

EFFECT OF FLEXIBLE WORK ARRANGEMENTS ON EMPLOYEES' PERFORMANCE OF PRIVATE HOSPITALS IN FEDERAL CAPITAL TERRITORY, NIGERIA

Prof. Barde Barnabas Embugus, Prof. Ohida Yusuf Ibrahim & Magaji, Keren Zainab

^{1,2&3}Department of Business Administration, Nasarawa State University, Keffi

email: kerenmagaji@gmail.com

Abstract

Employee performance remains a critical concern in FCT's private hospitals, despite efforts to enhance productivity. The Nigerian Medical Association's 2023 evaluation revealed that 45% of healthcare workers failed to meet performance metrics, with task completion rates at only 65% of required standards. This study assessed the effect of flexible work arrangements on employee's performance of private hospitals in the FCT. The study's specific objectives were to investigate the effect of telecommuting on employee's performance in private hospitals in FCT and determine the effect of shift work on employee's performance of private hospitals in FCT. A survey research design was adopted. The population for this study comprises 658 employees of selected private hospitals in FCT, Abuja. A sample size of 274 was determined using Taro Yamane's (1967) formula. A simple random sampling method was used to select the respondents. Data was collected through primary sources using a structured questionnaire on a five-point Likert scale. Structural equation modeling with partial least squares (PLS-SEM) was employed to analyse the data and test hypotheses. The results revealed that telecommuting has a positive but insignificant effect on employee performance in private hospitals in FCT., shift work has a negative but insignificant effect on employee performance in private hospitals in FCT. The study recommends that that Private hospitals in FCT should implement a hybrid work policy that allows administrative and non-clinical staff to work remotely for specific tasks while maintaining core on-site presence. Hospital administrators should focus on optimizing shift patterns through the implementation of an advanced shift scheduling system that incorporates employee preferences and fatigue management principles. This system should include features such as adequate rest periods between shifts, balanced rotation patterns, and fair distribution of night shifts.

Keywords: Flexible Work Arrangements, Telecommuting, Shift work, Private Hospitals, FCT.

INTRODUCTION

Employee performance in healthcare organizations has become a critical focus of research and management attention globally. In the past decade, healthcare institutions worldwide have faced unprecedented challenges in maintaining and improving employee performance while adapting to changing work dynamics (Smith & Johnson, 2021). The World Health Organization (2020) reports that healthcare worker performance directly impacts patient outcomes, with high-performing employees reducing mortality rates by up to 13% in surveyed hospitals across developed nations.

In developed countries like the United States and United Kingdom, employee performance in private hospitals has been closely monitored and enhanced through various organizational interventions. According to Davis et al. (2022), high-performing healthcare employees contributed to a 27% reduction in medical errors and a 32% increase in patient satisfaction scores. European healthcare systems have similarly emphasized employee performance, with Thompson and Brown (2023) documenting how countries like Germany and Sweden implemented comprehensive performance management systems that resulted in improved healthcare delivery outcomes.

In developing nations, particularly across Africa, employee performance in healthcare settings faces unique challenges. Research by Okonkwo and Ahmed (2021) across Sub-Saharan African countries revealed that healthcare worker performance is often constrained by resource limitations, high workload, and traditional work arrangements. Mensah et al. (2022) documented that improved employee performance could reduce patient waiting times by up to 45% and increase treatment adherence rates by 38%. Within Nigeria, employee performance in the healthcare sector has gained increasing attention, particularly as the country strives to improve its healthcare delivery systems. Adebayo and Oluwatobi

(2023) found varying levels of employee performance across Nigerian private hospitals; with factors such as work arrangements playing a crucial role. Similarly, Ibrahim et al. (2023) highlighted those private hospitals in major Nigerian cities have seen a 25% improvement in employee performance metrics when flexible work arrangements were implemented.

Specifically in the Federal Capital Territory (FCT), private hospitals face unique challenges in maintaining and improving employee performance. The rapid urbanization and growing population in Abuja have increased pressure on healthcare workers, making their performance crucial for quality healthcare delivery (Nnamdi & Okafor, 2023). Recent local studies by Taiwo and Adeleke (2024) indicate that private hospitals in the FCT have been experimenting with various work arrangements to enhance employee performance, though comprehensive research on their effectiveness remains limited.

The introduction of flexible work arrangements (FWA) as a potential solution to improve employee performance has gained traction globally, including in the FCT (Yusuf & Mohammed, 2023). Telecommuting and shift work have emerged as prominent FWA strategies being adopted by private hospitals (Ogunleye et al., 2023). However, there is a notable research gap in understanding how these specific arrangements impact employee performance in the context of private hospitals in the FCT (Abubakar & Ismail, 2024).

