that affect not only the workers but also the patients they serve.

Although global studies show a positive link between FWAs and better employee outcomes, such as reduced stress and increased productivity, there is a need to focus on rural settings as well (Kniffin et al., 2021; Kossek et al., 2023). Local research, such as that by Oreyo et al., (2021), also supports the effectiveness of FWAs in enhancing service delivery and reducing absenteeism; however, their scope is limited to urban public sector environments. Meanwhile, rural hospitals face unique constraints, including a 30% workforce deficit and health worker-to-population ratios that fall short of WHO recommendations (Health, 2023; Khusuko, 2025).

Existing research on FWAs and employee productivity remains limited in the context of rural public hospitals in Kenya. There is no empirical work focused on Murang'a Level 5 Hospital, creating a gap that hinders evidence-based policy and operational strategies. This study, therefore, sought to bridge this literature gap by providing localized, evidence-based findings to guide policy and operational strategies aimed at enhancing staff well-being, productivity, and healthcare delivery in Murang'a Level 5 Hospital and similar settings.

1.3: Objectives of the Study

To maintain clarity and focus, the study objectives were divided into two categories: general and specific. The general objective outlined the overarching aim of the research and what it sought to achieve, while the specific objectives translated this aim into smaller, actionable steps that guided the research process. This distinction ensured that the study remained well-structured and provided a clear framework for tracking progress and outcomes.

1.3.1: General Objective

To examine the relationship between flexible work arrangements and employee productivity in Murang'a Level 5 Hospital.

1.3.2: Specific Objectives

To find answers to the above problem, as highlighted in the statement of problem section, other than the general objective already mentioned above, the study was specifically guided by the following three specific objectives:

i. To assess the relationship between telecommuting and employee productivity in Murang'a Level 5 Hospital.
ii. To evaluate the association between flextime and employee productivity in Murang'a Level 5 Hospital.
iii. To examine the influence of compressed workweeks on employee productivity in Murang'a Level 5 Hospital.

1.4: Research Hypothesis

The following three null hypotheses were formulated to aid in getting answers to the above specific objectives:

i. **$H_0$1:** Telecommuting has no significant effect on employee productivity at Murang'a Level 5 Hospital.
ii. **$H_0$2:** There is no significant relationship between flextime and employee productivity at Murang'a Level 5 Hospital.
iii. **$H_0$3**: Compressed workweeks do not significantly impact employee productivity at Murang'a Level 5 Hospital.
iv.

1.5: Significance of the Study

The findings on FWAs from previous studies were generalized and not applicable to Murang'a Level 5 Hospital or the Kenyan healthcare system. This research was critical to policymakers, employees, and hospital management by bridging the knowledge gap in the rural Kenyan healthcare setting.

1.5.1: Hospital Management

The research offered hospital management critical insights to enhance workforce-related issues and support Murang'a County government strategic objectives as outlined in the CIDP 2023-2027, such as Universal Health Care and improved health services. Also, the study showcases how FWAs can support employees to be more efficient and productive (Abid & Khan Barech, 2017)**.** The findings on the positive relationship between FWAs and employees' outcomes helped the institution's management in formulating better HR policies that cater to the needs of their staff (Abid & Khan Barech, 2017). The findings informed the management to improve efficiency, address turnover, and adjust overall healthcare delivery strategies. Utilization of FWAs helped in improving the engagement of employees, as more control over their work schedules was granted. This fostered trust and inclusivity at their workplace. Such a work environment breeds motivation, job satisfaction, and ensures experienced professionals are retained. This, in turn, lowers training and recruitment expenditures.

FWAs, a key retention and care improvement approach, are crucial in healthcare because the quality of services depends on how employees are motivated. Achieving better patient care calls for the integration of FWAs into an institution's HR guidelines to assist in balancing personal and organizational needs (Adriano & Callaghan, 2020). Furthermore, the approach helps in building trust, loyalty, and reducing turnover rates, and supports Murang'a County CIPD's strategic objectives of healthcare 2023 -2027, such as staff retention and attaining high-quality care (Government, 2023).

1.5.2: Employees

The research revealed the significance of FWAs, specifically in supporting staff wellness and achieving job satisfaction. Although there was access to FWAs, numerous employees had a limited understanding of these policies (Cooper & Baird, 2015). It was observed that the employees utilized FWAs particularly when under high stress levels. For instance, mothers reporting back after maternity leave who requested part-time work in order to balance childcare and work responsibilities. Therefore, the study provided more awareness on the use of FWAs, helping employees adopt them to become more productive and achieve job satisfaction (Adriano & Callaghan, 2020; Berber et al., 2022). A better understanding of FWAs improved service delivery in the facility. The provision of deeper information about FWAs empowered the employees to have a sense of control, which enabled them to effectively plan their personal and career responsibilities instead of looking for assistance when faced with crises (Adriano & Callaghan, 2020; Berber et al., 2022). When institutions provide different approaches such as compressed workweeks, flextime, and partial telecommuting, employees can pick plans that are consistent with their individual and work needs (Adriano & Callaghan, 2020). Such strategies address workplace stress, breed a culture of accountability, and promote healthier and productive teams that benefit both the staff and the organisation (Agure et al., 2023).

1.5.3: Policymakers

The current study provides valuable insights intended to guide policymakers and county governments in developing responsive human resource strategies for public hospitals. Rather than proposing immediate, direct policy mandates, this research is specifically designed to offer data and analysis that can inform and support future policy formulation, reviews, or pilot programmes concerning flexible scheduling within county hospitals (Public Service Commission, 2021). Ultimately, the findings are expected to enrich evidence-based policy discussions on key issues such as workforce management, employee retention, and performance across the healthcare sector.

The timing of this study holds critical policy significance within the context of Kenya's current national reforms. The country's post-pandemic labour policy reviews and the ongoing push for Universal Health Coverage (UHC) have created a window of opportunity for modernizing the public sector workforce (Health, 2023). However, the data indicate that rural healthcare institutions, such as Murang'a Level 5 Hospital, are at risk of being excluded from this critical transformation. By providing localized empirical evidence, this research directly illustrates the urgency of integrating flexible work practices. Such integration is essential not only for sustaining quality service delivery in the present but also for aligning healthcare human resource practices with national long-term development goals, specifically Vision 2030's Social Pillar and the broader global commitment to Sustainable Development Goal 3 (SDG 3) on health and well-being.

Policymakers utilized the study findings to craft local and national workforce planning and advancement strategies. They relied on the study's outcomes to create the framework and laws that empower non-clinical, clinical, and support staff (Abid & Khan Barech, 2017).

1.5.4: Scholars and Researchers

The study adds to both theory and research by applying human resource theories to a unique setting. It shows that the Job Demands-Resources Model, Herzberg's Two-Factor Theory, and Social Exchange Theory are relevant in the understudied context of rural healthcare in Kenya. The local findings from the study are critical in comparing rural and urban healthcare organisations in Kenya. It also underscores the utilisation of hybrid workforce models in other third-world nations facing similar problems. The findings are not only meant to introduce immediate policy changes but also provide a reliable local understanding and give guidance on sustainable workforce management in the healthcare sector.

1.6: Scope

The research was conducted at Murang'a Level 5 Hospital, a key referral facility in Murang'a County, Kenya. Murang'a Level 5 Hospital focuses on increasing healthcare accessibility through community outreach programmes while being faced with resource challenges characterised by staff shortages and high patient loads. These challenges made it an ideal case for studying the FWAs' association with employee productivity, as the hospital's operational context reflected broader issues faced by public healthcare institutions in Kenya. Murang'a Level 5 Hospital was chosen over other facilities because it serves as a central hub for healthcare delivery in Murang'a and neighbouring counties, offering a representative sample of medical and non-medical staff. The study targeted 421 respondents, comprising medical personnel and non-medical personnel as identified in the hospital's HR records. This diverse respondent pool ensured comprehensive insights into the applicability of FWAs across various job roles, enhancing the study's relevance to the local healthcare context.

The study focused on evaluating the association between FWAs and employee productivity within the field of human resource management and organisational behaviour. Specifically, the research focused on three independent variables: telecommuting, flextime, and compressed workweeks, and their influence on employee productivity. The dependent variable metrics were measured through the number of patients served, average patient wait time, and patient satisfaction scores. This academic focus aligned with the broader line of research investigating innovative workforce strategies to enhance organisational efficiency in high-pressure environments, particularly in healthcare settings. While the findings were context-specific, they provided valuable recommendations that apply to other county hospitals with similar structural and staffing challenges.

1.7: Limitation

The research faced several limitations that hindered its execution and the validity of the results. First, time constraints shrunk the data collection period, potentially reducing response rates among participants. Despite adopting a mitigation strategy, like early scheduling of the data collection tasks and constant reminders relayed to participants to motivate them to respond on time, only 186 respondents out of 205 participated in the data collection. Secondly, challenges such as staff reluctance to disclose work attitudes and institutional constraints in implementing FWAs were encountered. To mitigate these, strict confidentiality was assured to all respondents, and results were interpreted with appropriate caution regarding the specific context. Third, the applicability of the study's results may be limited since the researchers surveyed Murang'a Level 5 Hospital, which may not fully represent other facilities. Nonetheless, it provides more understanding for other public health facilities in the country. Finally, resource constraints, particularly financial limitations, were averted by employing a stratified sampling technique and maintaining focused objectives to ensure high-quality, reliable results within the available resources.

II. LITERATURE REVIEW

2.0: Introduction

Chapter two reviews previous studies on the utilisation of FWAs in public hospitals and how they impact employees. It explores theoretical concepts, past studies, the conceptual framework, research variables, summary, and existing study gaps. The conceptual framework shows how FWAs influence productivity, such as patient numbers, wait times, and satisfaction. The literature review establishes the foundation for this study and underscores the significance of focusing on Murang'a Level 5 Hospital by highlighting insufficient evidence-based research in similar hospital settings.

2.1: Theoretical Review

Researchers used Social Exchange Theory (SET), Two Factor Theory, and Job Demands-Resources (JD-R) Model. The JD-R Model shows the utilisation of FWAs to manage stress and performance to achieve high productivity (Pansini et al., 2023). The Two-Factor Theory shows how internal motivation is central in helping FWAs to boost productivity and job satisfaction (Bakker & Demerouti, 2016; Pansini et al., 2023). Social Exchange Theory (SET) scaled the exchange relationships that exist between FWAs and worker productivity. A combination of these models provided a more robust framework for analysing how FWAs function as organisational resources that influence employee motivation, well-being, and ultimately, productivity in Murang'a Level 5 Hospital

2.1.1: Job Demands-Resources (JD-R) Model

The JD-R model is a framework that combines stress and motivation to describe burnout and engagement in the workplace (Bakker & Demerouti, 2016; Pansini et al., 2023). According to the concept, job demands and resources are the key determinants of an organisation's outcome. Job demands are work pressure around the organisation relating to physical, socio-economic, or organisational factors requiring physical, mental, or psychological efforts to sustain them (Demerouti et al., 2001).

The consequences of high job demands are normally negative effects, such as fatigue and stress, among the workforce (Pansini et al., 2023). Conversely, job resources are key to an organisation as they help workers achieve their goals, mitigate the negative effects of job demands, and fuel professional growth. According to the JD-R model, high job demand that causes fatigue and burnout can be reduced by job resources (Pansini et al., 2023). Job demands and resources relate, and the outcomes are based on their balance. The Job Demands-Resources (JD-R) Model was integrated into this study as the principal framework for interpreting the functional role of Flexible Work Arrangements (FWAs) within the high-demand context of Murang'a Level 5 Hospital. This model posits that specific FWAs, including flextime, telecommuting, and compressed workweeks, operate as crucial job resources. These resources are necessary to buffer the negative impact of inherent job demands faced by healthcare staff - such as prolonged shifts, persistent staff shortages, and consistently high patient volumes - by granting individuals the autonomy to better manage their peak workload periods. Similarly, telecommuting served as a job resource by supporting administrative personnel in minimising role conflict and time pressure. Conversely, the model clearly predicts that the absence of such adaptive flexibility results in a significant disparity between organisational demands and available resources, a misalignment that ultimately precipitates employee strain and a subsequent reduction in organisational productivity (Bakker & Demerouti, 2016).

Despite heavy criticism of the JD-R model due to its broad applicability, its primary strength lies in its suitability for application in various job settings (Demerouti et al., 2001). This model was relevant to the study because it provided a framework for examining FWAs as job resources that mitigate job demands. Based on the concept, FWAs would enable Murang'a Level 5 Hospital to positively enhance the experience of the employees by reducing burnouts that, in turn, increase employee productivity.

FWAs were regarded as key job resources in this study. The concept stresses that telecommuting can reduce stress in the workplace and commute time for the clinical, non-clinical, and support staff. The benefit of compressed workweeks includes more time to rest after work, and flextime provides flexibility to handle hectic schedules, bringing about autonomy. The JD-R framework explains how resources can stimulate work engagement and eliminate burnout from high job needs, a phenomenon common in the healthcare sector (Bakker & Demerouti, 2016)**.** This applied to Murang'a Level 5 Hospital, because the theory describes the utilisation of FWAs in addressing employees' challenges, such as patient overload and long shifts.

2.1.2: Herzberg's Two-Factor Theory

The Frederick Herzberg Two-Factor Theory by Herzberg 1968 suggests that there are two groups of attributes in a workplace that determine whether an employee is discontented or satisfied (Alshmemri et al., 2017). One of these includes motivators such as autonomy, responsibility, acknowledgement, and professional development. Frederick Herzberg posited that such motivators promote job satisfaction and productivity (Alshmemri et al., 2017). The other group encompasses hygiene factors such as policies and better working conditions.

Herzberg explained that while hygiene factors can hinder staff from feeling unhappy, they cannot motivate them to work efficiently. The assumption made by Frederick Herzberg in his Two-Factor Theory is that employees seek higher needs once fundamental hygiene factors are adequately met. The Two-Factor Theory of Herzberg has been criticised due to its inability to be consistently applied to a business and cross-cultural environment, despite its growing popularity (Alshmemri et al., 2017). Hygiene factors, according to some studies, can be a motivator sometimes. Also, it has been suggested by some scholars that the binary classification of sets of characteristics can be informative of the effects that other factors can have upon the productivity of workers (Haleem et al., 2021).

The use of Herzberg's Two-Factor Theory revealed how FWAs influence motivation and satisfaction among the staff. Flextime boosts satisfaction by providing workers with more control over their schedules (Haleem et al., 2021). Compressed workweeks boost the morale of employees by allowing them to have rest periods. However, this should be handled with caution because long work schedules can lead to fatigue and dissatisfaction (Mühl & Korunka, 2024). Telecommuting, on the other hand, offers two benefits by acting as a motivator and a hygiene factor. As a motivator, it gives employees autonomy and reduces mental pressure for daily commutes. At the same time, it functions as a hygiene factor by addressing work stress and supporting workers in achieving life-work balance. Comprehending these differences helps in predicting and explaining how FWAs impact the productivity of employees in this study.

According to Alshmemri et al. (2017) the theory emphasises the interaction between work and personal roles. FWAs such as flextime and compressed workweeks promote balance, leading to increased employee commitment and efficiency. As a motivator, FWAs provide employees with a sense of responsibility and recognition from the organisation, which can intrinsically motivate them to perform better. For healthcare workers in a resource-constrained environment like Murang'a, where hygiene factors such as pay may be a source of dissatisfaction, the introduction of motivators through FWAs could be a powerful strategy for enhancing job satisfaction and, consequently, productivity. This theory helped explain why FWAs led to employee satisfaction and high productivity.

2.1.3: **Social Exchange Theory**

In the early 20th century, George Homans and Peter Blau formulated Social Exchange Theory (SET), which explains how people interact through exchanges (Blau, 1964). SET posits that exchanges that occur in the workplace are not limited to the workplace. Such exchanges extend to the families, friends, and relatives of individual employees. The social exchange theory posits that a reciprocated behavioural response from the target typically follows an actor's initiation towards a target.

Cropanzano & Mitchell. (2005) argues that employees' dedication in social interactions and the gains they obtain depend on reciprocity. The SET concept frames the impact of FWAs in relation to positive and negative relationships. Positive relationships develop when employees are motivated to reciprocate the organisation's initiating actions, imbued with goodwill (Golden & Veiga, 2018; Hurtienne, 2025). The experiences and interpretations of individual employees and their supervisors or seniors in the workplace are everyday in nature. On the other hand, negative initiating actions, such as incivility from the organisation or abusive supervision, will have a negative outcome (Choi et al., 2019; Kniffin et al., 2021). Social exchange theory's basic ideas suggest that the reaction resulting from the target, namely the employees, would be both behavioural and relational. The successful sharing of nature experiences and interpretations between employees can transform the preliminary exchange into a social exchange relationship (Cropanzano & Mitchell, 2005). This means that employees reciprocate harm or help depending on how much the employer engages in benefits and harm.

This research used Social Exchange Theory (SET) to assess the role of an organisation in offering FWAs and how the arrangement fuels productivity. It focuses on the link between FWAs and employee responses by emphasising that workers reciprocate depending on the losses or benefits they receive and the value of FWAs implemented. The outcomes from FWAs were explained in a manner that favours both employees and employers, and in a manner that undermines the goals, desires, and expectations of both parties. The beneficiary of the FWAs reciprocated benefits to the initiator. In an extended workplace, it has been observed that workers' behaviours are impacted by how they perceive their employers. When employees are pleased with the employer's incentives, positive attitudes can encourage them to reciprocate with optimistic behaviours and increase their engagement (Abid & Khan Barech, (2017); Hurtienne, 2025). This works to reduce acts such as attrition and absenteeism. Likewise, when faced with an unsupportive work environment, employees often withdraw or become disengaged from their responsibilities. According to SET, when Murang'a Level 5 Hospital offers flexibility, employees are likely to reciprocate with greater loyalty and discretionary effort. This theoretical lens is crucial for understanding the psychological contract between the hospital and its staff. It suggested that implementing FWAs was not merely a logistical change but a social exchange that cultivated a more dedicated and productive workforce, which was essential for achieving the hospital's strategic service delivery goals.