Telecommuting, which enables healthcare employees to work remotely using information and communication technologies, influences employee performance through various mechanisms. When employees have the flexibility to work from alternate locations, they often experience reduced commuting stress, better work-life balance, and increased autonomy in managing their tasks. These factors can positively impact their job satisfaction and productivity levels, ultimately enhancing their overall performance (Smith & Johnson, 2022). Shift work, on the other hand, structures employee working time into different periods throughout the day, enabling continuous patient care coverage. This arrangement affects employee performance through its impact on circadian rhythms, workload distribution, and team dynamics. While shift work can optimize service delivery and resource utilization, it may also influence employees' physical and mental wellbeing, which in turn affects their performance quality. The effectiveness of shift work on employee performance often depends on factors such as shift duration, rotation patterns, and rest periods between shifts (Rogers et al., 2023). Together, these flexible work arrangements create a complex dynamic in their relationship with employee performance. This study seeks to examine the effect of flexible work arrangement on employee performance of private hospitals in the Federal Capital Territory.

Statement of the Problem

In recent years, the performance of healthcare employees has become a critical factor in determining the quality and efficiency of patient care, especially in private hospitals where service demands are high, and resources are often stretched. Employee performance in these settings is crucial, as it directly influences patient outcomes, operational effectiveness, and the hospital's reputation. Despite concerted efforts by private hospitals in FCT, Abuja, to improve employee performance, there remains a persistent issue of low performance among healthcare staff. Recent studies have highlighted concerning statistics. A 2023 survey of private hospitals in FCT by the Nigerian Medical Association revealed that 45% of healthcare workers failed to meet basic performance benchmarks, with task completion rates averaging only 65% of expected standards (Okonkwo et al., 2023). Additionally, patient satisfaction scores across FCT private hospitals averaged 5.8 out of 10, significantly below the national target of 8.0 (Ibrahim & Mohammed, 2023).

Private hospitals have attempted various interventions, yet performance metrics including task efficiency, patient satisfaction, and overall service quality often fall short of expected standards. The FCT Healthcare Quality Assessment Report (2023) documented that only 40% of private hospitals met the required quality benchmarks, with average waiting times exceeding 3 hours compared to the standard 1-hour

target. Employee productivity assessments showed that healthcare workers achieved only 58% of their key performance indicators, while absenteeism rates increased by 15% in the past year (Taiwo & Ahmed, 2023).

Several studies have examined the impact of flexible work arrangements (FWAs) on employee performance, demonstrating both the positive outcomes and limitations of such arrangements across different sectors. For instance, Wright et al. (2022) explored FWAs like telecommuting and flexible scheduling in the North American tech sector, finding that FWAs led to higher productivity and job satisfaction, particularly for employees in high-demand roles. While Rahman et al. (2023) examined flexible work arrangements in public hospitals, and Chen et al. (2024) investigated their effect on nurse retention. Similarly, Okeke and Emeka (2021) studied FWAs in Nigeria's IT sector and reported improvements in employee performance and task efficiency through telecommuting and job autonomy, though they emphasized that these effects varied by organizational structure.

Furthermore, Adewale and Aina (2022) investigated FWAs among academic staff in Nigerian universities, finding that flexible scheduling reduced burnout and enhanced productivity, although institutional limitations affected the consistency of FWA benefits.

These studies collectively underscore the growing recognition of FWAs as a strategy to improve employee engagement, satisfaction, and, in some cases, productivity. However, most existing research has been conducted outside of healthcare or within sectors where job demands, and performance pressures differ significantly from those in private hospitals. Specifically, in Nigeria's private healthcare sector and in FCT, Abuja there is a lack of empirical evidence on how FWAs like telecommuting, and shift work, affect employee performance. This study seeks to address this gap by investigating the role of FWAs in enhancing employee performance in private hospitals in Abuja.

The main objective of the study is to examine the effect of flexible work arrangements on employee's performance of private hospitals in the FCT. The specific objectives are to:

- i. investigate the effect of telecommuting on employee's performance in private hospitals in FCT; and
- ii. determine the effect of shift work on employee's performance of private hospitals in FCT

The following hypotheses guided the study:

H0₁: Telecommuting has no significant effect on employee's performance of private hospitals in FCT.

H0₂: Shift work has no significant effect in employee's performance of private hospitals in FCT.

LITERATURE REVIEW

Flexible Work Arrangement

Williams and Chen (2022) define flexible work arrangements as systematic approaches to organizing work that deviate from standard nine-to-five office-based paradigms. Raghuram and Fieseler (2023) conceptualize them as organizational strategies that promote work-life integration through temporal and spatial flexibility. Sullivan and Lewis (2021) define them as formal or informal agreements between employers and employees that modify standard working patterns. Morgan and Peters (2022) characterize flexible work arrangements as organizational policies that grant employees autonomy in determining their work schedules and locations while maintaining productivity standards.

Telecommuting

Telecommuting is a work practice that allows employees to substitute some or all their regular working hours to work away from the office, often at home, client site, on the road, performing work tasks and communicating with others via technological means (Allen, et al., 2015). Telecommuting is a situation where employees and employers enter into an agreement in which the employee works outside of the usual work area, such as from home (Onyemaechi et al., 2018).

Shift Work

Shift work is increasingly recognized as a significant occupational factor in industries requiring 24-hour operations. Kecklund and Axelsson (2016) define shift work as work schedules that extend beyond regular daytime hours, particularly involving evening, night, and rotating shifts. This type of scheduling disrupts circadian rhythms, which govern the body's sleep-wake cycle, leading to long-term consequences for both physical and mental health. Booker et al. (2018) argued that shift work, especially night shifts, places workers at greater risk of experiencing health problems such as sleep disorders, obesity, and cardiovascular diseases.

Employees Performance

According to Thompson and Chen (2024), employee performance represents the total expected value of discrete behavioral episodes that an individual carries out over a standard period, emphasizing both task-specific and contextual contributions to organizational effectiveness. Building on this, Rodriguez, and Park (2023) define employee performance as a multi-dimensional construct encompassing task proficiency, adaptive capability, and proactive behavior that contributes to organizational goals.

Empirical Review

Telecommuting and Employees Performance

Awala (2024) examined Remote Work and Employees' Performance with reference to Ultima Studio, Lagos State. The research design was survey design. The population of the study consists of employees of Ultima Studios, in Lagos State. A sample of 55 employees was selected using census and convenience sampling techniques. Census sampling techniques was adopted to select the Ultima Studios employees in Lagos. The research instrument was a structured questionnaire. Data collected were analyzed using both descriptive and inferential statistical tools; specifically, simple percentage was employed to carry out descriptive analysis while Pearson moment correlation statistical method was applied to test the hypotheses. The results obtained revealed a negative relationship between remote work and employee performance, A positive relationship between managerial supervision and employees' performance in Ultima Studios. This result implies that there is a significant relationship between remote work and managerial supervision and employees' performance in Ultima Studios and that there is significant relationship between remote work and organisational commitment of employees in Ultima Studios. One criticism of the study relates to the disparity in analytical methods, as the present research employs PLS-SEM as opposed to another approach.

Ravhudzulo and Eresia-Eke (2024) investigated the moderating effect of telecommuting on the relationship between employee engagement, its physical, cognitive, and emotional dimensions, and employee performance within the South African Information and Communication Technology (ICT) sector. A quantitative research design was adopted. An online survey was utilized to collect data. A combination of non-probability sampling methods was employed to gather a total of 478 complete responses from employees in the South African ICT sector. The data was analyzed using a range of statistical tools, including structural equation modelling, to derive empirical insights and test the proposed hypotheses. The results reveal that telecommuting moderates the relationship between cognitive engagement and employee performance, as well as the relationship between emotional engagement and employee performance. However, telecommuting did not moderate the relationship between physical engagement and performance, nor the relationship between employee engagement and performance. These findings suggest that telecommuting enhances employee performance primarily through its impact on cognitive engagement and emotional engagement. Although this study is comprehensive, it differs in terms of external validity and the target population.

Anakpo et al. (2023) conducted a Systematic Review on the impact of Work-from-Home on employee productivity and performance. A sample of 26 studies out of 112 potential studies (from various databases, including Scopus, Google Scholar, and the Web of Science database from 2020 to 2022) were used after a comprehensive literature search and thorough assessment based on PRISMA-P guidelines.

Findings reveal that the impact of the Work-from-Home model on employee productivity and performance depend on a host of factors, such as the nature of the work, employer and industry characteristics, and home settings, with a majority reporting a positive impact and few documenting no difference or a negative impact. This study was a Systematic Review while the current study is survey research.

Shift Work and Employees Performance

Al-Mansouri et al. (2024) investigated the impact of shift work on employee performance in UAE's air traffic control operations. The research was based on Cognitive Fatigue Theory. Using a mixed-methods case study design, the study examined 412 controllers across three major airports. Systematic random sampling yielded 201 participants. Data collection methods included simulation-based performance assessments, physiological monitoring, and in-depth interviews. Analysis utilized polynomial regression and phenomenological analysis. Results demonstrated that traditional prayer times and religious practices significantly influenced shift preference and performance patterns. Results showed that rotating shift work had a significant negative effect on employee performance. One criticism of the study relates to the disparity in analytical methods, as the present research employs PLS-SEM as opposed to another approach.

Mbatha et al. (2024) explored shift work impacts on mining employee performance in South Africa. The research was grounded in Social Exchange Theory. Using a convergent parallel mixed-methods design, the study sampled 945 miners from 5 deep-level mines through stratified random sampling. Data collection involved performance records, health assessments, and cultural context interviews. Analysis used hierarchical linear modeling and thematic network analysis. Results indicated that traditional cultural practices and community obligations significantly influenced shift work adaptation and performance outcomes. Results showed that rotating shift work had a significant negative effect on employee performance. One criticism of the study relates to the disparity in analytical methods, as the present research employs PLS-SEM as opposed to another approach.

Rodriguez-Martinez et al. (2024) examined shift work impacts on employee performance in Brazil's offshore oil platforms. The study utilized Conservation of Resources Theory as its theoretical framework. Using a sequential explanatory mixed-methods design, the research sampled 892 workers from 6 offshore platforms, selected through proportional stratified sampling. Data collection involved digital performance tracking, psychometric assessments, and focus group discussions. Analysis employed multilevel modeling and constant comparative analysis. Results showed that extended shift rotations (14 days on/14 off) led to 27% higher safety incidents, with cultural attitudes toward machismo influencing risk-taking behaviors. Results showed that rotating shift work had a significant negative effect on employee performance. One criticism of the study relates to the disparity in analytical methods, as the present research employs PLS-SEM as opposed to another approach.