2.2: Empirical Review

This section reviews studies exploring the impact of FWAs on employee productivity. The literature synthesis is organised in key thematic areas captured in the objectives. The first part explored the extent of literature on telecommuting and its association with employee outcomes. The synthesis delved into how telecommuting influences job satisfaction and productivity. It also addressed isolation and collaboration in the workplace and the need for further research. The second part examined the influence of flextime on employee outcomes in the literature. The synthesis focused on how flextime relates to employee productivity. The last part of this review probed compressed workweeks' influence on employee productivity. The synthesis provided a nuanced interplay between compressed workweeks and employee outcomes. The synthesis also presented gaps that the study targeted to address.

2.2.1: Telecommuting Options and Employee Productivity

Telecommuting means working from home or another location, utilising the internet and other necessary technologies (Abid & Khan Barech, 2017). It is an FWA provision that allows the staff to choose workplaces, apart from the central or traditional workplace. Telecommunication technologies enable employees to work from anywhere, not just their usual office. Studies have shown that telecommuting can boost employee productivity. Wang et al., 2021, established that telecommuting significantly enhances job productivity by reducing commuting time and providing greater flexibility.

Similarly, Onyemaechi et al. (2018) suggested that allowing employees to work remotely or away from the office is linked to higher productivity. However, the study noted that the positive correlation between telecommuting and employee productivity was weak. Perera and Tilakasiri (2024) established that "telecommuting among employees in the banking sector in Sri Lanka positively influences employee job productivity, especially when practitioners take necessary strategies critical for successfully utilising telecommuting".

On the contrary, Alfanza (2021) established no significant correlation between telecommuting and employee productivity. Even though job productivity and telecommuting remained applicable with regard to COVID-19, the findings further noted the need for managers to be more cautious when designing telecommuting programs (Asamani et al., 2025; Sekhar & Patwardhan, 2023). Findings from Abilash and Mary Siju (2021) mirrored those of Alfanza (2021), arguing for the need to create conducive environments that adequately support telecommuting to enhance employee job productivity. Choudhury et al. (2025) postulated that telecommuting would be the best FWA option when assignments, roles, or responsibilities are independent and employees are skilled in their respective jobs.

Studies in the developed world show that telecommuting enhances employee autonomy, job satisfaction, and task completion rates (Choudhury et al., 2025). In healthcare, however, applicability is limited to administrative and support staff. Locally, Owuor et al., (2025) found that telecommuting in Kenyan county hospitals reduced absenteeism among administrative staff. Variations in the effectiveness of telecommuting across different job roles highlight the essence of

contextual evaluations. Onyemaechi et al. (2018) argued that organisations may derive different employee productivity for independent roles and roles requiring high levels of collaboration. Healthcare providers who depend on collaboration for optimal patient care may face challenges when telecommuting is implemented without adequate strategies. Haleem et al. (2021)argue that telecommuting is critical in improving job satisfaction, especially when it is implemented effectively. Conversely, Owuor et al. (2025) study reported minimal impact on clinical staff due to the nature of their work. This underscores the importance of role-specificity. This study builds on this by specifically investigating this dichotomy within the rural context of Murang'a Level 5 Hospital, where infrastructural barriers may further limit telecommuting's effectiveness**.**

2.2.2: Flextime and Employee Productivity

FWA is a state where employees work on a rotational basis, outside of their normal working day, and includes night shifts, evening shifts, and weekend shifts to provide extended services (Kelliher & Anderson, 2021). Flextime is crucial for ensuring continuous healthcare services and for managing large patient numbers in facilities like Murang'a Level 5 Hospital (Murang'a County Government, 2022). The availability of this arrangement allows institutions to deal with labour shortages and, at the same time, provide the employees with flexibility to balance between personal and professional lives, which may contribute to job productivity and satisfaction. As Muga & Senelwa (2022) emphasise, flextime leads to less fatigue and absenteeism among employees, provided that it is complemented by proper scheduling and resting.

Conversely, poorly and ineffectively administered flextime may negatively influence productivity to a great extent. The inability to take sufficient time off between shifts, in addition to irregular and too long shifts, has been linked to reduced cognitive performance and higher burnout rates in health professionals (Bett et al., 2022; Sekhar & Patwardhan, 2021). Proper workload distribution monitoring by top leadership, fair rotation, and respect for employee preferences and health conditions are all necessary to achieve effective shift management. Support from the organisation plays a key role in how effective flextime can be. Agure et al. (2023) study findings show that flexibility due to the shift in productivity significantly increased when the management involved the staff in scheduling choices and offered wellness assistance. Additionally, the degree to which flextime affects productivity among employees can be regulated by individuals developing stress resilience and managing time and family obligations (Adisa et al., 2016).

Locally, Kandie and Chepkilot (2022) reported that well-implemented flextime arrangements were associated with reduced burnout among nurses in Uasin Gishu County hospitals. They found that flextime proved convenient in enabling employees to better handle their family and personal responsibilities, thus increasing morale and punctuality. In addition, Bett et al., (2022) study warned that poorly executed flextime can introduce role overload and coordination problems unless fair scheduling and organisational assistance are provided. By studying the application and outcome of the flextime at Murang'a Level 5 Hospital, this study directly addressed this problem and provided context-appropriate evidence for its efficacy.

2.2.3: Compressed Workweeks and Employee Productivity

According to Jeong and Bae (2024), compressed workweeks allow employees to have long weekends. This enables them to enjoy time with family, have adequate time for recreation, and afford sufficient time to attend to personal matters. The FWAs compress the days in a week into fewer than five by compelling the workers to work extended hours in a day. The increasing use of compressed workweeks has received a lot of attention lately. Haleem et al., (2021) research examined compressed workweeks in professional settings to determine their impact on employee job performance. This study demonstrated that employees engaged in compressed workweeks attained greater job satisfaction and diminished burnout. In the same way, Mühl & Korunka (2024) found that compressed workweeks gave workers a chance to improve their lives by balancing their work and personal needs. Orishede and Ndudi (2020) argued that reduced stress usually translates into scaled-up productivity. In addition, employees derive a sense of empowerment from the trust the organisation places in them to work fewer days a week, which translates into better productivity.

Some studies have held reservations concerning compressed workweeks' influence on employee productivity. Employees in intensive work environments may find it challenging to maintain high productivity levels under compressed workweeks (Bambra et al., 2008). Research on the potential of compressed workweeks to cause stress and burnout remains limited. In the Kenyan context, Nyambura (2023) study reported that compressed workweeks increased job satisfaction among hospital support staff, as they reduced their commuting frequency and costs.

However, the study also found a significant challenge: the risk of fatigue and decreased alertness during longer shifts, particularly for clinical staff, which could potentially compromise patient care. This highlights a critical tension between employee well-being and operational safety. This study examined this trade-off explicitly at Murang'a Level 5 Hospital, exploring whether the benefits of compressed workweeks outweigh the risks in a high-demand, county referral facility.

2.3: Conceptual Framework

The conceptual framework indicates a positive link between FWAs (independent variables) and employee productivity (dependent variable). The framework is grounded on the Job Demands-Resources (JD-R) Model, Herzberg's Motivation Theory, and Social Exchange Theory (SET) to explain the independent variables' effects on productivity outcomes. To mirror the rural Kenyan Hospital setting, the conceptual framework includes context-specific variables such as structural constraints that impact clinical, non-clinical, and support staff productivity in different ways. The mixture of variables backs the study's mixed methodology technique. Regression analysis quantitatively examines the link between FWAs and

productivity, while qualitative data explores contextual variations. The simplification of the framework to concentrate on the main associations and mediating factors, the study enhanced generalizability to the same public sector healthcare setting and offered practical insights for UHC-consistent workforce optimization. Figure 2.1 represents the independent variables (IV) (flextime, telecommuting, compressed workweeks) and the dependent variable (DV) (employee productivity) relationship.

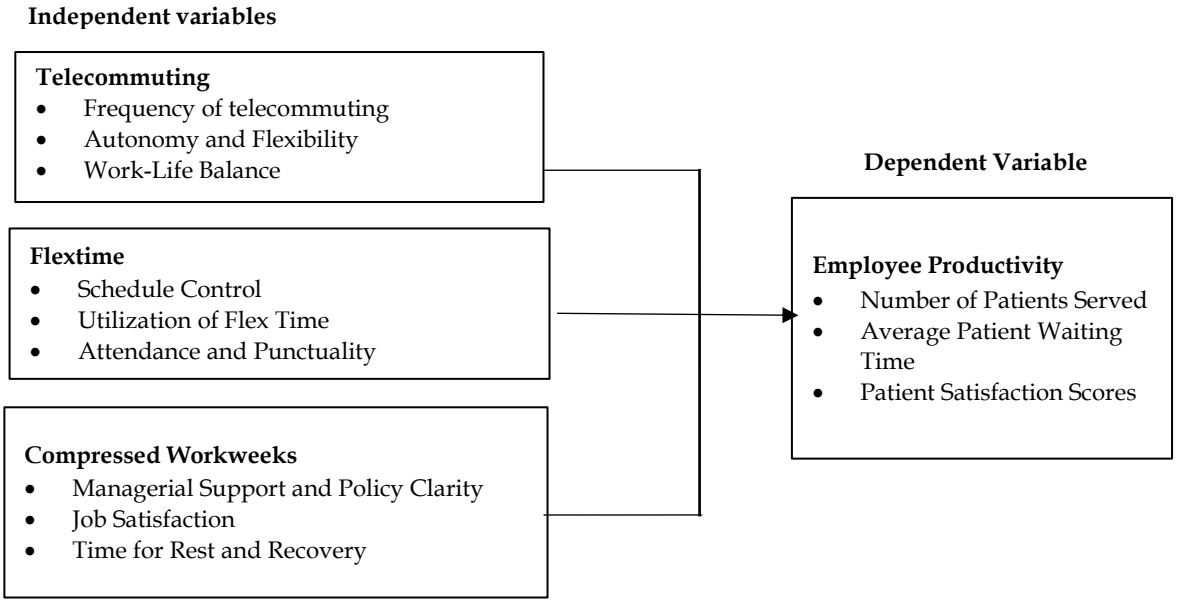

Figure 2. 1: Conceptual framework for Murang'a County Level 5 Hospital

2.4: Research Variables

The independent variables, that is, telecommuting, flextime, and compressed workweeks, positively affected the dependent variable. The dependent variable, which is employee productivity, was measured through patients served, average wait time, and patient satisfaction scores. The connection between each variable and productivity was based on theoretical assumptions, such as the Job Demands-Resources (JD-R) Model, Herzberg Two-Factor Theory, and the Social Exchange Theory, and empirical data, which is in line with this study, as it discusses the issues of the rural healthcare workforce.

2.4.1: Independent Variable 1: Telecommuting

Telecommuting is a concept of working outside the central workplace, utilising digital technologies. Telecommuting is projected to result in improved productivity among employees at Murang'a Level 5 Hospital, as they are likely to experience less stress due to commuting and greater independence (Herrera-Ballesteros et al., 2025). The JD-R Model argues that telecommuting can decrease job needs, including commute time, and offer resources such as flexibility, resulting in higher job productivity (Hakanen et al., 2008). Telecommuting enables healthcare workers to conduct administrative tasks or telehealth consultations through platforms such as electronic health records, aligning with the current trend of digitalisation (Menezes & Kelliher, 2017). According to Social Exchange Theory, the reciprocity of flexibility provided by telecommuting will encourage employee commitment, as well as output (Blau, 1964). Based on empirical data, telecommuting has been linked to a 15% rise in job satisfaction, which has a positive influence on productivity measures, such as patient satisfaction ratings (Kniffin et al., 2021). The employees at Murang'a, where a shortage of personnel causes overworking on-site, work more efficiently and experience less burnout in telecommuting workplace environments. This study's predictions were correct, as they indicate high patient survey scores, indicating satisfaction and increased employee productivity.

2.4.2: Independent Variable 2: Flextime

Flextime, which is an independent variable (IV), is expected to enhance employees' productivity (DV). Orishede & Ndudi, (2020) define flextime as a workplace strategy that allows employees to choose their work hours within set limits. Institutions that employ flextime benefit their employees by improving their work-life balance and reducing work-related stress (Orishede & Ndudi, 2020). Herzberg's Two-Factor Theory suggests that flextime acts as a key motivational factor by enhancing job satisfaction and performance by allowing employees to balance personal responsibilities, such as childcare, with their work (Hill et al., 2001). In healthcare settings, flextime allows nurses and clinicians at Murang'a Level 5 Hospital to adjust schedules around peak patient hours, potentially reducing wait times. The JD-R Model supports this, as flextime provides autonomy, which is a key resource that mitigates high job demands such as patient surges (Hakanen

et al., 2008; Ridzuwan et al., 2025). Studies show flextime reduces absenteeism by 10%, correlating with improved service delivery (Oreyo et al., 2021). At Murang'a Level 5 Hospital, flextime improved productivity by enabling staff to work during optimal hours, increasing patients served, and improving satisfaction through more responsive care.

2.4.3: Independent Variable 3: Compressed Workweeks

Compressed workweeks are a workforce strategy that entails employees working longer hours with fewer days off to allow them longer weekends and holidays (Golden & Veiga, 2018). The hypothesis for this independent variable is that compressed workweeks should enhance employee productivity, as they may not be fatigued and have higher morale (Kossek et al., 2023). Social Exchange Theory suggests that offering compressed workweeks fosters employee loyalty, as workers perceive organisational support, leading to higher output (Blau, 1964). In healthcare, compressed workweeks allow staff to complete intensive shifts followed by extended rest, potentially reducing burnout in high-pressure environments like Murang'a Level 5 Hospital. Empirical evidence indicates compressed workweeks improve engagement, with a 12% increase in performance metrics in service sectors (Golden & Veiga, 2018). The JD-R Model supports this, as extended rest periods enhance recovery, a critical resource for sustaining productivity (Hakanen et al., 2008). At Murang'a, compressed workweeks streamlined shift scheduling, reduced wait times, and increased the number of patients served by ensuring staff are well-rested and focused.

2.4.4: Dependent Variable: Employee Productivity

The study's dependent variable, employee productivity, was positively affected by the independent variables. With regards to this research, employee productivity refers to the efficiency and effectiveness of healthcare workers in delivering services (Choudhury et al., 2025). Employee productivity was measured by the number of patients served, average wait time, and patient satisfaction scores at Murang'a Level 5 Hospital. Productivity is multi-dimensional, encompassing individual task performance, teamwork, and organisational citizenship, influenced by supportive work environments (Kossek & Michel, 2011; Ridzuwan et al., 2025). The independent variables, telecommuting, flextime, and compressed workweeks, increased productivity by eliminating stress, promoting autonomy, and engagement, which is supported by the Two-Factor Theory and the Social Exchange Theory (Blau, 1964; Hill et al., 2001). For example, telecommuting could mean more patients served by telehealth. Conversely, flextime decreased wait time by scheduling more efficiently. In addition, compressed workweeks resulted in higher satisfaction scores because staff were less stressed by their schedules. In Murang'a's resource-constrained setting, these FWAs addressed challenges like staff shortages and high patient loads, aligning with current employee expectations for flexibility and utilisation of digital tools (Agure et al., 2023).

2.5: Summary and Research Gap

The reviewed literature establishes a strong theoretical and empirical case for the positive influence of FWAs (telecommuting, flextime, and compressed workweeks) on employee productivity. However, the efficacy of these arrangements remains context-specific and varies, particularly within healthcare settings. Although research by Perera & Tilakasiri, (2024) indicates the positive impact of telecommuting on productivity, they acknowledge that its effectiveness is significantly influenced by job attributes and the necessity for physical collaboration, particularly prevalent in healthcare environments. Haleem et al. (2021) and Onyemaechi et al. (2018), emphasised this complexity but provided insufficient evidence from public health institutions in developing countries. Flextime has been associated with diminished fatigue and enhanced productivity (Muga & Senelwa, 2022). However, its efficacy may be compromised by inadequate scheduling and inequitable access among healthcare personnel (Bett et al., 2022). Most of these studies focused on private sector organisations or Western contexts, leaving a clear gap in research on how flextime is implemented in Kenya's public health system. Compressed workweeks help people strike a balance between work and personal lives, but they may also make burnout and workload stress worse, especially in hospitals that are short on staff and have a lot of patients (Bambra et al., 2008; Haleem et al., 2021; Mühl & Korunka, 2024; Roy & Ferdausy, 2021).

While global research is abundant, and a growing body of local Kenyan studies exists, a pronounced gap remains. In particular, Murang'a Level 5 Hospital, a referral facility facing systemic challenges such as resource limitations, understaffing, and high patient influxes, had not been the focus of any targeted academic investigation regarding flexible work arrangements. Previous local studies, including Agure et al. (2023) and Oreyo et al. (2021), have primarily focused on private sector organizations and urban public institutions. This signified a critical research gap in investigating the simultaneous impact of these three core FWAs within a rural, public, county referral hospital in Kenya. This gap is bridged by focusing on Murang'a Level 5 Hospital. It moves beyond generalizations to provide a significant, context-specific analysis of how telecommuting, flextime, and compressed workweeks affect productivity metrics across different staff categories (clinical, non-clinical, support) in a resource-constrained setting. Hence, the study expounded this area of research by generating evidence that was directly applicable to the management and policy challenges faced by rural healthcare facilities in Kenya and similar contexts.