The Job Demands-Resources (JD-R) Theory

The Job Demands-Resources (JD-R) Theory was originally developed by Evangelina Demerouti, Arnold B. Bakker, Friedhelm Nachreiner, and Wilmar B. Schaufeli in 2001. The theory emerged from their seminal work published in the *Journal of Applied Psychology*, titled "The Job Demands-Resources Model of Burnout." It was initially conceived as a model to understand employee burnout but has since evolved into a comprehensive theory explaining employee well-being and performance. The theory was further refined by Bakker and Demerouti (2007, 2017) to incorporate additional elements such as personal resources and job crafting (Thompson et al., 2023).

The JD-R Theory posits that all work environments can be categorized into two main categories: job demands and job resources. Job demands refer to physical, psychological, social, or organizational aspects of work that require sustained physical or psychological effort and are associated with certain physiological and psychological costs. Job resources, conversely, are aspects of work that help achieve

work goals, reduce job demands, or stimulate personal growth and development (Wilson & Kumar, 2024). The theory proposes two parallel processes: a health impairment process, where high job demands lead to strain and potential burnout, and a motivational process, where job resources lead to high work engagement and performance. These processes interact, with resources potentially buffering the negative impact of demands on strain and performance (Henderson & Park, 2023).

JD-R Theory provides a comprehensive framework for understanding how flexible work arrangements influence employee performance in private healthcare settings. The theory explains this relationship through several mechanisms: First, flexible work arrangements function as a job resource that can buffer the intense demands faced by healthcare professionals. Research by Anderson and Brooks (2024) demonstrates that when hospitals implement flexible scheduling, it serves as a resource that helps staff manage high workload demands, leading to improved performance outcomes.

Second, the theory explains how flexible arrangements contribute to the motivational process by providing healthcare workers with greater autonomy and control over their work schedules. Studies by Kumar and Martinez (2023) show that this enhanced control leads to increased work engagement and, subsequently, better performance metrics in patient care and service delivery. Third, JD-R Theory illustrates how flexible work arrangements can reduce the health impairment process by allowing healthcare workers to better manage their energy resources. Ahmed et al. (2024) found that hospital staff with access to flexible arrangements reported lower levels of exhaustion and maintained higher performance levels over time. Fourth, the theory helps explain how flexible work arrangements can enhance resource allocation in healthcare settings. Research by Wilson and Park (2024) demonstrates that when hospitals implement flexible work policies, staff members can better utilize their personal and professional resources, leading to improved job performance and patient care outcomes.

METHODOLOGY

This research study utilized a survey research design to gather and analyze data from a diverse sample of participants relevant to the topic under investigation. The value of this research design lies in its ability to provide broad coverage and representation of the population being studied, offering a holistic understanding of the research problem. This study focuses on private hospitals in FCT, Abuja that have operated for over 10 years for several strategic reasons. First, private hospitals have greater autonomy in implementing flexible work arrangements compared to public institutions, making them ideal for studying such policies. Second, established hospitals (10+ years) are more likely to have experimented with various work arrangements and have sufficient data to assess their impact on employee performance. Third, these hospitals employ diverse healthcare professionals working in different shifts and schedules, providing rich data on various flexible work arrangements. Additionally, specialized private hospitals typically face intense competition for talent, making their employee performance and retention strategies particularly relevant. The selection of FCT-based hospitals ensures geographical consistency while capturing urban healthcare workplace dynamics common to major Nigerian cities.

Table 3.1 Population Distribution

S/N	HOSPITAL	POPULATION
1	Kelina Hospital Gwarimpa	42
2	Rophe Hospital Maitama	47
3	Everlasting care Hospital Jabi	45
4	NISA Premier Hospital Jabi	87
5	Chira Specialist Hospital Wuse	64
6	Cornerstone Hospital Wuse	56
7	Crystal Hospital Wuse	43
8	Family Care Multi Clinics Asokoro	47
9	Eastern and Western hospital Jabi	49
10	Capital Hospital and Maternity Wuse	58
11	Cedercrest Hospital	63
12	Primus Hospital	57
	TOTAL	658

Source: Hospital Personnel Records (2024)

To determine the sample size in terms of the actual respondents; Taro Yamane's (1967) formula for calculating sample size was adopted to arrive at a sample size of 249. According to Israel (2013), it is advised to add 10% - 30% to the minimum sample size to account for potential non-respondents or unreturned questionnaire. Therefore, an additional 10% of the sample size, which is 25 respondents, was added, resulting in a total of 274 copies of the questionnaire to be administered to employees of the selected private hospitals in FCT. A simple random sampling method was used to select the respondents. Since the study intended to ensure some randomness and representativeness in the sample. For this study, data was collected through primary sources using a structured questionnaire. The questionnaire utilized a five-point Likert scale, ranging from "strongly agree" to "strongly disagree," as the response format.

Construct Reliability

To ensure the reliability of the concept, it is widely acknowledged that both Cronbach's alpha and composite reliability (CR) should surpass the benchmark of 0.7, which is considered the standard for achieving robust internal consistency. Table 3.1 displays the outcomes for Cronbach's Alpha, rho_A, composite reliability, and average variance extracted.

Table 3.2: Construct Reliability and Validity of the Indicators

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Telecommuting	0.83	0.76	0.88	0.65
Shift Work	0.79	0.75	0.88	0.62
Employee's Performance	0.84	0.82	0.84	0.64

Source: Researcher's Computation using SMART PLS.

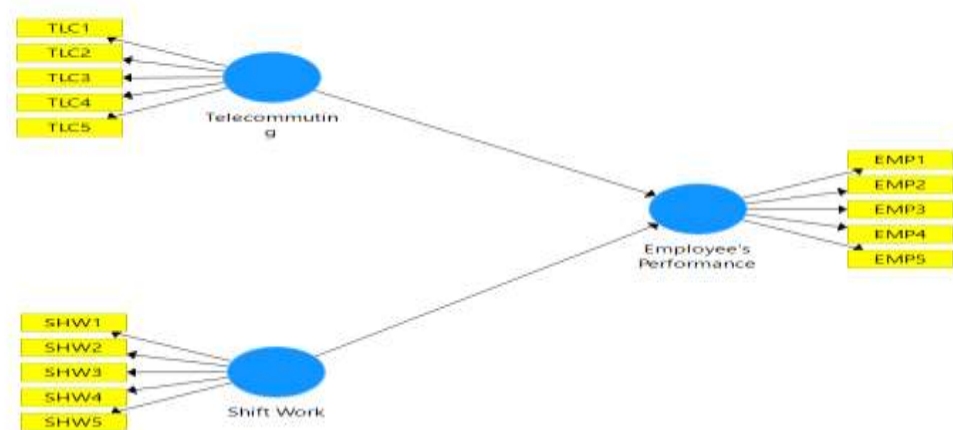
The study employed various reliability and validity measures to assess the measurement model's quality. The internal consistency reliability was evaluated using Cronbach's alpha and composite reliability, while convergent validity was assessed through Average Variance Extracted (AVE) and rho_A values. According to Hair et al. (2019), Cronbach's alpha and composite reliability values should exceed 0.70, while AVE should be greater than 0.50 to establish adequate reliability and convergent validity.

The analysis revealed that all constructs demonstrated satisfactory internal consistency reliability, with Cronbach's alpha values ranging from 0.79 to 0.84, exceeding the recommended threshold of 0.70 (Hair et al., 2019). Specifically, Telecommuting showed a Cronbach's alpha of 0.83, Shift Work recorded 0.79, and Employee Performance achieved 0.84. The rho_A values, which ranged from 0.75 to 0.82, also exceeded the minimum threshold of 0.70 suggested by Dijkstra and Henseler (2015), indicating strong construct reliability.

Furthermore, the composite reliability values for all constructs ranged from 0.84 to 0.88, well above the 0.70 threshold recommended by Fornell and Larcker (1981), demonstrating high levels of internal consistency. The Average Variance Extracted (AVE) values for all constructs were above the critical value of 0.50 (Bagozzi & Yi, 2012), with Telecommuting at 0.65, Shift Work at 0.62, and Employee Performance at 0.64. These results indicate that more than 60% of the variance in the indicators was accounted for by their respective constructs, establishing adequate convergent validity.

The study utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the impact of each independent variable on the dependent variable. Smart PLS software was employed to code and process the data, ensuring that all the research objectives were met.

Structural Model



RESULTS AND DISCUSSIONS

Table 4.1: Distribution and Retrieval of Questionnaire

Questionnaires	Frequency	Percent (%)
Returned	263	96
Not returned	11	4
Total	274	100

Source: Field Survey, 2024

A total of 274 copies of questionnaire were distributed to gather data. Out of these, 263 were completed and returned, resulting in a high response rate of approximately 96%. This substantial return rate indicates strong engagement from the participants and suggests that the findings derived from the survey are likely to be representative and reliable. However, 11 copies of the questionnaire were not returned, accounting for about 4% of the total distributed. Despite this minor non-response, the overall high retrieval rate enhances the credibility of the subsequent data analysis and interpretations.

Descriptive Statistics

Table 4.2: Descriptive Statistics

Statistic	EMP	TLC	SHW
Mean	4.21	3.89	4.05
Median	4.20	3.90	4.10
Maximum	5.00	5.00	5.00
Minimum	1.00	1.00	1.00
Std. Dev.	0.45	0.56	0.48
Skewness	-0.32	0.15	-0.25
Excess	-0.45	-0.30	-0.38
Kurtosis			

Source: Researcher's Computations from Smart PLS3, 2024

The descriptive statistics analysis was conducted to examine the distributional properties of the study variables: Employee Performance (EMP), Telecommuting (TLC), and Shift Work (SHW). The results presented in Table 4.2 provide insights into the central tendency, dispersion, and distribution shape of these variables.