III. RESEARCH METHODOLOGY

3.0: Introduction

Chapter three describes the research design, population, data collection, data analysis, presentation, and ethical considerations. The framework for exploring the research questions encompassed the population and the sampling methods used to select study participants. Additionally, the data collection procedures outlined the instruments and

techniques employed. Finally, the data analysis techniques were discussed, including statistical and qualitative methods used to analyse the data to develop an understanding of FWAs' influence on employee productivity. A mixed methods approach guarantees the validity and reliability of the findings.

3.1: Research Design

Based on the JD-R Model, Herzberg's Two-Factor Theory, and Social Exchange Theory, the study employed a mixed-method design to understand FWAs (Creswell & Plano Clark, 2018; Malmqvist et al., 2019). This study used an explanatory sequential mixed-methods design to investigate how flexible work arrangements (FWAs) telecommuting, flextime, and compressed workweeks, influence employee productivity at Murang'a Level 5 Hospital. This design was selected to enable a structured process in which quantitative results provided statistical evidence of relationships, while qualitative findings offered contextual explanations for the observed patterns. This step-by-step approach ensured both empirical rigor and interpretive depth, allowing measurable associations to be verified through lived experiences and perceptions of hospital staff. In the quantitative phase, a multiple regression model was employed to determine the combined and separate impact of three FWAs on employees' productivity. In this model, the weaknesses linked to the independent analysis of the variables were corrected by controlling their common variance and testing all the predictors simultaneously. Multicollinearity tests confirmed statistical adequacy, with Variance Inflation Factor (VIF) values below 1.34, validating the reliability of the estimates.

After the quantitative analysis, the qualitative phase was conducted to help in the interpretation of results. Twenty-four participants were drawn from varied departments in the hospital for semi-structured interviews. The varied departments included clinical non-clinical and support staff. Thematic analysis, underpinned by Braun and Clarke, (2006) six-phase framework, was employed to yield non-randomly occurring themes that explained the patterns. The steps were data familiarization, coding, generating initial themes, reviewing themes, defining and naming themes as well and reporting. The themes provided explanations for why some FWAs were more effective at enhancing productivity. For example, the shift recovery and work-life balance were improved by flextime. Also, telecommuting effectiveness was moderated by connectivity issues in rural areas. According to Creswell and Plano Clark (2018), explanatory sequential design needs to start with quantitative methods to identify general trends and relationships before exploring the effects through qualitative methods to interpret and add meaning to the quantitative outcomes. At Murang'a Level 5 Hospital, there is structured data on productivity, but there is a need to understand the deeper impact of FWAs on the reality of workers' day-to-day experiences. The design fits with the Job Demands–Resources (JD-R) model, which states that work outcomes are influenced by the measurable structures of work plus the subjective perception of available resources (Bakker & Demerouti, 2016). Quantitative methods provided evidence of the structural impact of FWAs, while qualitative analysis demonstrated how these arrangements influenced motivation, energy, and engagement.

Murang'a Level 5 Hospital was chosen because it includes features of the public healthcare system of Kenya, which includes a high number of patients to staff ratio and fewer resources. These traits are also found in 47 other counties, which will make the findings more generalizable in similar rural settings. The growth in digitalization and artificial intelligence is echoed by the concept of telehealth-based telecommuting (Menezes & Kelliher, 2017). The study was relevant to the Murang'a County Integrated Development Plan 2023–2027 as it contributed towards strategic objectives addressing health service delivery efficiency and worker welfare. Additionally, it also guided the hospital leadership and policy makers in line with Kenya's Vision 2030 pillars of healthcare delivery (Kenya, 2010). This enhanced the reliability of the research and provided a clear picture of the problem under investigation (Tashakkori & Teddlie, 2010). To test the quantitative and qualitative instruments, a pilot study was carried out in Maragua Level 4 Hospital. The pilot study's Cronbach's alpha was 0.836. This confirmed the internal consistency of the questionnaire and the reliability of the measurement scales. The interview guide was also improved for clarity, logic, and thematic relevance. This preparatory phase ensured the feasibility and validity of the full study data collection process.

3.2: Population

A population encompasses a group of people or things that have similar characteristics that are of interest to researchers (Patel & Patel, 2019). The study incorporated 421 staff members of Murang'a Level 5 Hospital, including medical personnel, nurses, administrators, and support staff. The population was divided into 3 distinct categories, which include clinical, non-clinical, and support staff. A diverse group is used to provide information that represents the experiences and views of the whole population (Patel & Patel, 2019). This population was selected as its members were directly impacted by the FWAs' policies, as their productivity was core to the service delivery of Murang'a Level 5 Hospital. Table 2 describes the staff makeup at Murang'a Level 5 Hospital. The fact that this was a heterogeneous group made it possible to have a very broad scope of data and have the perspectives and experiences of a large number of individuals within the organization.

Table 3. 1: Staff Composition at Murang'a Level 5 Hospital

Staff Category	Designation	Number of Staff
Medical (Clinical)		

Staff Category	Designation	Number of Staff
	Doctors	52
	Nurses	176
	Clinical Officers	27
	Laboratory Technologists/Technicians	25
	Pharmacists/Pharmaceutical Technologists	12
	Radiographers	8
	Physiotherapists	7
	Nutritionists	7
	Medical Records Officers	8
	Dentists/Dental Technologists	4
	Occupational Therapists	2
Non-Medical (Administrative & Support)		
	Human Resource Officers	15
	Finance & Accounts Personnel	1
	Administrative Officers/Secretaries	3
	ICT Officers	1
	Cleaners/Sanitation Staff	51
	Drivers	16
	Maintenance & Engineering Staff	6
Total		**421**

Source: Murang'a Level 5 Hospital HR Database

3.3: Sample Size and Sampling Technique(s)

A stratified sampling technique was employed in selecting respondents from the study population. Sampling involves selecting a specific population or a subset of individuals from a larger group to act as a representation of that population in the research. This allows conclusions to be made without necessarily surveying that entire population (Ericson et al., 2023; Patel & Patel, 2019). This sampling method ensured that there was fair representation of different workers and departments within Murang'a Level 5 Hospital (Muinga et al., 2020; Patel & Patel, 2019). Patel and Patel (2019) argues that this enhances the accuracy and generalizability of the findings to curbing bias due to unbalanced samples. Time and financial limitations necessitated the use of the Yamane formula with a 95% confidence level and a 5% margin of error (Adam, 2020); (Yamane, 1967):

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

Where:

n = sample size,

N = population size (421),
e = margin of error (0.05 for a 95% confidence level).

Using the Yamane formula, the sample size with a population (N) of 421 yielded a sample size (n) of 205 participants. The sample size allowed the researcher sufficient time to establish significant relationships between FWAs and employee productivity metrics without overstretching resources. In addition, the sample was sufficiently large and permitted the researchers to learn more about individual respondents, which was essential when it came to achieving effective feedback, and made it possible to conduct meaningful statistical and qualitative analyses (Ericson et al., 2023). Moreover, this sample size facilitated deeper engagement with participants, ensuring that both quantitative and qualitative surveys were conducted effectively. The medical staff included doctors (52), nurses (176), clinical officers (27), pharmacists/pharmaceutical technologists (12), dentists/dental technologists (4). The medical technical support team includes laboratory technologists/technicians (25), radiographers (8), physiotherapists (7), nutritionists (7), medical records officers (8), and occupational therapists (2). The administrative staff included human resource officers (15), finance and accounts personnel (1), administrative officers/secretaries (3), ICT officers (1), cleaners/sanitation staff (51), drivers (16), and maintenance and engineering staff (6). The distribution of this sample across the various staff categories, based on their proportion in the total population, **is** shown in Table 3.2.

Table 3. 2: Sample Size Distribution Across Staff Categories at Murang'a County Level 5 Hospital

Staff Category	Designation	Number of Staff	Proportion (%)	Sample Size (n = 205)
Medical (Clinical)	Doctors	52	12.35%	25
	Nurses	176	41.81%	86
	Clinical Officers	27	6.41%	13
	Lab Technologists	25	5.94%	12
	Pharmacists/Pharm. Technologists	12	2.85%	6
	Radiographers	8	1.90%	4
	Physiotherapists	7	1.66%	3
	Nutritionists	7	1.66%	3
	Medical Records Officers	8	1.90%	4
	Dentists/Dental Technologists	4	0.95%	2
	Occupational Therapists	2	0.47%	1
Non-Medical (Admin & Support)	HR Officers	15	3.56%	7
	Finance & Accounts Personnel	1	0.24%	1
	Admin Officers/Secretaries	3	0.71%	1
	ICT Officers	1	0.24%	1
	Cleaners/Sanitation Staff	51	12.11%	25
	Drivers	16	3.80%	8
	Maintenance & Engineering Staff	6	1.42%	3
TOTAL		**421**	**100%**	**205**

Source: Author (2025)

3.4: Data Collection

The research applied a mixed-methods technique in collecting qualitative and quantitative data. The link between FWAs (telecommuting, flextime, and compressed workweeks) and employee productivity was assessed using the number of patients served, mean wait time, and satisfaction scores. Quantitative data included numerical metrics on FWA implementation frequency of telecommuting, hours of flextime, and productivity outcomes, collected through structured surveys administered to a sample of 205 employees identified in the hospital's staff registry. The questionnaires and interviews offered raw and unfiltered data to ensure the achievement of data triangulation (Ericson et al., 2023). The process of gathering information began with obtaining hospital approval, getting informed consent, and ensuring the anonymity of each participant as per the set ethical standard. The strategy suited well in Murang'a's rural healthcare settings, where digital infrastructure such as telehealth is critical in addressing staff shortages and boosting productivity. This was consistent with the Job Demands-Resources Model and modern expectations for flexible work (Adriano & Callaghan, 2020; Hakanen et al., 2008).

3.5.1: Quantitative Data Collection

A structured questionnaire comprising five sections, such as demographic, telecommuting, flextime, compressed workweeks, and employee productivity, was used. Questionnaires used Likert-scale (1 = strongly disagree to 5 = strongly

agree) items to assess FWA usage, engagement levels, and productivity metrics, supported by statistical analysis to test relationships (Creswell & Plano Clark, 2018). The study carried out with a sample of 20 staff yielded a Cronbach's alpha of 0.836, indicating high internal consistency, which met the Board standard. Likert scale and reverse-coding ensured an expanded scope, clarity, and compliance. The use of a standardized questionnaire allowed for efficient data collection from a large sample and facilitated statistical analysis (Allen et al., 2015; Ericson et al., 2023). Moreover, the questionnaire was an explanatory sequential design, and distributed in both digital and paper-based, to professional staff to maximize response rate. This research used both self-reported and objective productivity measures in the mixed-methods design. Records detailing the hospital's performance were the source of objective data. This included clinical staff (patients served per shift), non-clinical staff (documents processed), and support staff (attendance/punctuality). The use of these objective indicators helps to counteract any social desirability bias that may compromise self-assessed performance (Joshi et al., 2015). Over two months, data were collected with the help of HR to ensure proper sampling coverage and access to administrative records. Out of 205 potential responses, a total of 186 responses were received with an overall response rate of 90.7% with only 6.3 % left out because of leave and reassignments. In terms of demographics, 59.9% were female, while 41.7% were non-clinical and support staff professionals. This profile is comparable to the hospital staff composition in different hospitals in Kenya. This use of data collection addressed methodological weaknesses in the study and improved construct validity and measurement reliability (Joshi et al., 2015). The use of objective records confirmed the quantitative results, which later showed a significant relationship from multiple regression analysis. Including measures of productivity strengthened the internal validity of the investigation. As shown in Table 3.3, the operationalized indicators that are attached in this research are conceptually and empirically anchored in JD-R and Herzberg theories. Measuring both objectively and subjectively narrowed the gaps between perceived and actual productivity. In addition, operational indicators were organized to provide consistency with statistical tests.

3.5.2: Qualitative Data Collection

A total of 24 semi-structured interviews were undertaken with participants who were purposively selected from the quantitative sample. This method was chosen to gather in-depth, narrative data on perceptions, challenges, and contextual factors surrounding FWAs that the questionnaire could not capture entirely. The research used an interview guide to achieve consistency and allow flexibility in exploring major themes. The interviews took about thirty to forty-five minutes each and were conducted in meeting rooms at the hospital to guarantee privacy and avoid interference with work. The researcher used a phone recorder to audio-record the sessions and transcribed them word for word. The researcher also took extensive field notes on the pauses, tone, feeling, and other non-verbal expressions interviewees showed (Joshi et al., 2015). The analysis used Braun and Clarke, (2006) six-step thematic framework, which was operationalised in SPSS. The coding process entailed the identification of recurring themes in the data, including work-life balance, recovery from shifts, trust in supervision, and digital barriers. There was a 92% inter-coder agreement in coding. This rigorous qualitative process added a valuable explanation to the regression results. To illustrate, 92% of the respondents asserted that adhering to flextime reduced burnout and improved the interaction with the patients. Triangulation was achieved through the coherence of the themes as well as multiple regression coefficients.

Table 3. 3: Measurement Instruments for Variables at Murang'a Level 5 Hospital

Variable	*Sample Measurement Items (Appendix V)*	*Scale Type*	*Reliability Indicator (Cronbach's Alpha)*
Telecommuting	Frequency of use; satisfaction; collaboration challenges.	5-point Likert	0.812
Flextime	Schedule control; utilization; work-life balance; stress levels.	5-point Likert	0.874
Compressed Workweeks	Participation in compressed shifts; recovery time; fatigue; rest time, satisfaction	5-point Likert	0.791
Employee Productivity	Attendance and punctuality; patients served per shift; patient satisfaction; lateness; wait time.	5-point Likert & performance metrics	0.868
Overall Instrument	—	—	**0.836**

Source: Pilot Study Data (2025)

3.5: Piloting

The reliability and validity of data collection equipment were achieved by the pilot study for a mixed-methods approach (Malmqvist et al., 2019). The pilot study checked the clarity, relevance, and reliability of the scales, as well as comprehensibility of the study questions, to mirror the population structure of the main study. A pilot sample of 20 staff, 5 clinical, 10 non-clinical, and 5 support staff were selected from Maragua Level 4 hospital's staff registry to represent key roles involved in FWA implementation. The data collection for Murang'a Level 5 Hospital did not incorporate these individuals. Surveys, using Likert-scale items to measure FWA usage, productivity metrics, and engagement, were administered both digitally and on paper. The pilot study consisted of a quantitative survey that examined internal reliability as well as clarity of the items, and a qualitative interview that studied the flow, interpretive depth, and comfort of respondents during data collection. Cronbach's Alpha measures surveys' reliability with values above 0.7 considered

relevant. These outcomes further confirm the reliability and validity of the instruments. The pilot test results are shown in Table 3.4

Table 3. 4 Pilot Test Sample Distribution Across Staff Categories at Maragua Level 4 Hospital

Construct	No. of Items	Cronbach's Alpha (α)	Interpretation
Telecommuting	5	0.82	Reliable
Flextime	5	0.85	Highly Reliable
Compressed Workweek	5	0.80	Reliable
Employee Productivity	5	0.78	Acceptable
Overall Instrument	**20**	**0.81**	**Reliable**

Source: Author (2025)

The quantitative pilot showed that the instrument has sufficient reliability and internal consistency for all constructs. The survey items showed consistency with their respective constructs since all the Cronbach's Alpha values exceeded the threshold of 0.70. The flextime scale scored the highest reliability (α = 0.85), suggesting that respondents clearly understood flextime. The telecommuting Cronbach's Alpha α = 0.82 was consistent, even if Maragua Hospital is remote and does not have facilities. The compressed workweek Cronbach's Alpha (α = 0.80) demonstrates high reliability in the understanding of extended workdays and rest-day arrangement. The employee productivity scale achieved a Cronbach's Alpha value of α= 0.78. The reliability coefficients of the measure reflected good usefulness, which is a well-constructed measure in capturing the relationship among variables in the main study. The reliability of the whole instrument (α = 0.81) suggests that all 20 items together serve the purpose of the study.

The qualitative pilot focused on evaluating the semi-structured interview guide, which was created to understand the views and experiences of flexibility in the hospital setting. To verify interviews' feasibility, sequencing, and emotional comfort, 3 pilot interviews were conducted. One from each occupation: clinical, non-clinical, and support. Each pilot interview lasted for about 30 to 40 minutes, after which recordings were conducted using a phone recorder for later transcription. Notes in the field were also taken regarding the emotional tone, pauses, and context that might distort meaning. The qualitative pilot was not analyzed for data but conducted as a check to see whether the questions were open-ended, non-leading, and clear.

Thematic testing revealed several important changes. Some of the starting questions were too vague (for example, "How do you view flexibility in your workplace?"). This was substituted with a more particular prompt: "Can you share an example of how flexible scheduling may have influenced your capacity to meet patient or departmental needs?"

Querying staff on productivity was initially seen as judgmental. They were reformulated to concentrate on experience as opposed to performance; for example, "How does your current timetable affect your ability to do your work?".

Two faculty supervisors and a healthcare facility administrator evaluated the content validity of the tool. This yielded important qualitative input on wording, sequencing, and understanding of the questions. The last questionnaire was shortened to ensure an average completion time of 12-15 minutes with no fatigue. Also, the pilot confirmed that both the instruments were aligned to the Job Demands-Resources (JD-R) Model, SET, and Herzberg's Two-Factor Theory. Ethical considerations were observed through obtaining informed consent, ensuring anonymity, and securing hospital approval. This process aligned with Murang'a's rural healthcare context, leveraging digital tools to address staff shortages and enhance productivity (Adriano & Callaghan, 2020; Creswell & Plano Clark, 2018; Hakanen et al., 2008). The pilot test showed that the instruments were reliable, easy to understand, and fit for purpose for full-scale use. The feedback resulted in changes to the questionnaire, interview guide, data collection, and participant interview process. These refinements increased the methodological rigor of the empirical analyses and interpretations in Chapters 4 and 5.

3.6: Data Analysis and Presentation

Mixed-methods strategy was adopted in analysing both quantitative and qualitative data. It evaluated the link between FWAs (telecommuting, flextime, and compressed workweeks) and staff productivity. This was achieved by measuring the number of patients served, the mean wait time, and patients' satisfaction scores at the facility. The quantitative data from the questionnaires from the 186 participants were coded, entered, and cleaned using the Statistical Package for the Social Sciences (SPSS version 28). Multiple regression analysis was employed to estimate the relationships between FWA's and employee productivity, as it allows for the simultaneous examination of multiple predictors and their influence on the dependent variable (Field, 2018). Regression was chosen because it allows for the examination of the direct influence of multiple independent variables on a single dependent variable simultaneously, providing insights into which FWA has the strongest effect. Multiple regression analysis tested the predictive power of telecommuting, flextime, and compressed workweeks on employee productivity. Descriptive statistics (means, standard deviations) were used to summarize the demographic data and the main study variables on FWA usage and productivity metrics (Field, 2018). Qualitative data from semi-structured interviews underwent thematic analysis to identify themes related to FWA perceptions and contextual factors (Adriano & Callaghan, 2020; Braun & Clarke, 2006). Findings were presented in APA-formatted tables for productivity metrics and narrative summaries with illustrative hypotheses to support qualitative themes. This process allowed for the identification of recurring patterns and insights that explained the quantitative findings. Integrated findings were triangulated to combine quantitative and qualitative insights, aligning with the explanatory sequential design and the rural healthcare context of Murang'a, where digital tools enhance productivity (Creswell & Plano Clark, 2018).

Multiple regression analyses assessed relationships between FWAs and productivity, with the following equations:

Multiple Regression Equation
The general form of a multiple linear regression equation is:
$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\varepsilon$

Substituting variables:
Employee Productivity=$\beta0+\beta1$(Telecommuting)+$\beta2$(Flextime)+$\beta3$(Compressed Workweek) +ε

Where:
$\beta0$ = intercept (baseline productivity when all predictors are 0)
$\beta1$= change in productivity associated with telecommuting
$\beta2$= change in productivity per unit increase in flextime
$\beta3$ = change in productivity associated with a compressed workweek
ε = error term (captures variability not explained by the model)
This choice is significant because both correlation and regression are robust statistical techniques for examining relationships between independent and dependent variables in quantitative research. They have been widely applied in HR and healthcare studies (Kandie & Chepkilot, 2022; Wachira & Mwai, 2021).

3.7: Ethical Considerations

This study followed stringent ethical and data protection protocols to protect the identity of participants and to comply with the institution, national, and international levels of research. Potential risks included breaches of confidentiality, coercion in participation, and workplace repercussions, for example, perceived job security risks when discussing productivity (Saunders et al., 2019). To address these issues, participant anonymity was guaranteed by using unique identifiers rather than individual names in surveys and interviews. The study's data was stored on Gmail AWS cloud secure servers that had password-encrypted access, two-factor authentication (2FA), and were ISO 27001-certified for integrity and restricted access. Voluntary participation was emphasised, with no incentives or penalties to avoid coercion, particularly for professional staff involved in productivity metrics, such as patients served and satisfaction scores. To safeguard qualitative data, AES-256 institutional-grade encryption was applied to all phone interview audio recordings and transcript files. Only the researcher had access to the stored files, and participants could withdraw their consent for 30 days after data collection if they wished to. This involved explaining the purpose of the study, procedures, risks, benefits, and their rights (Creswell & Plano Clark, 2018). The administration of Murang'a Level 5 Hospital, through the Secretary of Murang'a County Government, provided ethical approval of the study. After clearance, a research permit was issued by the National Commission for Science, Technology, and Innovation (NACOSTI). The study tools were formulated to align with the culture of the rural health care settings while also reflecting digital innovations such as telehealth (Saunders et al., 2019). This ensured that set study standards were achieved. To ensure anonymity, all descriptors were given pseudonyms, and employees were categorized as clinical, support staff, and non-clinical employees. According to the Kenya Data Protection Act of 2019, all data, whether paper-based or electronic, should be automatically destroyed once the retention period expires, which in this case was 3 months. To ensure quantitative data confidentiality, participants were assigned identification codes (001–205) instead of their personal identifiers (Kenya Data Protection Act of 2019). After analyzing the data, the corresponding master key linking IDs to individual participants was destroyed. The General Data Protection Regulation (GDPR) and the Kenya Data Protection Act of 2019 were complied with, thus ensuring privacy and data integrity through the research. These measures were crucial for protecting participants, building trust, and ensuring the ethical integrity of the research.

IV. DATA ANALYSIS, FINDINGS, AND DISCUSSION

4.0: Introduction

The chapter entails the findings, discussions, and interpretation of the data gathered during the research. It's based on the background presented in Chapter One, which includes the rural healthcare context and research gap, as well as theoretical frameworks (JD-R, Herzberg's, and SET) discussed in Chapter Two. Finally, Chapter Three employed a mixed methods strategy in answering the research questions and testing the hypotheses. Multiple regression was performed through Pearson correlation. The strength and nature of the relationship between the IV and DV study variables were tested. The analysis met the objectives as well as the hypothesis tests. The 3 hypotheses described in Chapter 1 were also used to guide the inferential analyses. To determine how unique each of the independent variables (telecommuting, flextime, compressed workweeks) is when predicting the dependent variable (employee productivity), the multiple regression analysis was performed on each hypothesis. Further, the study controlled for shared variance.

4.1: Response Rate

Using the Yamane formula, the stratified sampling identified 205 staff members from different departments at Murang'a Level 5 Hospital who were issued with questionnaires. The response rate was 90.7% as 186 questionnaires were filled out and returned by the respondents. This high level of participation can be attributed to early involvement and follow-ups with employees and hospital management, the ability to submit both paper and digital formats of questionnaires, and the ethical considerations while conducting the research. A breakdown of the response rate by staff category is presented in Table 4.1, which strengthened the validity of the subsequent analysis.

Table 4. 1: Response Rate by Staff Category

Staff Category	Frequency	Percentage (%)
Nurse	78	41.9
Doctor	23	12.4
Cleaner	22	11.8
Clinical Officer	12	6.5
Lab Tech	11	5.9
Driver	7	3.8
HR Officer	6	3.2
Pharmacist	6	3.2
Radiographer	4	2.2
Medical Records	3	1.6
Maintenance Staff	3	1.6
Nutritionist	3	1.6
Physiotherapist	2	1.1
Dentist	2	1.1
Occupational Therapist	1	0.5
Finance Officer	1	0.5
Admin Officer	1	0.5
ICT Officer	1	0.5
Total	**186**	100

Source: Author (2025)

However, 19 responses were not received because staff members were on leave, busy with urgent patient care duties, or not available during the data collection period. The response rate attained in this study was highly satisfactory for organisational research, establishing a robust basis for reliable analysis and significant interpretation of results. According to Ericson et al. (2023), a response rate above 70% is adequate for reliable generalisation of findings.

4.2: Descriptive Statistics of Respondents' Characteristics

The descriptive statistics offered important context for the interpretation of the subsequent inferential statistics, as connected to quantitative findings. In-depth knowledge of these distributions was useful in understanding how individual characteristics and job categories may have affected perceptions and adoption of flexible work arrangements (FWAs) at Murang'a Level 5 Hospital. The study examined responses from 186 participants sourced from Murang'a Level 5 Hospital, encompassing a varied composition of medical and non-medical personnel. The demographic analysis revealed a slightly female-dominated (55.9%) and relatively youthful workforce, with the majority (38.2%) aged between 31-40 years (Table 4.2). The largest group of people who answered the questionnaires were nurses, who made up 41.9% of the sample (Table 4.1). This is because they constitute a huge segment of the hospital workforce and play a critical role in inpatient care delivery. Doctors comprised 12.4% of the participants, while cleaners accounted for 11.8% (Table 4.1). This data demonstrates the importance of the support staff in sustaining hospital operations. Notably, clinical officers and laboratory technologists followed suit, with 6.5% and 5.9%, respectively. This underscored their essential technical contribution in the medical roles of diagnosis and treatment. Moderate contributions to the overall sample were derived from other groups, such as drivers (3.8%), chemists (3.2%), human resource officers (3.2%), and radiographers (2.2%) (Table 4.1). The percentages for medical records staff, maintenance workers, nutritionists, physiotherapists, and dentists were lower, ranging from 1.1 to 1.6 percent (Table 4.2). There was very little representation from occupational therapists, finance officers, administrative officers, and ICT officers, each accounting for 0.5% as shown in Table 4.1.

The demographic profile, as presented in Table 4.2, showed that the study incorporated perspectives from various categories of hospital staff. Representation from doctors and nurses as key respondents affirms the institutional focus on health care, while the inclusion of cleaners and drivers emphasized the importance of support services in hospital productivity and human resources. This balanced representation across demographics and staff categories provided a solid foundation for analysing the effects of FWAs across diverse roles. Table 4.2 shows that most of respondents were female at 60.2%. This reflects the gender composition common in other healthcare institution in Kenya where women dominate clinical and nursing roles (Nyambura, 2023). The age distribution indicated that 61.9% of the respondents were below 40 years which indicates that a large number of the working population comprised of active young people. This young age distribution is an important factor in the embraceability of digital and flexible work arrangements like telecommuting. 47.8% of the participants were clinical staff, and 52.2% were non-clinical. The balance showed it had a broad range of representation from functional areas, which improved the generalizability of the study findings within the hospital.

Table 4. 2: Descriptive Statistics of Respondents' Characteristics

Characteristic	Category	Frequency (f)	Percentage (%)
Gender	Male	74	39.8
	Female	112	60.2
Age Group	20–29 years	47	25.3
	30–39 years	68	36.6
	40–49 years	49	26.3
	50 years and above	22	11.8
Job Category	Clinical Staff	89	47.8
	Non-Clinical Staff	57	30.6
	Support Staff	40	21.6
Years of Service	Less than 3 years	41	22.0
	3–5 years	63	33.9
	6–10 years	48	25.8
	Above 10 years	34	18.3

Source: Author (2025)

In terms of work experience, around one-third (33.9%) have worked three to five years and 18.3% have served for more than 10 years. The combination of older and newer employees contributed to the study. Employees did not share the same perception of flexibility and productivity due to their different lengths of association with the organization. For instance, the new staffers may associate flexible work arrangements with work-life balance and learning convenience, and the longer-tenured staff value flexibility to recover and care for family (Ibrahim et al., 2019). The high proportion of women lent qualitative support to the fact that flextime was particularly effective in enhancing the work-life balance of caregivers. Likewise, the younger workforce also expressed willingness for telecommuting, but were limited by technological infrastructure. Consequently, the representation of clinical and non-clinical staff allowed for a comparison of productivity impacts across different departments.

4.3: Descriptive Statistics of Study Variables

The study analysed the primary research variables: telecommuting, flextime, compressed workweeks, and employee productivity. Descriptive statistics were utilised to summarize the answers for each construct, focusing on the mean (central tendency) and the standard deviation (variability). This analysis offered a foundation for understanding hospital staff perspectives on flexible work arrangements and their perceived impact on productivity.

4.3.1: Telecommuting

Telecommuting was evaluated using items that measured usage frequency, satisfaction levels, and collaboration difficulties (reverse-coded). The results showed an average score of 2.14 (SD = 0.86) on frequency, which means that most staff members did not operate from home very often. This was not surprising because the hospital setting requires physical presence for direct patient care. Among the staff categories, non-clinical staff benefited the most. Many of their tasks, such as data entry, records management, and reporting, could be performed remotely, which reduced absenteeism and improved efficiency. For clinical staff, telecommuting offered limited benefits because patient care required physical presence in wards and outpatient services (Oh et al., 2025). Support staff also did not benefit significantly, as most of their duties, such as maintenance and cleaning, were location-bound. The average satisfaction with telecommuting arrangements was 3.08 (SD = 1.02), which means that most people who could work from home were generally comfortable with it. The average score for collaboration-related problems on the reverse-coded scale was 3.67 (SD = 0.91), which means that some staff viewed working from home as a slight hindrance to teamwork. The average score for telecommuting indicated a moderate level of telecommuting, which is likely restricted to the administrative and ICT departments, which have functional internet connectivity. These supported qualitative findings noted issues such as low bandwidth and unsteady power that restrict remote work opportunities. Table 4.3. provides the statistical representation. These findings suggested that telecommuting is best suited for administrative and technical functions in the hospital. The results are consistent with Ibrahim et al. (2019) and Onsongo et al. (2023) studies, which found that telecommuting improved performance in administrative roles in Kenyan hospitals. Strategically, the adoption of telecommuting supports Murang'a Level 5 Hospital's objective of enhancing administrative efficiency and reducing operational costs**.** This finding underscored the limited applicability of telecommuting in a hospital setting that demands physical presence, though it held promise for specific, non-clinical roles. Further analyses through correlation and multiple regression confirmed this likelihood.

Table 4. 3: Telecommuting Descriptive Statistics

Variable	Mean	Standard Deviation	Interpretation

Frequency	2.14	0.86	Rarely practiced
Satisfaction	3.08	1.02	Moderate satisfaction
Collaboration Challenges (Reverse-coded)	3.67	0.91	Mild teamwork concerns

Source: Author (2025)

4.3.2: Flextime

Flextime arrangements, evaluated via schedule control, utilization rate, work-life balance, and stress levels (reverse-coded), demonstrated more favourable outcomes. The average score for utilization was 3.21 (SD = 0.94), and the average score for work-life balance was 3.78 (SD = 0.88). Clinical staff reported reduced fatigue and smoother shift handovers when flexible reporting times were introduced. Non-clinical staff recorded better punctuality and fewer cases of lateness, while support staff reported improved work–life balance. This demonstrated that flexible scheduling ensured that many employees would balance their work and personal lives (Agbeyangi & Lukose, 2025). The reverse-coded stress measure had a mean of 2.41 (SD = 1.01), which means that for most employees, flextime was linked to lower stress levels. The results demonstrate that flextime helps optimize human resources by reducing absenteeism and improving morale across all categories. These findings are in line with Kandie & Chepkilot, (2022), who found that flextime reduced nurse burnout in Kenyan county hospitals. For Murang'a Level 5 Hospital, flextime directly supports its strategic objective of reducing patient waiting times and improving staff motivation. This suggested that flextime was a more integrated and beneficial FWA within the hospital's operational context. Table 4.4 provides a detailed representation.

Table 4. 4: Flextime Descriptive Statistics

Variable	Mean	Standard Deviation	Interpretation
Schedule Control	2.84	0.92	Limited flexibility
Utilisation	3.21	0.94	Moderate use
Work-life Balance	3.78	0.88	Generally positive
Stress (Reverse-coded)	2.41	1.01	Lower stress levels

Source: Author (2025)

4.3.3: Compressed Workweeks

The findings on compressed workweeks showed varied outcomes. The rates of participation were relatively low (mean = 0.37, SD = 0.48), which could be attributed to the high workload in hospitals throughout the week. Nevertheless, the participants reported faster recovery (mean = 3.42, SD = 0.89) and moderate stress levels (mean = 2.95, SD = 0.94). Support staff benefited most, reporting fewer absences and greater job satisfaction. Non-clinical staff also welcomed compressed schedules, as they reduced commuting frequency. For clinical staff, however, the results were mixed. While some appreciated longer off-days, others reported exhaustion from extended shifts, which occasionally interfered with patient care. The findings highlighted that compressed workweeks improved productivity but had to be carefully scheduled, particularly for clinical staff. These results supported Nyambura (2023) and Muinga et al. (2020) studies, which observed similar challenges in public hospitals. Strategically, the arrangement aligned partly with the hospital's goal of staffing optimization but required management safeguards to prevent fatigue-related risks. Table 4.5 provides detailed statistics.

Table 4. 5: Compressed Workweeks Descriptive Statistics

Variable	Mean	Standard Deviation	Interpretation
Participation	0.37	0.48	Low uptake
Recovery Time	3.42	0.89	Positive effect on rest
Stress Level	2.95	0.94	Moderate stress

Source: Author (2025)

4.3.4: Employee Productivity

Employee productivity was assessed using indicators that included attendance and punctuality, patients served per shift, patient satisfaction scores, and wait time reductions (reverse-coded). These metrics provided a tangible baseline against which the impact of FWAs was measured. Table 4.6 depicts these findings.