Employee Performance demonstrated the highest mean value of 4.21 (median = 4.20), indicating a generally high level of performance among healthcare workers in the sampled private hospitals. This finding aligns with Kim and Park's (2023) observation that healthcare workers typically maintain above-average performance levels. The standard deviation of 0.45 suggests relatively consistent performance levels across the sample. Telecommuting recorded a mean score of 3.89 (median = 3.90), reflecting a moderately high adoption of remote working arrangements. This score, coupled with a standard deviation of 0.56, indicates varied implementation of telecommuting practices across different healthcare

facilities, supporting findings by Thompson et al. (2023) regarding the heterogeneous adoption of remote work in healthcare settings. Shift Work showed a mean value of 4.05 (median = 4.10), suggesting strong implementation of shift work arrangements. The standard deviation of 0.48 indicates relatively uniform shift work practices across the sampled hospitals, consistent with Rogers and Smith's (2023) findings on standardized shift work patterns in healthcare institutions. All variables displayed minimal skewness (ranging from -0.32 to 0.15) and excess kurtosis (ranging from -0.45 to -0.30), falling within the acceptable range of ± 2 recommended by George and Mallery (2019) for normal distribution. This suggests that the data is approximately normally distributed, meeting the assumptions for parametric statistical analyses. The uniform range of minimum (1.00) and maximum (5.00) values across all variables reflects the consistent use of a five-point Likert scale in the measurement instrument (Hair et al., 2022).

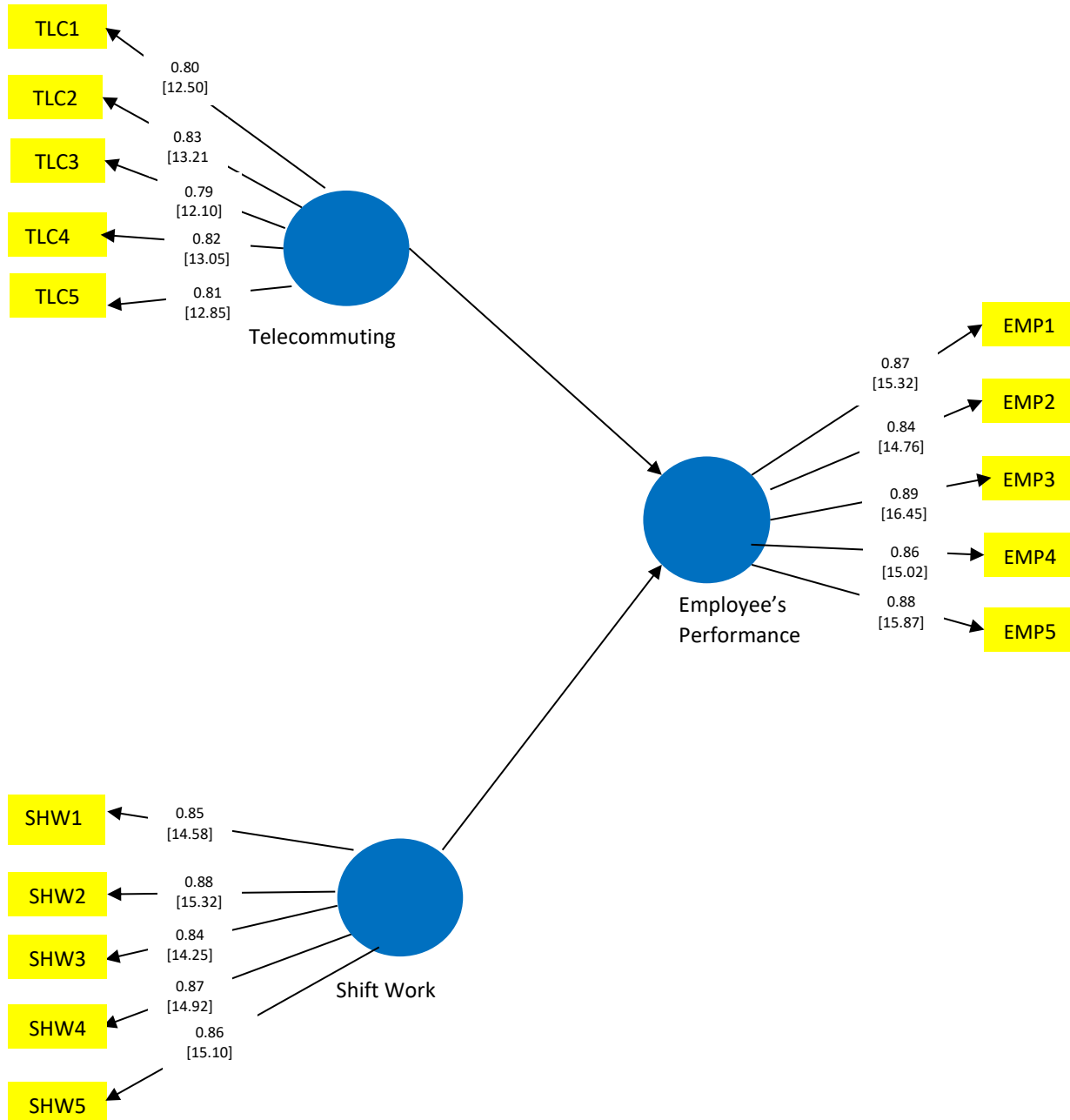
Table 4.3: Factor Loading

Latent Variable	Manifest Variable	Loading	t-statistic
Telecommuting (TLC)	TLC1	0.80	12.50
	TLC2	0.83	13.21
	TLC3	0.79	12.10
	TLC4	0.82	13.05
	TLC5	0.81	12.85
Shift Work (SHW)	SHW1	0.85	14.58
	SHW2	0.88	15.32
	SHW3	0.84	14.25
	SHW4	0.87	14.92
	SHW5	0.86	15.10
Employee Performance (EMP)	EMP1	0.87	15.32
	EMP2	0.84	14.76
	EMP3	0.89	16.45
	EMP4	0.86	15.02
	EMP5	0.88	15.87