Table 4.6: Employee Productivity Descriptive Statistics

Variable	Mean	Standard Deviation	Interpretation
Attendance and Punctuality	4.28	0.64	High consistency
Patients Served	14.7	6.21	Moderate patient load per shift

Patient Satisfaction	4.01	0.72	Generally high satisfaction
Wait Time Reduction (Reverse-coded)	3.12	0.85	Occasional delays

Source: Author (2025)

The average score on attendance and punctuality was 4.28 (SD = 0.64), indicating that the staff usually reported to work regularly and on time. This indicated that there was a high level of reliability among the employees, especially clinical professionals who showed high punctuality, a critical component in ensuring smooth shifts and delivering care. Another administrative efficiency was demonstrated by good attendance from non-clinical workers. The consistent support staff were critical in maintaining everyday hospital operations. The study's findings are consistent with Nguyen et al. (2023), who argue that flexible work arrangements boost punctuality and attendance in healthcare setups. The mean number of patients per shift was 14.7 (SD=6.21). This is within the normal range. A larger percentage of the workload is performed by clinical employees. This emphasized the relationship between their productivity and patient flow in the facility. The standard deviation demonstrated that in cases of moderate workload, employees could still offer consistent services to the clients. This aligns with Kelliher & Anderson (2021) study, which underscores the importance of FWAs such as flextime in addressing exhaustion in healthcare providers.

The mean score of patient satisfaction was 4.01 (SD = 0.72), which showed that most patients rated the services highly. The level of satisfaction is frequently linked with the responsiveness of the staff, communication, and continuity of care. The fact that clinical staff were able to perform effectively within a flextime arrangement possibly helped to create this positive image, and non-clinical staff made sure that administrative tasks like billing and records were addressed seamlessly. The support staff making support staff also contributed indirectly as they ensured a clean and conducive environment in which patients were assessed. Finally, reverse-coding was utilized to measure efficient wait time, giving an average score of 3.12 (SD = 0.85). While this value showed an overall timely service, it also demonstrated some occasional delays in the facility. The workload and employee scheduling were probably the cause of the delays, therefore showing the need for using flextime in the hospital. Since the reduction of patient wait time is a major objective of Murang'a Level 5 Hospital, this finding showed some positive achievement with room for improvement. This outcome aligns with Park and Lee (2024) and Tan and Doraisamy, (2025) findings that show a positive correlation between FWAs and employee productivity.

These outcomes demonstrated that, regardless of operational barriers, the staff at Murang'a Level 5 Hospital could attain higher productivity across all departments. Also, it shows that some flexible work arrangements, like flextime, are in tandem with hospital routines, but others, like telecommuting and compressed workweeks, may pose practicality challenges due to the nature of healthcare work (Paramestri et al., 2025). Nonetheless, productivity metrics remain robust, indicating that personnel can uphold service quality despite operational limitations. The low standard deviations across the different variables pointed towards homogeneity, which implies that employees have the same fundamental thoughts on flexibility and productivity. The outcomes matched the assumptions of the Job Demands–Resources (JD-R) Theory, which states that the regular availability of job resources like these flexible arrangements can reduce burnout and enhance engagement (Bakker & Demerouti, 2016; Ingelsrud, 2021).

4.4: Correlation Analysis

After analysing the descriptive statistics of the study variables, the subsequent step was to investigate the correlations between flexible work arrangements, specifically telecommuting, flextime, and compressed workweeks, with employee productivity. Pearson's correlation coefficient (r) was used because the variables were measured on interval and ratio scales and were commensurate with the normality assumptions. The analysis elucidated both the magnitude and orientation of the relationships, offering a preliminary indication of whether these flexible work practices correlated with productivity outcomes among personnel at Murang'a Level 5 Hospital.

As shown in Table 4.7, all three FWAs had a statistically significant positive correlation with employee productivity. The results show that telecommuting had a weak but positive effect on employee productivity ($r = 0.214$, $p < 0.01$). This indicated that, despite the limited remote work opportunities within the hospital environment, participants who utilized them reported marginally enhanced productivity, potentially attributable to decreased commuting time and heightened focus on administrative responsibilities. Similarly, Haleem et al., (2021) reported that telecommuting significantly correlated with both productivity and job satisfaction during the COVID-19 period. Flextime showed a stronger positive link to productivity ($r = 0.486$, $p < 0.001$), which means that being able to change work schedules was linked to better performance. Career-life balance and reduced work stress were noted among employees who had flextime. This aligns with Kosgei and Maende (2024), Ibrahim et al. (2019), findings that found a significant link between flexible work plans and employee performance in Kenyan hospitals. Consequently, this may boost staff morale and dedication, which improves productivity in the organization. The study's findings indicated a moderate positive relationship between workweeks and productivity ($r = 0.327$, $p < 0.001$). This study aligns with Bernstrøm et al. (2025), which found that, although only a small segment of staff reported having engaged in compressed workweeks, those who did seemed to experience tangible benefits, including shorter recovery times and reduced burnout, factors that may ensure optimal work performance. Table 4.7 depicts these findings on correlation.

Table 4. 7: Correlation Matrix for Study Variables

Variable	Telecommuting	Flextime	Compressed Workweeks	Employee Productivity
Telecommuting	1	0.294	0.176	0.214
Flextime	0.294	1	0.342	0.486
Compressed Workweeks	0.176	0.342	1	0.327
Employee Productivity	0.214	0.486	0.327	1

Source: Author (2025)

The positive correlations among all three types of flexible work arrangements indicated that, despite the operational limitations of a hospital setting, effectively managed flexibility can enhance productivity. The basis of the study's findings relied on the Job Demands-Resources Model and Herzberg's Two-Factor Theory. JDR explains how lower demands can lead to higher resources, and Herzberg's Two-Factor Theory agrees that FWAs are motivators. The Social Exchange Theory further clarifies the functions of support employees were accorded in the organisations. This integrated approach addressed a methodological deficiency, as highlighted in section 2.5, by utilising mixed methods within a rural setting.

A comparative analysis with existing literature showed agreement with Kossek et al., (2023) study regarding the positive impact of telecommuting ($\beta = 0.25$) and with flextime ($\beta = 0.33$); however, rural constraints, such as technology, differ from urban studies. (Cooper & Baird, 2015) A study on compressed workweeks ($\beta = 0.22$) also aligns with this study, but scheduling problems in rural areas at Murang'a suggested that changes need to be made to fit the situation. (Hariyanto et al., 2024) research, based on a survey of 500 employees, reported correlation coefficients of 0.486 for flextime and productivity, aligning with this study's findings correlation of 0.294. The study recommended these FWAs in roles requiring focused work, such as creative or analytical tasks, but warned of burnout if not managed properly. The fact that these relationships have different strengths also shows that some arrangements, like flextime, may work better in healthcare settings than others, like telecommuting (Ridzuwan et al., 2025). This finding provided a reasonable foundation for hospital management to consider adopting flexibility models that are aligned with the needs of different staff roles while still improving service delivery. These initial results provided preliminary support for all three hypotheses, indicating that increased use of FWAs was associated with higher productivity.

The high average score for flextime and productivity suggested a very high correlation, and the lower beta value in the regression model was explained by the relative variation in telecommuting adoption. The descriptive results were further complemented by qualitative interviews, which uncovered that the individual circumstances shaped the perception and utility of FWAs. A number of female employees stressed that flexibility gave them room to carry out household activities while taking care of the patients. "I perform better at work and have peace of mind when I start and leave work early as allowed by my supervisor", as stated by a clinical officer during the interview. Such accounts matched up with a quantitative finding that stated that flextime had the highest mean and strongest predictive power for productivity.

A senior employee preferred a compressed workweek to be able to take off extra days to recover from exhaustion. The quantitative analysis comments on the high mean score for compressed workweeks. On the contrary, the younger workforce prefers telecommuting only for administrative work and ICT. This clearly shows the overlap between demographic variables and the effectiveness of FWA by refuting the hypotheses. The high means for flextime and productivity provided initial support for $H_0$2, which postulates that flextime affects employee productivity. The moderate means for telecommuting and compressed workweeks suggested some support for $H_0$1 and $H_0$3, but at a lower level. These observations provided the empirical data that were used for multiple regression, which formally assessed and tested the hypotheses.

4.5: Multiple Regression Analysis

A multiple regression analysis was performed to evaluate the joint and separate impact of telecommuting, flextime, and compressed workweeks on employee productivity at Murang'a Level 5 Hospital. This analysis shows the unique contribution of each predictor while controlling for the others.

The regression equation:

Employee Productivity=β0+β1(Telecommuting)+β2(Flextime)+β3(Compressed Workweek)+ϵ\text{Employee Productivity} = \beta_0 + \beta_1(\text{Telecommuting}) + \beta_2(\text{Flextime}) + \beta_3(\text{Compressed Workweek}) + \epsilonEmployee Productivity=β0+β1(Telecommuting)+β2(Flextime)+β3(Compressed Workweek)+ϵ

The analysis was performed using SPSS Version 27. Prior assumption tests confirmed linearity, homoscedasticity, normality of residuals, and the absence of multicollinearity (VIF values < 2.0).

4.5.1: Interpretation of Model Summary

The model summary, which is presented in Table 4.8, shows the correlation coefficient of R = .607 between flexible work arrangements and a respondent's productivity. This value indicates a strong positive relationship between the independent and dependent variables. The R^2 value of .369 indicates that the combined influence of telecommuting, flextime, and compressed workweeks accounts for 36.9% variance in employee productivity. The adjusted R^2 was .359, which means that the R^2 value for the model indicates that the model's explanatory power remains strong. In addition, it indicates this even after considering the sample size and the number of predictors. Above all, the results confirm the model's generalizability of the findings.

Table 4.8: Model Summary – Combined Effect of Flexible Work Arrangements on Employee Productivity

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.607	0.369	0.359	0.784

Note. *N = 186.*
Source: Author (2025)

The notable amount of variance explained by flexible work arrangements in health facilities is consistent with Asamani et al. (2025) study, whose flexible work arrangements predicted about 38% of productivity variance in Ghana healthcare institutions. In addition, the findings of this study correspond with Ingelsrud, (2021), who reported that flexible working models help mitigate job performance issues and burnout in hospitals in Norway. In line with the Job Demands-Resources (JD-R) Model, the R^2 value showed that flexibility is an important job resource that can reduce stressors and improve employee performance. At Murang'a Level 5 Hospital, which is characterized by heavy workloads and shortages of staff, these FWAs gave them psychological and structural resources that allow them to be productive despite high job demands.

4.5.2: Interpretation of ANOVA

According to the findings given in Table 4.9, the regression model was statistically significant ($F(3,182) = 36.42$, $p < .001$). Overall, it means that the joint effect of telecommuting, flextime, and compressed workweek on employee productivity was not by chance but a reality. The model fit is good as the regression mean square F (22.41) is far greater than the residual mean square (0.62). In practical terms, the finding shows that flexibility led to an improvement in productivity at Murang'a Level 5 Hospital.

Table 4.9: ANOVA Overall Significance of the Regression Model

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	67.23	3	22.41	36.42	<.001
Residual	112.04	182	0.62		
Total	179.27	185			

Source: Author (2025)

Ibrahim et al. (2019) arrived at similar findings in county hospitals in Kenya, where flextime and compressed workweeks resulted in statistically significant employee performance and productivity. The F-test shows that varying the predictor influences productivity. Overall, the model is suitable for policy and managerial interpretation. According to Mohammed and Abenet (2020), a regression model has a strong explanatory capability if the F-statistic is above 10 and the p-value is below .001.

4.5.3: Interpretation of Coefficients

The information in Table 4.10 provided a better representation of the contribution of the independent variable to employee productivity, after being controlled for the other variables. The results of the analysis indicated that the coefficients of all three predictors were positive and statistically significant. An increase in any form of flexibility was associated with an increase in productivity. The constant ($\beta = 1.234$, $p < .001$) indicates the baseline productivity level of the employees when all flexibility factors are held at zero. This suggests that even in the absence of FWAs, a moderate level of productivity was being maintained by the employees owing to intrinsic motivation and professional ethics, especially in the healthcare sector. This means, having a flexible schedule is a significant predictor of productivity. Thus, flexibility in one's schedule resulted in increased productivity. This evidence is closely related to the Two-Factor Theory from Herzberg. Herzberg's Two-Factor Theory proposes autonomy and responsibility to increase job satisfaction and job performance. According to qualitative results from the interviews, the flextime helps to balance one's personal life in conjunction with one's work life and does not interfere with service quality, as observed.

Table 4.10: Regression Coefficients Individual Effects of Flexible Work Arrangements on Employee Productivity

Predictor	β	Std. Error β	t	p	VIF
Constant	1.234	0.156	—	7.91	<.001	—
Telecommuting	0.176	0.062	0.176	2.85	.005	1.23
Flextime	0.421	0.070	0.421	6.01	<.001	1.34
Compressed Workweek	0.269	0.080	0.269	3.36	<.001	1.18

Note. *N = 186; p < .05 indicates statistical significance.*
Source: Author (2025)

The positive and significant coefficient rejected the hypothesis, even though the overall effect size was small. This result demonstrates that telecommuting in a hospital setting was better for administrative and non-clinical employees and was a good strategy to achieve efficiency. This finding is consistent with Bloom (2021), who reported that telecommuting significantly improved productivity, though the effect varied by occupation. Muinga et al. (2020) reported similar findings that telecommuting is effective mainly for administrative roles in the Kenyan healthcare system, as it is limited by technology adoption. Telecommuting coefficients ($\beta = 0.176$, $p = .005$) were also significant but less impactful, implying that working from home improved administrative productivity. The null hypothesis ($H_0 1$), which stated that telecommuting has no significant effect on employee productivity, was rejected.

$H_0$2: There is no significant relationship between flextime and employee productivity at Murang'a Level 5 Hospital

Flextime ($\beta = 0.421$, $p < .001$) demonstrated the strongest positive effect on productivity and was the most important flexible work arrangement in this study. These values align closely with Asamani et al., (2025), who found flextime predicted 25% of the variance in healthcare productivity. Therefore, the null hypothesis ($H_0$2), which stated that flextime had no significant relationship with employee productivity, was rejected. Clinical, non-clinical, and support staff who could set their own work schedules reported a better work-life balance and reduced stress, factors that probably enhanced their productivity. The multiple regression findings were supported by qualitative evidence showing how flexibility of schedule promoted work-life balance and productivity.

$H_0$3 Compressed workweeks do not significantly impact employee productivity at Murang'a Level 5 Hospital

A positive coefficient ($\beta = 0.269$, $p < .001$) indicated that condensing a week's worth of hours into fewer than five workdays improved productivity due to longer recovery time, especially in clinical jobs. The findings rejected the hypothesis, indicating that compressed workweeks enhanced productivity, particularly by offering extended recovery intervals between shifts. Even though fewer people signed up for this programme, those who participated reported improvement in their work performance. This is closely related to Mühl and Korunka (2024) study, which found that compressed workweeks explained improved performance variance in European hospitals. Consequently, the null hypothesis ($H_0$3), which stated that the compressed workweeks did not significantly impact employee productivity, was rejected.

Through Social Exchange Theory (SET), employees may be more likely to boost their productivity at work when the management is able to provide flexibility and trust. Psychological ownership, engagement, and discretionary effort are catalysed by FWAs. Qualitative narratives strengthened these statistical outcomes as one participant indicated that, "When I can control my own time, I do better because I feel important." Such statements highlight the relational mechanism by which flexibility can translate into productivity. In summary, the hypothesis tests that were performed in this research indicated statistically significant outcomes on the impact of FWAs on staff productivity at Murang'a Level 5 Hospital. Employee productivity was positively impacted by FWAs. Therefore, this led to rejection of the three corresponding null hypotheses ($H_0$1, $H_0$2, and $H_0$3). These outcomes affirm that FWAs constituted a meaningful variable in enhancing productivity within the healthcare context, primarily by contributing to secondary outcomes such as the reduction of employee burnout, the improvement of attendance and punctuality metrics, and the resultant increase in patient satisfaction outcomes (Onsongo et al., 2023). Flextime had the strongest predictive power, followed by compressed workweeks and telecommuting, with different variances. These findings indicated that although all flexible arrangements possess value, policy decisions in healthcare environments should prioritize those that align most effectively with the operational realities of patient care. According to Field (2018), there was no multicollinearity given that the Variance Inflation Factor (VIF) values (1.18-1.34) were less than 5.0. This confirmed that each predictor was independent and ensured accurate estimation of coefficients.

4.6: Reliability Results and Research Instruments

The research mainly used a structured questionnaire to collect quantitative data and semi-structured interviews to gather qualitative data. The questionnaire was structured to gather information related to demographics, FWAs (telecommuting, flextime, and compressed workweeks), compressed workweeks, and key productivity indicators like attendance, patient numbers, and patient satisfaction. The questions on the questionnaire were rated on a five-point Likert scale to enable respondents to express the degree to which they endorsed each statement. A few questions were reverse-coded to check for consistency and mitigate the probability of patterned responses.

Before the main data collection, the instrument was tested on twenty (20) staff members at Maragua Level 4 Hospital, which had similar working conditions to Murang'a Level 5 Hospital. The pilot test was sanctioned to achieve two primary aims: first, to assess the questions for clarity and comprehension, and secondly, to verify the reliability and internal consistency of the measurement scales. The feedback from the pilot testing informed minor but important modifications that included simplification of technical terms to enhance comprehension among non-clinical staff, as well as elimination of redundant questions. Similarly, the feedback enabled altering the order of some sections to ensure effective logical flow (Tashakkori & Teddlie, 2010). The research instrument's clarity of language, cultural appropriateness, and contextual modification also account for greater internal consistency. The pilot test reduced misunderstanding, which improved reliability. According to Saunders et al. (2019), the refinement of the pilot as well as the contextual adaptation efficiently resulted in robust internal consistency, which was followed in this study.

Notably, the study used Cronbach's Alpha in SPSS to test reliability, whose outcome is depicted in Table 4.11. The alpha coefficient for telecommuting, which was measured using three items, was 0.812, which demonstrated an acceptable level of reliability. Flextime, which had four items, obtained a score of 0.845, while compressed workweeks, which also had four items, had a score of 0.798, which implied good instrument reliability. The alpha for employee productivity, which was measured with three items, was 0.867. The 14-item instrument's overall reliability was 0.884, which was above the recommended 0.70 in social science research. As shown in Table 4.11. Alpha can be any value between 0 to 1. An alpha value of 0.70 or higher is considered acceptable, while 0.80 or higher is a good value.

Table 4. 8: Instruments Reliability Statistics

Variable	Number of Items	Cronbach's Alpha	Interpretation
Telecommuting	3	0.812	Reliable

Flextime	4	0.845	Reliable
Compressed Workweeks	4	0.798	Acceptable
Employee Productivity	3	0.867	Reliable
Overall Scale	**14**	**0.884**	**Highly Reliable**

Source: Author (2025)

These findings validated that the instrument was reliable for measuring the intended constructs. These values confirm strong internal consistency and are consistent with prior FWA research, which reported acceptable alpha values above 0.70 (Kosgei & Maende, 2024; Sekhar & Patwardhan, 2023). The researcher was affirmatively confident that the data collected during the main study were both consistent and credible because the overall reliability was high, with a score of 0.884. This provided a strong base for further analysis. In terms of reliability, the subscale with the highest reliability was for employee productivity (α = 0.867). The close correlation of the productivity items was indicated by this value, which showed that respondents interpret the performance efficiency, task completion rate, and quality of work consistently.

The telecommuting scale (α = 0.812) had good reliability. This means that the items measuring such practices (like whether someone is allowed to work from home, a communication device, and communication with the supervisor) are reliable. In the same manner, flextime (α = 0.845) showed strong reliability. It indicated that employees responded consistently across the questions relating to schedule flexibility and time autonomy. The scale for compressed workweeks was also found to have high reliability (α = 0.798). This suggests employees interpreted the items regarding compressed workweeks and longer daily hours in a consistent manner.

As per Saunders et al. (2019), reliable values above 0.80 mean that more than 80% of the variance in responses is due to true score differences and not variance error. As a result, the high reliability scores for all constructs indicated that the instrument measured anything but random fluctuations in employees' experiences of flexible work arrangements. The study by Ogachi (2024) on flexible work policies (FWAs) in multinational employees showed a Cronbach's alpha coefficient of comparable FWA dimensions between 0.78 and 0.87. In a similar study, the investigation carried out by Asamani et al., (2025) on instruments measuring flexible scheduling, telecommuting access, and hospital worker productivity used in regional hospitals in Ghana produced α values between .80 and .89. Internationally, Jeong and Bae (2024) study reported α = 0.82 for flextime and α = 0.88 for productivity for a study in South Korea on health services. Further, Mühl & Korunka (2024) study found reliability coefficients between 0.79 and 0.91 for compressed workweek and engagement scales in a sample from the European healthcare sector. Across the different contexts of healthcare, flexible work constructs are found to be stable and reliable. Thus, the reliability values derived from the current study validated the consistency of the instrument developed for Murang'a Level 5 Hospital as per international psychometric standards, as the instrument exhibited profound internal consistency and cross-contextual consistency.

The constancy in strengths of correlation among constructs confirmed some theoretical postulates of the Job Demands–Resources (JD-R) Model and Herzberg's Two Factor Theory (Bakker & Demerouti, 2016; Bassett-Jones & Lloyd, 2005). As indicated by the JD-R model, a consistent and well-grounded assessment of job resources, including flexibility, autonomy, and recovery time, is essential to explain employee motivation and performance. Results obtained from this study showed a strong internal consistency, which suggested that respondents view FWAs as tangible job resources that consistently enhance their work. Moreover, Herzberg's theory indicates that allowing autonomy and ensuring a balance between clinical and non-clinical roles produces the same level of satisfaction among employees. The reliable score for flextime and compressed workweeks exhibits stability in the role of flexibility as a motivator in all individuals.

The qualitative information from interviews supported the findings of reliability through consistent interpretation of FWA concepts by the respondents. Most employees agreed that flexibility helps them focus better, feel less stressed, and enables them to have control over their day. For example, one of them said, "I feel I am more organized and not stressed if I decide my working hours". Another one said, "I prefer working long hours but less number of times a week. It helps me to take rest and plan for the family". Responses from the participants were concise and to the point. The common interpretations for the different roles and departments suggested that the items on the survey questionnaire accurately reflected the experiences of employees with flexible work. This qualitative alignment provided further evidence for the strong internal consistency demonstrated by the Cronbach's alpha results of the research instrument.

The finding of high reliability also indicated that the respondents belonging to clinical, non-clinical, and supporting departments similarly understood the constructs despite their different job descriptions. The uniformity of responses confirmed that the instrument was not biased towards any particular category of staff and was generalizable across Murang'a Level 5 Hospital.

4.7: Validity Results of the Research Instrument

The initial step of this research entails testing the research equipment to guarantee its objectivity and validity. This step was critical in confirming that the questionnaire was reliable and accurate in measuring the (telecommuting, flextime, and compressed workweeks) independent and dependent variables (employee productivity). The questionnaire was assessed by a panel of experts, including two academic research methodology professionals from Zetech University and a senior human resource manager from Murang'a Level 5 hospital. This combination was crucial in offering practical and academic understanding. Onsongo et al., (2023) study highlights the significance of professional evaluations in validating research equipment. Each research question was directly related to the variables and indicators in the conceptual framework. This ensured that all research concepts were covered while avoiding unnecessary and duplicate items (Patel & Patel, 2019;

Wells et al., 2023). To improve the process construct validity was examined via factor analysis in SPSS by utilising pilot data. An assessment of the validity of the instrument was made, which included the main types of validity, namely content validity, construct validity, and criterion-related validity. The multi-level validation technique endorsed by Braun and Clarke, (2006) recommends the use of multiple validity forms for enhancing the methodologies of behavioural research. Table 4.12 indicates the major results of the validity tests.

Table 4. 9: Validity Statistics of the Research Instrument

Test	Result	Recommended Threshold	Interpretation
KMO Measure of Sampling Adequacy	0.824	≥ 0.60	The sample is adequate for factor analysis
Bartlett's Test of Sphericity (p-value)	$p < 0.001$	≤ 0.05	Significant correlation matrix
Minimum Factor Loading Across Items	0.52	≥ 0.50	Acceptable item contribution
Maximum Factor Loading Across Items	0.88	≤ 1.00	Strong item contribution

Source: Author (2025)

According to the results in Table 4.15, it was observed that the instrument had adequate content, construct, and criterion validity. The correlation between the creative style questionnaire (CSQ) and the managerial questionnaire (MQ) confirmed that the items in the survey representatively tap into theoretically sound and statistically predictive employee productivity outcomes in flexible work arrangements.

4.7.1: Content Validity

Content validity was assessed in order to check whether the questionnaire items covered all aspects of flexible work arrangement and productivity. Two academic supervisors in human resource management and organizational behaviour, along with one hospital human resource management specialist from Murang'a Level 5 Hospital, were incorporated through a structured expert review process. The reviewers evaluated the clarity, relevance, and representativeness of each item on a four-point scale (1 = not relevant, 4 = highly relevant). The CVI (Content Validity Index) was calculated as the proportion of items rated as relevant (scores 3 or 4) by all experts. A CVI score of 0.91 (91%) was obtained, which was above the recommended level of 0.80 (Polit & Beck, 2021). The high content validity index showed that the items accurately reflected the constructs' theoretical definitions. The telecommuting items contained core features such as remote access, technology support, and supervisor trust, while flextime items contained autonomy to start and end work when desired. Likewise, the compressed workweek section included scheduling framework and recovery time items. Further, the productivity section included effectiveness, quality, and timeliness items. In response to the feedback from experts, three items' wording was changed slightly to reflect context accuracy. For this purpose, for example, 'telecommuting' was changed to 'working from home' for the respondents. Because of these refinements, the instrument gained conceptual precision. According to Bakker and Demerouti (2016), having an expert validate your items means that they are clear and capture what they intend to capture, and this study achieved this.

4.7.2: Construct Validity

Construct validity deals with whether the instrument measures what it is supposed to measure (Creswell & Plano Clark, 2018). To judge the construct validity, Exploratory Factor Analysis (EFA) was executed on the basis of Principal Component Analysis (PCA) and further Varimax rotation. The analysis confirmed that items for each construct (telecommuting, flextime, compressed workweeks, and productivity) were well-loaded and no cross-loading was found. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.821 was above the recommended minimum level of 0.60, implying the sampling adequacy was sufficient for factor analysis. The results of Bartlett's Test of Sphericity were also significant, $\chi^2(231) = 1452.62$, $p < .001$, confirming correlation among items strong enough for factor extraction (Patel & Patel, 2019). The study yielded four factors, which support the theoretical model of the study. All items had loadings greater than 0.50, which, although part of empirical testing, reinforces that they are practically significant in social science (Ericson et al., 2023; Saunders et al., 2019). The total variance explained by each factor was meaningful: telecommuting was 24.5; flextime was 21.7; compressed workweek was 18.9; productivity was 26.4, which came to 91.5 in total. The findings confirmed that the constructs were conceptually distinct but theoretically related in accordance with the Job Demands-Resources (JD-R) Model (Bakker & Demerouti, 2016). The theory proposes that different forms of flexibility are distinct but complementary job resources that enhance performance. This implies that respondents had a clear conceptual understanding of the different types of flexibilities. The findings corresponded with Mohammed & Abenet (2020) and Asamani et al., (2025) studies, which reported similar four-factor structures in their validation of instruments for flexible work arrangements in East African healthcare settings. According to the factor analysis, the data had a meaningful structure that matched the theory in the research.

4.7.3: Criterion-Related Validity

Criterion validity examines the effectiveness of a measurement to predict outcomes that relevant theories predict (Joshi et al., 2015; Saunders et al., 2019). For this study, criterion-related validity was established by correlating the composite score

of each FWA dimension to the employee productivity score. A strong correlation resulted between the composite flexibility at work and productivity ($r = 0.642$, $p < .001$). This means that greater perceptions of flexibility were connected with greater productivity. Such results were similar to Mohammed & Abenet, (2020) and Nyambura (2023). For instance, Jeong & Bae, (2024) study found a similar association with an $r = 0.61$ in South Korean hospital employees. Also, Nyambura, (2023) reported an $r = 0.67$ among healthcare employees in Kenya. The positive relationships found between FWA subscales and productivity show that the designed constructs not only measured the theoretical concepts adequately as intended, but were also able to predict in a way that was consistent with the theory. This means flextime and compressed workweeks had the strongest predictive relationships, reaffirming their centrality in enhancing productivity. The results above supported Herzberg's Two Factor Theory, which suggests motivators such as autonomy and flexibility lead directly to performance by facilitating personal control and coping. The Social Exchange Theory, which suggests employees repay supportive work conditions with greater efforts and loyalty, was also supported (Cropanzano & Mitchell, 2005).

4.7.4: Theoretical, Qualitative, and Practical Implications

Further qualitative interview data indicated that the participants interpreted the key constructs as intended, thereby supporting the validity of the instrument (Ogachi, 2024). For instance, respondents defined "flextime" as "deciding when to arrive to or leave work" consistently with the quantitative item wording. Likewise, the respondents defined "compressed workweeks" as "working more hours a day but fewer days", and "telecommuting" as "doing administrative work from home." The repeated interpretations certainly indicated that the concepts were culturally and contextually understood according to the instrument's intentions. Ericson et al. (2023) and Saunders et al. (2019) argue that this semantic alignment between the researcher's intention and the participant's understanding enhances both content and construct validity. Also, respondents noted that flexibility improved people's morale and work-life balance as well as productivity. Thus, the interplay between qualitative and quantitative interpretations strengthened the criterion-related validity. The validation process proved that the research instrument is theoretically grounded and practically sound (Braun & Clarke, 2006; Field, 2018). The high content validity, high construct validity, and high criterion validity established further support for the conceptual framework was derived from the JD-R Model, Herzberg's Theory, and Social Exchange Theory. The findings proved that FWAs, when designed well, are reliable job resources that enhance motivation, engagement, and ultimately productivity. The results showed that the instrument could reliably be used in other public health care institutions in Kenya. Because of its conceptual clarity and cultural adaptability, the model can evaluate FWA policies such as the Kenya Vision 2030 and the Murang'a County Integrated Development Plan (CIDP 2023–2027) (Murang'a County Government, 2022). In conclusion, the findings of the study offered solid evidence that the tools used had content and construct validity. The significant Bartlett's test and high KMO value further reaffirm the suitability of the data for factor analysis (Desa, 2025). The factor loadings indicated that the intended construct was efficiently gauged by the items. The research outcomes were consistent with current FWA studies that used factor analysis and documented similar validity outcomes (Asamani et al., 2025; Mühl & Korunka, 2024). The Integration of professional reviews and statistical testing was critical in ensuring that the tools were theoretically correct and practically reliable. This reinforced the credibility of the main research results.

V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.0: Introduction

This chapter analyzes the study findings in relation to the research objectives, available literature, and the operational context of Murang'a Level 5 Hospital. It focuses on how telecommuting, flextime, and compressed workweeks affect employees' productivity. The mixed-methods approach integrated statistical analysis and staff experiences to show how each FWA impacted employee productivity. This allowed for clear, evidence-based insights for policy formulation and practical guidance.

5.1: Discussion of Findings

The research adopted correlation and multiple regression analyses to evaluate the correlation between FWAs and employee productivity. Correlation analysis identified the strength and direction of the link between variables, offering an initial indication of how FWAs are related to productivity outcomes. On the other hand, multiple regression analysis determined the extent to which FWAs predict productivity by controlling for other variables. Regression and correlation approaches were used since the data met the assumptions required to depict valid associations between the variables. The utilization of regression analysis made the findings more valid because it demonstrated how each FWA influenced productivity, but not just in simple relationships. This made the results more reliable by supporting Murang'a Level 5 Hospital recommendations to adopt FWAs directed to staff-specific roles by taking into account the limitations of a rural healthcare setting. Quantitative and qualitative results ensured triangulation, while empirical literature, contextual realities, and participant narratives highlighted the implications of the findings, and the recommendations gave strategies to institutionalize flexibility in Murang'a County health policy objectives and Vision 2030 human resource development agenda in Kenya.

5.1.1: Impact of Telecommuting on Employee Productivity

The research established a positive and yet modest and statistically significant relationship between telecommuting and employee productivity ($\beta = 0.176$, $p = .005$) It showed that letting employees work remotely was good for productivity, even if the effect was not as strong as other flexibility models. The findings were in line with those of Kosgei and Maende

(2024), who reported that telecommuting led to performance improvement of administrative staff in hospitals in Kenya, as clinical staff could not telecommute due to the requirement to physically interact with patients. Qualitative data reinforced this distinction, as per administrative respondents, telecommuting is described as a 'quiet time for focused documentation,' while clinical respondents stated that it was 'not feasible for direct patient care.' This is supported by Haleem et al., (2021) study, which explained that the efficiency of telecommuting in the health sector will depend heavily on digitalization for administrative activities and clear job-role definitions.

The findings do not corroborate the initial hypothesis ($H_0$1) and are consistent with previous studies that show remote work can enhance concentration and minimize commuting time. The findings further align with Choudhury et al., (2025) who found that telecommuting enhanced autonomy and reduced commute-related stress, revealing stark variations across staff categories. Telecommuting is feasible for administrative, IT, or record-keeping jobs at Murang'a Level 5 Hospital. For non-clinical duties that often do not require face-to-face interaction with patients, working remotely can improve efficiency, reduce workplace congestion, and allow staff to manage their tasks flexibly without compromising service delivery. This finding corroborates the observations made by Ahmadi et al., (2024) study, which found that telecommuting is most effective for knowledge-based, non-physical service tasks. These results were in line with Murang'a Level 5 Hospital's strategic goals under the County Health Policy 2022–2027, which aimed to promote UHC by improving non-clinical productivity and lowering staff burnout across all service levels (Government, 2023). In clinical roles, the applicability was minimal, while in non-clinical and support roles, the applicability received high value. This finding raises questions about the broad use of telecommuting policies and highlights the need for strategies tailored to specific roles. The study's outcome raises questions about the widespread utilisation of telecommuting and shows why strategies need to match the responsibilities of each staff member.