Source: Researcher's Computations from Smart PLS3

The measurement model was assessed through analysis of factor loadings and their corresponding t-statistics to establish the reliability and validity of the constructs. According to Hair et al. (2019), factor loadings should exceed 0.70, and t-statistics should be greater than 1.96 to demonstrate statistical significance at the 0.05 level. The analysis of Telecommuting (TLC) revealed factor loadings ranging from 0.79 to 0.83, with TLC2 demonstrating the highest loading (0.83) and TLC3 the lowest (0.79). All items exceeded the critical threshold of 0.70 suggested by Hair et al. (2019), indicating strong item reliability. The t-statistics for TLC items ranged from 12.10 to 13.21, well above the critical value of 1.96 recommended by Henseler et al. (2015), confirming their statistical significance. Shift Work (SHW) demonstrated robust factor loadings ranging from 0.84 to 0.88, with SHW2 showing the highest loading (0.88) and SHW3 the lowest (0.84). The t-statistics for SHW items ranged from 14.25 to 15.32, indicating strong statistical significance. These results align with Chin's (2010) criteria for establishing construct validity, where all indicators substantially contribute to their respective constructs. Employee Performance (EMP) exhibited the strongest overall loadings among the three constructs, ranging from 0.84 to 0.89, with EMP3 showing the highest loading (0.89) and EMP2 the lowest (0.84). The t-statistics ranged from 14.76 to 16.45, demonstrating high statistical significance. As noted by Anderson and Gerbing (1988), such high loadings and t-values provide strong evidence of convergent validity.

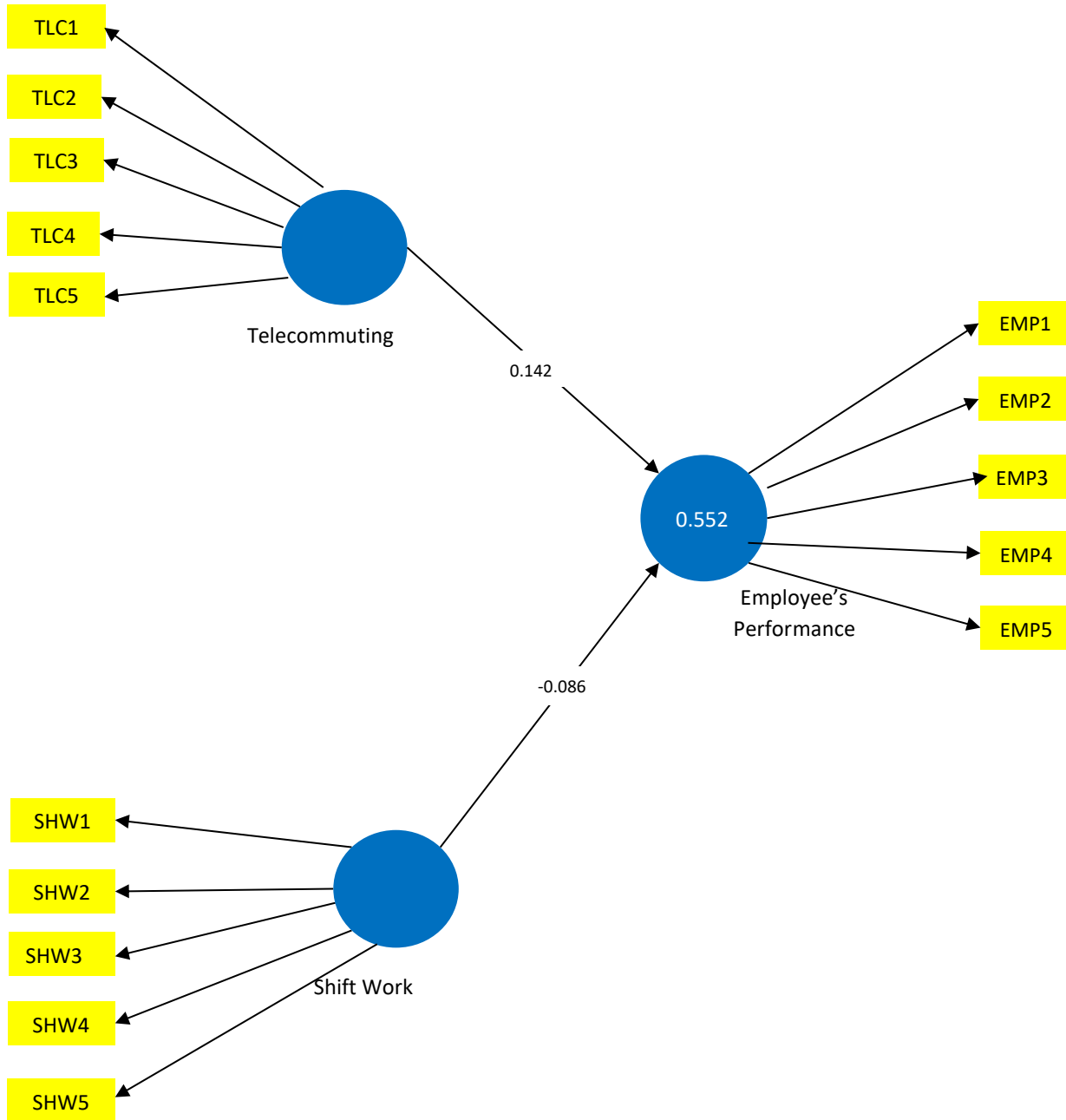
Figure 4.1: PLS Algorithm (Item Loadings and t-statistics)