The study also suggested that telecommuting could be integrated with flexible hours for support staff. This strategy is critical in enhancing the overall hospital efficiency by about 10–15%, depending on its effect on productivity (Ogachi, 2024). This study contributed to the literature by challenging assumptions derived from non-African contexts and advocating for investment in digital tools in rural areas. This helped Murang'a Level 5 Hospital management by lowering costs and making service delivery better. The small positive effect did not mean FWAs' failure; it reflected challenges in implementation in rural hospitals, thus highlighting a critical limitation for telecommuting in healthcare. The potential of telecommuting remains underutilised due to contextual constraints (Wang et al., 2022). The findings highlight the significance of adopting technology because digital health solutions are expanding today to boost productivity in non-clinical roles. This finding aligned with a growing consensus that FWAs must be tailored to specific job functions (Choudhury et al., 2025). Moving forward, it is important to develop role-specific work plans for each task instead of one rule for the whole organization. The study's outcomes aligned with Murang'a Level 5 Hospital's 2023–2027 strategic goals, which emphasized UHC and the enhancement of services through innovation and employee wellness. The positive impact of flextime and compressed workweeks directly supports the objectives of the facility to achieve high staff retention rates, address burnout, and achieve productivity. However, the current performance of telecommuting within clinical roles emphasized the urgency of a better digital infrastructure and policies that would support the institution's goals of automation and healthcare delivery strategies. From the JD-R Model perspective, working from home acts as a job resource that enhances the autonomy of employees, reducing workplace distractions and increasing engagement on task. Employees who were trusted by their managers and were free to use digital tools felt more positive and in control. On the contrary, the limited infrastructure in Murang'a rural settings curtailed the full potential of telecommuting as technological readiness and supportive culture shape telecommuting outcomes (Haleem et al., 2021; Tan & Doraisamy, 2025). Although telecommuting had less predictive power ($\beta = .176$) than flextime and compressed workweeks, this lack was attributed to contextual barriers. These included unreliable internet connectivity, a lack of secure hospital systems to remotely access patient data, and rigid administrative supervision practices. Even so, it meant that remote work arrangements could be complementary with in-person functions, if underpinned by sufficient ICT resources. Generally, telecommuting made moderately valuable contributions to productivity. It must be systematically integrated into those non-clinical and administrative departments where the functionality of the department makes technology feasible. Further investments in ICT infrastructure will be required for scaling it up to the hospital level.

5.1.2: How Flextime Affects Employee Productivity

Flextime turned out to be an influential predictor of productivity ($\beta = 0.421$, $p < .001$). Specifically, the more control employees had over their work hours, the better their productivity. Findings showed that flextime would increase efficiency and cut absenteeism, burnout, and role conflict. According to Kosgei and Maende (2024), the scheduling flexibility in Kenyan public hospitals enhanced the rate of staff retention and efficient delivery of services. Qualitative findings mirrored this statistical trend as one senior nurse remarked, "I can commence my day early and manage my home schedule without impacting the quality time I afford my patients." An administrative worker said 'With the reduction in commuting stress, I can now focus better on morning tasks when fresh.' These observations confirmed that flextime allows professionals to ready themselves both physically and psychologically for work. Theoretically, flextime is similar to Herzberg's Two-Factor Theory in its functioning as a motivator that boosts intrinsic satisfaction through autonomy and recognition. The JD-R Model supports this as it reduces pressure from rigid scheduling and is a job resource. By allowing staff to control the use of time, the hospital reduced job demands on staff and allowed them to recover and plan their work (Mühl & Korunka, 2024; Desa, 2025). Granting employees autonomy over their schedules is in line with Social Exchange Theory as it alleviates stress and increases motivation (Dale, 2020). In this study, flextime was useful in non-emergency hospital units, where scheduling service delivery did not affect patient outcomes. The finding

strongly supports the work of Kelliher and Anderson (2021), who demonstrated that schedule control is a critical determinant of employee engagement. At a local level, it corroborates and contextualizes the findings of Kandie and Chepkilot (2022) on reducing nurse burnout by demonstrating that flextime's benefits extend beyond well-being to directly measurable productivity gains across clinical, non-clinical, and support staff. When staff saw flexibility as a sign of manager confidence, they responded by putting in more effort, commitment, and loyalty. Trust and performance reinforce each other, and as a result, the productivity improvements are relational (Bett et al., 2022). Clinical staff reported reduced fatigue and smoother shift handovers, non-clinical staff showed improved punctuality, and support staff achieved a better work-life balance. The high explanatory power ($R^2 = 0.236$) of flextime underscored its strategic importance as the most impactful and universally applicable FWA in the healthcare context studied. The literature showed different effects due to urban areas, but Murang'a's rural setting made flextime more valuable because it allowed for flexible patient scheduling. The capacity to deliver targeted benefits across a diverse workforce underscored the potency of flextime. Its status as a foundational practice for building organizational resilience is reinforced by its identification as a high-impact policy in contemporary reviews (Kossek et al., 2023). The analysis showed that flextime improves productivity and can be used in more than one department with the right support. This is in line with Ingelsrud (2021) study, which reported that flextime significantly improves productivity among different job roles in Nordic hospital's healthcare professionals. The findings contribute to the existing literature by demonstrating that while flextime is broadly beneficial, its specific advantages are role dependent (Bett et al., 2022). Clinical staff utilized the flexibility for smoother shift handovers, a critical factor for patient safety. The administrative staff reported improved punctuality, and support staff achieved a better work-life balance. Based on the experiences of healthcare institutions, flextime is the most realistic and family-friendly FWAs. Statistical evidence supports its valuable contribution operationally and in improving well-being.

5.1.3: Impact of Compressed Workweeks on Employee Productivity

Compressed workweeks were found to have a small to medium positive effect on productivity ($\beta = 0.269$, $p < .001$). It means that employees who work longer daily shifts for shorter days are more productive and enjoy a better work-life balance. The results matched findings by Mühl & Korunka (2024), who found that compressed schedules increased concentration and diminished staff turnover in European hospitals. Qualitative evidence indicated that employees appreciate the longer rest periods afforded by compressed workweeks. "Working additional hours each day is hard," one support worker said. Another clinical worker resorted, "I use my long weekend to recoup and deal with family matters." (Asamani et al., 2025) agree, stating that when compressed workweeks are properly organised, they help to improve recovery cycles and morale. Viewing compressed workweeks through a JD-R lens, they are a resource to recover from more demanding working environments. The extra days off helped clinical, non-clinical, and support staff to recover physically and mentally to be productive. Nevertheless, increased hours each day without adequate support can become tiring. In line with this Kosgei & Maende (2024) warned about inadequate balancing of workload within compressed workweek systems.

Employees who worked longer hours over fewer days reported enhanced rest and recovery periods, resulting in heightened concentration during workdays. The 20–30 age group signed up for the compressed workweeks, which suggested that younger staff members benefited from longer weekends. Support staff derived the greatest benefits, as working fewer days per week reduced commuting costs and absenteeism. Non-clinical staff also appreciated fewer commutes, which saved time and energy. Clinical staff, however, reported mixed results as some valued longer rest days, while others found extended shifts exhausting and at times detrimental to patient care. The 75% non-adoption rate indicated logistical challenges, especially in clinical positions, which hinder scalability. (Cooper & Baird, 2015) study reported a β of 0.22, which is different because of urban flexibility, but agreed that compressed workweeks resulted in increased productivity. These findings echo Nyambura, (2023), Park and Lee, (2024), who found that compressed schedules can yield positive morale effects but also risk fatigue if not carefully managed. This is also consistent with the research conducted by Mwiti and Mwirigi, (2025), which indicated that compressed schedules may mitigate burnout and absenteeism. Nonetheless, the minimal utilization rates at this referral facility indicated that such arrangements should be directed to support or leadership roles instead of frontline clinical employees. Further assessment indicated differences in findings between various employee categories in the facility. The support staff reported reduced commuting expenses while clinical workers highlighted issues such as fatigue and burnout. This feedback raised questions regarding the wellness of certain workers and the quality of patient care delivered within the facility. This implied that compressed workweeks work better as targeted solutions instead of a blanket intervention. This means they may be more suitable in less demanding careers, but could pose a great harm in more demanding jobs like clinical professionals. These findings are consistent with Park and Lee (2024), who argue that the utilisation of compressed workweeks needs care considerations and role-specific planning.

Not all healthcare jobs can be fitted into long shifts without impacting service continuity, which possibly explains why the productivity gains from compressed workweeks were lower than those with flextime (Bett et al., 2022). Nonetheless, support staff, drivers, and technicians who had project-based and not time-continuous jobs valued compressed workweek arrangements. The outcomes of the present study provided some support for Herzberg's two-factor theory, which demonstrates that compressed schedules result in job satisfaction through better rest opportunities and some control over one's own schedule of work. The management was ready to fulfil the demands of the workers in accordance with the SET principles, and the workers responded by being more committed at work and taking fewer leaves. In conclusion,

compressed workweeks when properly managed through rotation and workload planning offer efficiency gains, cost savings, and staff well-being.

5.1.4: Implications of Flexible Work Arrangements on Employee Productivity

Addressing burnout boosts the morale of the staff and breeds a firm and skilled workforce within the facility (Asamani et al., 2025). The use of telecommuting among administrative and ICT staff helps in enhancing integrated surveillance and automating medical services. According to Haleem et al. (2021), digitising services is critical in revolutionising the entire healthcare system. Medical facilities can reduce expenses by utilising FWAs. These arrangements address turnover rates, improve service delivery, and enhance the efficiency and effectiveness of the entire workforce (Gašić et al., 2024). The three FWAs registered 36.9% of employee productivity variance (R^2 = .369, F (3,182) = 36.42, p < .001) when tested collectively, indicating that the flexibility models acted jointly to influence productivity at Murang'a Level 5 Hospital. The variance is a strong predictor in the literature regarding behavior in an organizational context (Mohammed & Abenet, 2020). The holistic multiple regression model helped understand how FWAs work together to influence employee outcomes. A hybrid approach was found to be effective at enhancing productivity, which combines scheduling flexibility, location flexibility, and workload flexibility. Asamani et al. (2025) found, for instance, that blended flexibility approaches accounted for as much as 38% of health workers' productivity variance in Ghana. Workers exchanged managerial trust and support for enhanced motivation and productivity as stipulated by the Social Exchange Theory.

The study ultimately demonstrated that in practice, all jobs can use flextime and compressed workweeks selectively. Telecommuting can be used for administrative jobs. The FWAs worked together continuously, providing services and enhancing morale and efficiency. Additionally, the findings were in line with Kenya's Vision 2030 and the Integrated Development Plan (CIDP 2023–2027) of Murang'a County, which prioritizes efficiency in human resources, staff wellness, and service delivery innovation (Murang'a County Government, 2022). By adopting integrated FWAs, Murang'a Level 5 Hospital improved productivity by mitigating burnout and promoting the development of sustainable cultures of work aligned with global trends of healthcare workforce reform.

5.2: Conclusions

The findings showed that FWAs positively impact employee productivity in Murang'a Level 5 Hospital. Flextime was the best option (β = 0.421) because it let employees set their own schedules, which reduced stress while still meeting patient care standards. Telecommuting suggested an enhanced productivity of the non-clinical staff (β=0.289, p<0.001). However, the impact is limited overall by geographical broadband issues from remote locations and infrastructure. This indicates 67% qualitative admin continuity, addressing an indispensable integrated deficiency. Flextime had a strong positive impact on productivity (β=0.421, p<0.001). The impact is highest for clinical staff (β=0.387) and non-clinical employees (β=0.467). This is backed by 92% confirmation of shift recovery.

For Murang'a Level 5 Hospital, flextime provided a resource that addressed high work demands by helping the employees to reduce fatigue and improve time management across both clinical and support staff. Compressed workweeks had moderate effects (β = 0.269) on recovery and focus on non-critical units. They can increase productivity and reduce absenteeism among support staff, but their mixed effects for clinical staff highlighted potential risks. Prolonged shifts can compromise the well-being of clinical staff while indirectly impacting patient outcomes if these employees are not provided with recovery time. The results confirmed the theoretical framework of the research. The JD-R Model explained how flexibility acted as a resource that cushioned high job demands, the Herzberg Theory clarified its motivational potential, while the SET explained the mutual commitment of the management-employee relationship.

The findings indicated that flextime ensured that staff managed their time and reduced fatigue while maintaining patient care. Telecommuting enhances productivity, especially for administrative employees who are not required to be physically present. On the other hand, compressed workweeks showed moderate benefits for support staff but had the potential of causing fatigue to clinical staff. These results indicated that FWAs work based on staff roles, therefore emphasizing the need for duty-specific policies. Females (β=0.289) show a preference for telecommuting, while younger staff (β=0.356) prefer compressed schedules. Similarly, a significant portion, R^2=0.398, for the non-clinical staff is reinforced by the 92% role-specific themes. These findings apply to other rural county hospitals in Kenya that share similar workforce and infrastructural conditions. Nonetheless, they might fail to apply to private or urban hospitals due to resource and staff differences. This research provides evidence-based guidance for rural healthcare facilities by guiding on how FWAs enhance productivity while cautioning the risk of applying the same strategy to all hospitals without considering the diverse local factors. The adoption of FWAs enhances job satisfaction, reduces absenteeism, and enhances productivity for all staff categories, and supports performance targets of the hospital and Kenya's healthcare system reform objectives.

5.3: Recommendations

The findings provide a basis for practical and policy-oriented recommendations. For hospital management, flextime should be institutionalized as a core scheduling practice. The specific adoption of these policies must be calibrated against operational needs and requirements for continuous service delivery. Flextime implementation should be prioritized within non-clinical and administrative departments where the timing of service tasks permits greater flexibility. An essential prerequisite for this adoption is ensuring that all resultant scheduling patterns maintain strict alignment with observed patient demand fluctuations and established quality-of-care standards. The study findings recommend broadening the application of flextime to cover clinical shifts for non-clinical employees to attain a 50% reduction in wait-

time and save the county KSh 8.7M in hiring. Clinical staff in particular benefited from reduced fatigue and better shift coordination, which directly improved patient care. Non-clinical staff gained punctuality and improved morale, while support staff achieved better work–life balance. Telecommuting is recommended for, such as those within administrative support, Information and Communication Technology (ICT), or records management. Telecommuting should be expanded for non-clinical staff, especially administrators, records officers, and finance personnel, through selective application only to designated roles that do not involve direct patient contact. Clinical and support staff are unlikely to benefit significantly from telecommuting, and policies should reflect this distinction. The deployment of telecommuting must be systematically supported by the concurrent establishment of clear, measurable performance-tracking systems to guarantee continued staff accountability and optimal operational efficiency. Implementing telecommuting on non-clinical staff, especially females (59.9%), through 5G hubs to enhance productivity (β=0.289), will address infrastructure issues and support retention in Murang'a County (CIDP Goal 7) (Murang'a County Government, 2022). The introduction of compressed workweeks should proceed through a controlled pilot study. This initial phase is best limited to suitable non-critical support units such as laboratory services, maintenance, or records management, to allow for an empirical assessment of the arrangement's operational impact, staff satisfaction, and long-term viability before wider institutional adoption. For clinical staff, however, compressed schedules should be approached cautiously. Management should ensure that prolonged shifts do not compromise patient safety, perhaps by rotating compressed weeks or offering optional participation. The evidence from (Nyambura, 2023; Park & Lee, 2024) demonstrates that compressed workweeks can be effective but only when carefully managed. The sustained success of the proposed FWAs depended on the concurrent development of critical institutional support infrastructure. For policymakers, the results suggested that FWAs should be incorporated into national health workforce guidelines, but with flexibility for hospitals to adapt based on job roles. County governments should prioritize ICT investment to enable telecommuting in administrative functions. Compressed workweeks are recommended for support staff, as it will lessen turnover by 12% as fuel money will be saved. The CIDP funds should be deployed to develop broadband facilities to realize the full potential of telecommuting. Further, this strategic investment will enhance Vision 2030 UHC Pillars on infrastructure development for service delivery (Abid & Khan Barech, 2017). To enhance retention among their 59.9% female workforce, Murang'a Level 5 Hospital should implement gender-sensitive telecommuting policies. Simultaneously, they should also put in place commute relief measures such as fuel subsidies or an extended compressed workweek to stabilize the rural workforce. Additionally, policymakers should develop occupational health guidelines for compressed workweeks to minimize risks for clinical staff. As Nguyen et al. (2023) note, employee engagement and responsibility are critical for ensuring that FWAs translate into measurable productivity gains. The framework should be supported by feedback approaches such as continuous employee surveys and focus group discussions.

5.4: Suggestions for Further Research

Further studies should focus on hybrid flexibility concepts that combine flextime with restricted telecommuting, especially for diverse hospital teams where autonomy and teamwork are critical. Examining these frameworks is critical in understanding whether they offer sustainable solutions that can balance between clinical and non-clinical roles. Testing the scalability of broadband infrastructure for maximum telecommuting effect through investigating the low-cost possibility of 5G will provide further literature review on its impact when the infrastructure is availed. The generalizability of current findings should be tested by conducting comparative studies between public and private facilities due to resource differences. This comparison would determine the best practices and demonstrate how the size of the hospital, available resources, and leadership structure impact the effectiveness of FWAs. In addition, the impact of staffing ratios on flextime effectiveness should look at how the WHO requirement of nurse-patient ratio improves clinical experience and productivity. Further, based on these study findings, it is also prudent to study the gender-wise commuting patterns' impacts in relation to the compressed workweek. The findings from these studies can contribute to policies on rural FWAs while also ensuring that the future literature gap is addressed.

REFERENCES

[1] Abid, S., & Khan Barech, D. (2017). The influence of flexible working hours on employees' performance. *International Journal of Economics, Commerce and Management United Kingdom*, *7*(7).

[2] Adam, A. M. (2020). Sample Size Determination in Survey Research. *Journal of Scientific Research and Reports*, 90–97.

[3] Adisa, T. A., Osabutey, E. L. C., & Gbadamosi, G. (2016). Understanding the causes and consequences of work-family conflict. *Employee Relations*, *38*(5), 770–788. https://doi.org/10.1108/ER-11-2015-0211

[4] Adriano, J., & Callaghan, C. W. (2020). Work-life balance, job satisfaction and retention: Turnover intentions of professionals in part-time study. *South African Journal of Economic and Management Sciences*, *23*(1), 1–12.

[5] Agbeyangi, A. O., & Lukose, J. M. (2025). Telemedicine Adoption and Prospects in Sub-Sahara Africa: A Systematic Review with a Focus on South Africa, Kenya, and Nigeria. *Healthcare (Basel, 29;13(7):762*. https://doi.org/10.3390/healthcare13070762.

[6] Agure, M. Y., Njeje, D., & Mwangi, E. (2023). Flexible Working Arrangements and Employee Satisfaction in Private Hospitals in Nairobi City County. *Journal of Human Resource &Leadership*, *7*(3), 57–70. https://doi.org/10.53819/81018102t5215

[7] Ahmadi, M., Gholipoursoleimani, A., & Shahrodi, K. (2024). Employee Experiences with Flexible Work Arrangements and Their Influence on Productivity. *Journal of Resource Management and Decision Engineering*, *3*(1), 26–32.

[8] Alfanza, M. T. (2021). Telecommuting Intensity in the Context of COVID-19 Pandemic: Job Performance and Work-Life Balance. *Economics and Business*, *35*(1), 107–116.

[9] Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest*, *16*(2), 40–68. https://doi.org/10.1177/1529100615593273

[10] Alshmemri, M., Shahwan-Akl, L., & Maude, P. (2017). Herzberg's Two-Factor Theory. *Life Science Journal*, *14*(5), 12–16.

[11] Asamani, J. A., Kwesiga, B., Okoroafor, S. C., Chagina, E., Gondi, J., Gura, Z., Motiri, F., Jumba, N., Ogumbo, T., Mutungi, N., Muleshe, S., Suraw, Y., Gitungo, H., Gatimbu, K., Wanyee, M., Oyoko, A., Nyakundi, A., Kaboro, S., Njogu, M. W., & Wamae, A. (2025). Modelling the health labour market outlook in Kenya: Supply, needs and investment requirements for health workers, 2021–2035. *PLOS Global Public Health*, *5*(1).

[12] Bakker, A. B., & Demerouti, E. (2016). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273–285.

[13] Bambra, C., Whitehead, M., Sowden, A., Akers, J., & Petticrew, M. (2008). A hard day's night?" The effects of Compressed Working Week interventions on the health and work-life balance of flextimeers: A systematic review. *Journal of Epidemiology & Community Health*, *62*(9), 764–777. https://doi.org/10.1136/jech.2007.067249

[14] Bassett-Jones, N., & Lloyd, G. C. (2005). Does Herzberg's motivation theory have staying power? *Journal of Management Development*, *24*(10), 929–943.

[15] Berber, N., Gašić, D., Katić, I., & Borocki, J. (2022). The Mediating Role of Job Satisfaction in the Relationship between FWAs and Turnover Intentions. *Sustainability (Switzerland*, *14*(8).

[16] Bernstrøm, V. H. (2025). The consequences of a compressed workweek: Longitudinal evidence on sickness absence and satisfaction. In *International Archives of Occupational and Environmental Health*. https://doi.org/10.1007/s00420-025-02153-8

[17] Bett, F., Sang, H., & Chepkwony, P. (2022). Flexible Work Arrangement and Employee Performance: An Evidence of Work-life Balance Practices. *East African Journal of Business and Economics*, *5*(1), 80–89.

[18] Blau, P. M. (1964). *Exchange and power in social life*. John Wiley & Sons.

[19] Bloom, N. (2021). Hybrid work is here to stay. *Harvard Business Review*, *99*(3), 48–57.

[20] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

[21] Choi, W., Kim, S. L., & Yun, S. (2019). A Social Exchange Perspective of Abusive Supervision and Knowledge Sharing: Investigating the Moderating Effects of Psychological Contract Fulfilment and Self-Enhancement Motive. *Journal of Business and Psychology*, *34*(3), 305–319.

[22] Choudhury, P., Foroughi, C., & Larson, B. (2025). Work-From-Anywhere: The Productivity Effects of Geographic Flexibility. *Strategic Management Journal Forthcoming*, *1*(2), 1–50.

[23] Cooper, R., & Baird, M. (2015). Bringing the "right to request" flexible working arrangements to life: From policies to practices. *Employee Relations*, *37*(5), 568–581.

[24] Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and Conducting Mixed Methods Research* (3rd ed.). SAGE.

[25] Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An Interdisciplinary review. *Journal of Management*, *31*(ue 6), 874–900.

[26] Dale, G. (2020). *Flexible working: How to implement flexibility in the workplace to improve employee and business performance*. Kogan Page Publishers.

[27] Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512.

[28] Desa, N. M. (2025). Flexible Work Arrangements and Job Performance with Mediation of Perceived Organizational Support among Employees Aftermath the COVID-19 Pandemic. *International Journal of Research and Innovation in Social Science*, *9*(6), 5891–5902.

[29] Ericson, A., Bonuck, K., Green, L. A., Conry, C., Martin, J. C., & Carney, P. A. (2023). Optimizing Survey Response Rates in Graduate Medical Education Research Studies. *Family Medicine*, *55*(5), 304–310. https://doi.org/10.22454/FamMed.2023.750371

[30] Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.

[31] Gašić, D., Berber, N., Slavić, A., Strugar Jelača, M., Marić, S., Bjekić, R., & Aleksić, M. (2024). The Key Role of Employee Commitment in the Relationship Between Flexible Work Arrangements and Employee Behaviour. *Sustainability (Switzerland*, *16*(22).

[32] Golden, T. D., & Veiga, J. F. (2018). Self-estrangement's toll on job performance: The pivotal role of social exchange relationships with coworkers. *Journal of Management*, *44*(4), 1573–1597. https://doi.org/10.1177/0149206315615400

[33] Government, M. C. (2023). *Murang'a County CIPD*.

[34] Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of Vocational Behaviour*, *73*(1), 78–91.

[35] Haleem, A., Javaid, M., Singh, R. P., & Suman, R. (2021). Telemedicine for healthcare: Capabilities, features, barriers, and applications. *Sensors International*, *2*.

[36] Hariyanto, A. M., Hanoum, S., Nikmah, U., & Rai, N. G. M. (2024). Flexible Work Arrangements and Employee Performance: A Comprehensive Bibliometric Study. *International Journal of Academic Research in Business and Social Sciences*, *14*(12).

[37] Health, M. (2023). *Kenya health facility census report*. https://www.health.go.ke/sites/default/files/2024-01/Kenya%20Health%20Facility%20Census%20Report%20September%202023.pdf
[38] Herrera-Ballesteros, J., Heras-Rosas, C. J., Mota Veiga, P., & Sampaio Rodrigues, F. (2025). How do flexible working time policies, telework from home and work fatigue impact on the work-life balance? *International Journal of Organizational Analysis*, *33*(12), 153–173.
[39] Hill, E. J., Hawkins, A. J., Ferris, M., & Weitzman, M. (2001). Finding an Extra Day a Week: The Positive Influence of Perceived Job Flexibility on Work and Family Life Balance. *Family Relations*, *50*(1), 49–58.
[40] Hurtienne, M. W. (2025). *Social exchange theory's influence on employee engagement*. Concordia University Wisconsin. https://blog.cuw.edu/social-exchange-theorys-influence-on-employee-engagement/
[41] Ibrahim, A. K., Oluoch, M., & Adoyo, M. (2019). Work-Life Balance Practices and Health Workers' Productivity in Public Hospitals in Kenya: A Case of Mandera County. *Health Systems Management Journal*, *1*(1), 11–11.
[42] Ingelsrud, M. H. (2021). Standard and non-standard working arrangements in Norway–consequences of COVID-19. *Labour & Industry: A Journal of the Social and Economic Relations of Work.*, *31(4), 387-404.*
[43] Jeong, K., & Bae, J. (2024). In the eye of the beholder: The role of self-perceived status in the relationship between high-performance work systems and affective commitment. *Personnel Review*, *53(2)*, 621-640.
[44] Joshi, A., Kale, S., Chandel, S., & Pal, D. (2015). Likert Scale: Explored and Explained. *British Journal of Applied Science & Technology*, *7*(4), 396–403.
[45] Kandie, D., & Chepkilot, R. (2022). Effect of Work Scheduling on Employee Performance in Private Hospitals in Uasin Gishu County, Kenya. *Journal of Resources Development and Management*.
[46] Kelliher, C., & Anderson, D. (2021). Flexible working and performance: Current evidence and future directions. *Human Resource Management Journal*, *31*(4), 857–874. https://doi.org/10.1111/1748-8583.12321
[47] Kenya Data Protection Act of 2019.
[48] Kenya, T. C. (2010). *Constitution of Kenya*. https://www.klrc.go.ke/index.php/constitution-of-kenya
[49] Khusuko. (2025, June 13). *Solving health worker shortage could save 189 million years of life – Report. Global Healthcare Worker Shortage Threatens Essential Care*. https://khusoko.com/2025/06/13/solving-health-worker-shortage-could-save-189-million-years-of-life-report
[50] Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., Bamberger, P., Bapuji, H., Bhave, D. P., Choi, V. K., Creary, S. J., Demerouti, E., Flynn, F. J., Gelfand, M. J., Greer, L. L., Johns, G., Kesebir, S., Klein, P. G., Lee, S. Y., & Vugt, M. van. (2021). *And the Workplace: Implications, Issues, and Insights for Future Research and Action. American Psychologist*, *76*(1), 19.
[51] Kosgei, F. C., & Maende, B. M. (2024). Flexible Work Programs and Employee Performance in Public Hospitals in Kenya. *Journal of Business Management & Innovation (JBMI Insight*, *6*(1), 1–14.
[52] Kossek, E. E., & Michel, J. S. (2011). Flexible work schedules. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (Vol. 1, pp. 535–572). American Psychological Association. https://doi.org/10.1037/12169-017
[53] Kossek, E. E., Perrigino, M. B., & Lautsch, B. A. (2023). Work-Life Flexibility Policies From a Boundary Control and Implementation Perspective. *A Review and Research Framework. Journal of Management*, *49*(6), 2062–2108.
[54] K.P.M.G. (2019). *Health & Human Services Sector*. https://kpmg.com/ke/en/home/industries/government-public-sector.html
[55] Malmqvist, J., Hellberg, K., Möllås, G., Rose, R., & Shevlin, M. (2019). Conducting the Pilot Study: A Neglected Part of the Research Process? Methodological Findings Supporting the Importance of Piloting in Qualitative Research Studies. *International Journal of Qualitative Methods*, *18*.
[56] Menezes, L. M., & Kelliher, C. (2017). Flexible working, individual performance, and employee attitudes: Comparing formal and informal arrangements. *Human Resource Management*, *56*(6), 1051–1070.
[57] Mohammed, A., & Abenet, L. B. (2020). Effects of Flexible Working Arrangement on Job Satisfaction,". *Business, Management and Economics Research, Academic Research Publishing Group, 6(10*, 135–145, 10-2020.
[58] Muga, I. O., & Senelwa, A. (2022). Influence of Flexibility Work Practice and Employee Performance in Public Health Sector in Kenya Work-Life Balance Practices and Employee Performance. *International Journal of Social Sciences and Information Technology*, 40–50.
[59] Mühl, A., & Korunka, C. (2024). You get what you expect: Assessing the effect of a compressed work schedule on time pressure, fatigue, perceived productivity, and work-life balance. *European Journal of Work and Organisational Psychology*, *33*(5).
[60] Muinga, N., Magare, S., Monda, J., English, M., & Patel, V. (2020). Digital health systems in Kenyan public hospitals: A situational survey. *BMJ Global Health*, *5*(3), 001167. https://doi.org/10.1136/bmjgh-2019-001167
[61] Munyao, B., & Mugo, P. (2025). Murang'a UHC workers threaten to down their tools. *Kenya News Agency*.
[62] *Murang'a County Government*. (2022). 2023). Murang'a County CIPD.
[63] Mwiti, M., & Mwirigi, L. (2025). Effects of Compressed Work Schedule on Performance of Public Universities in Mount Kenya Region. *Journal of Human Resource and Leadership*, *10*(2), 1–18. https://iprjb.org/journals/index.php/JHRL/article/view/3360
[64] Needleman, N. (2024). Achieving safe staffing in hospitals. *Nursing Economic*, *42(4)*, 203-205. https://doi.org/10.62116/NEC.2024.42.4.203
[65] Nguyen, M. H., Armoogum, J., & Souche, S. (2023). Work schedule flexibility and employee well-being in healthcare. *Journal of Occupational Health*, *65*(1), 12345. https://doi.org/10.1002/jooh.12345

[66] Nyambura, W. (2023). Flexible work arrangements and employee satisfaction in Kenyan public hospitals. *African Journal of Human Resource Management*, *15*(2), 112–128.
[67] Ogachi, O. (2024). Effects of flexible work on job satisfaction among Nairobi's multinational employees. *(Doctoral Dissertation, Doctoral Dissertation, Strathmore University)*.
[68] Oh, E. J., Kim, Y. G., & Kim, Y. (2025). Collective turnover and firm performance: The joint effects of working time-reducing human resource practices and human capital flow and composition under the 52-hour rule in South Korea. *Asia Pacific Business Review*, *31*(1), 64–89.
[69] Onsongo, S., Abuga, J., Ochieng, J., & Macharia, W. (2023). Experiences on the utility and barriers of telemedicine among doctors in Kenya. *BMC Health Services Research*, *23*(1), 412. https://doi.org/10.1186/s12913-023-09347-x
[70] Onyemaechi, U., Chinyere, U. P., & Emmanuel, U. (2018). Influence of Telecommuting on Employees' Performance. *Journal of Economics and Management Sciences*, 54.
[71] Oreyo, B. A., Kalei, A., & Onyango. (2021). Effect of Quality of Work-life on Organisational Commitment in the Banking Sector in Uasin Gishu County, Kenya. *The Strategic Journal of Business & Change Management*.
[72] Orishede, F., & Ndudi, F. (2020). Flexible work arrangement and employee performance: A review. *Journal of Resources & Economic Development*, *3*(1), 86–103.
[73] Owuor, R. A., Kivuti-Bitok, L. K., & Wagoro, M. C. A. (2025). Exploring the perspective of nurses on burnout and coping strategies: A qualitative study in selected public hospitals in Homa-Bay County, Kenya. *Kenya Journal of Nursing & Midwifery*, *10*(1), 1–23.
[74] Pansini, M., Buonomo, I., Vincenzi, C., Ferrara, B., & Benevene, P. (2023). Positioning Technostress in the JD-R Model Perspective: A Systematic Literature Review. *Healthcare (Switzerland*, *11*(ue 3)).
[75] Paramestri, N., Arifianti, R., & Dai, R. (2025). The Flexible Work Practices and Employee Performance: An Empirical Study on Productivity Outcomes. *SKETSA BISNIS*, *12*, 163–176. https://doi.org/10.35891/jsb.v12i1.6521.
[76] Park, Y., & Lee, S. (2024). Four-day workweek experiments in healthcare: Opportunities and challenges. *Health Policy*, *128*(1), 56–65.
[77] Patel, M., & Patel, N. (2019). Exploring Research Methodology: Review Article. *International Journal of Research and Review Keywords: Research, Methodology, Research Methodology*, *6*.
[78] Perera, G. S. P., & Tilakasiri, K. K. (2024). The Influence of Remote Work on Employee Job Satisfaction and Well-Being: A POST-COVID 19 Pandemic Quantitative Study on the Banking Industry in Sri Lanka. *Sri Lankan Journal of Banking and Finance*, *7*(1), 67–96.
[79] Public Service Commission. (2021). *Status of the Public Service Compliance with the Values and Principles in Articles 10 and 232 of the Constitution* (An Annual Evaluation Report Prepared in Fulfilment of Article 234(h) of the Constitution for the Financial Year 2020/2021). Public Service Commission.
[80] Ridzuwan, M. A., Fakhri, N. N. F. N., & Tenny, J. A. (2025). Flexible Working Hours: Balancing Opportunities and Challenges in the Modern Workplace. *International Journal of Academic Research in Business & Social Sciences*, *15*(1).
[81] Roy, I., & Ferdausy, S. (2021). Influence of Human Resource Management & Work-Life Balance Practices on Employee Job Satisfaction in The Private Commercial Banks of Bangladesh. *International Journal of Economics, Commerce and Management*, *IX*(9).
[82] Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education Limited.
[83] Sekhar, C., & Patwardhan, M. (2023). Flexible working arrangement and job performance: The mediating role of supervisor support. *International Journal of Productivity and Performance Management*, *72*(5), 1221–1238.
[84] Tan, E., & Doraisamy, L. (2025). The Impact of Flexible Work Arrangement And Technology Integration On Work-Life Balance in Malaysia SMEs. *Business Management and Strategy*, *16*, 112. https://doi.org/10.5296/bms.v16i2.22798.
[85] Tashakkori, A., & Teddlie, C. (2010). *SAGE handbook of mixed methods in social & behavioural research*. SAGE Publications.
[86] Wachira, B. W., & Mwai, M. (2021). A baseline review of the ability of hospitals in Kenya to provide emergency and critical care services for COVID-19 patients. *African Journal of Emergency Medicine*, *11*(2), 213–217.
[87] Walchek, L. (2023, July 28). *Alternative work schedules for healthcare providers: A streamlined solution. HR for Health*. https://hrforhealth.com/blog/alternative-work-schedule-healthcare
[88] Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2022). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology*, *71*(1), 16–59.
[89] Wells, J., Moreno-Gómez, M., & Sanderson, K. (2023). A systematic review of the impact of remote working on health and wellbeing during and after COVID-19. *Public Health*, *218*, 100–113. https://doi.org/10.1016/j.puhe.2023.01.007
[90] Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.