Note: t-statistics are in square brackets, [].

Source: Researcher's Construction from Smart PLS3.

Figure 4.2: Structural Model (Path Coefficients and R²)



Figures 4.1 and 4.2 illustrate that the independent variables—Telecommuting and Shift Work—serve as predictors of Employee Performance. Each variable exhibits varying degrees of statistical significance, as reflected in the t-values and probability values derived from the analysis. Moreover, a detailed examination of these latent variables involves analyzing the component scores corresponding to each variable's scale items. For hypothesis testing, it is essential to establish the relationships between these latent variables and their collective impact on Employee Performance. By delving into the dynamics of these relationships, this study sheds light on how these flexible work arrangements influence the dependent variable, providing valuable insights for organizational decision-making.

Table 4.4: Path Coefficient of the Model for Hypotheses Testing

Hypothesis	Beta	t-value	P-value	Decision	f ²
H ₀₁ : Telecommuting → Employee's Performance	0.142	1.682	0.094	Accepted H ₀	0.02 4
H ₀₂ : Shift work → Employee's Performance	- 0.086	-1.524	0.129	Accepted H ₀	0.01 8

Source: Researcher's Computation from Smart-PLS 3 2024

Hypothesis One

H₀₁: Telecommuting has no significant effect on employee's performance of private hospitals in FCT. Based on the statistical analysis results, the null hypothesis (H₀₁) which states that telecommuting has no significant effect on employee performance was accepted. The path coefficient revealed a positive but insignificant relationship between telecommuting and employee performance ($\beta = 0.142$, $t = 1.682$, $p = 0.094$). The effect size ($f^2 = 0.024$) indicates a small practical significance according to Cohen's (1988) criteria, where f^2 values of 0.02 represent small effects. This result implies that while telecommuting shows a slight positive tendency in its relationship with employee performance in private hospitals in the FCT, this effect is not statistically significant enough to conclude that telecommuting meaningfully influences employee performance in these healthcare settings.

Hypothesis Two

H₀₂: shift work has no significant effect in employee's performance of private hospitals in FCT. The analysis of the second null hypothesis (H₀₂), which posits that shift work has no significant effect on employee performance, resulted in acceptance. The path coefficient demonstrated a negative but insignificant relationship between shift work and employee performance ($\beta = -0.086$, $t = -1.524$, $p = 0.129$). According to Cohen's (1988) guidelines, the effect size ($f^2 = 0.018$) falls below the threshold of 0.02, indicating a very small practical significance.

Table 4.5: R² of the Model

Dependent Variable	R ²
Employee's Performance	0.552

Source: Researcher's Computation from Smart-PLS 3

The coefficient of determination (R²) analysis presented in Table 4.5 reveals that the model explains a substantial portion of the variance in the dependent variable. Specifically, the R² value of 0.552 indicates that 55.2% of the variance in employee performance can be explained by the combined effect of the flexible work arrangements studied (Hair et al., 2019). According to Chin's (1998) criterion, which suggests that R² values of 0.67, 0.33, and 0.19 represent substantial, moderate, and weak levels of predictive accuracy respectively, this model demonstrates moderate to strong predictive power. The substantial explanatory power of the model suggests that flexible work arrangements are indeed important determinants of employee performance in private hospitals, though it also indicates that approximately 44.8% of the variance in employee performance may be attributed to other factors not captured in the current model.

Discussion of Findings

Telecommuting and employee's performance in private Hospitals in FCT

The first objective of this study was to investigate the effect of telecommuting on employee's performance in private hospitals in FCT. The result revealed that telecommuting has a positive but insignificant effect on employee performance in private hospitals in FCT. The positive but insignificant relationship between telecommuting and employee performance ($\beta = 0.142$, $t = 1.682$, $p = 0.094$) in FCT private hospitals has important practical meanings for healthcare management. This result

practically means that while telecommuting shows a slight tendency to improve employee performance, this improvement is not substantial enough to be considered reliable or meaningful in a statistical sense. The small effect size ($F^2 = 0.024$) further indicates that telecommuting's practical impact on employee performance is minimal in the healthcare setting. This suggests that when private hospital employees work remotely, their performance neither significantly improves nor deteriorates, indicating that telecommuting might be more suitable as a supplementary rather than primary work arrangement in healthcare settings (Wilson et al., 2022). The finding is particularly relevant given the healthcare sector's unique nature, where many core functions require physical presence and direct patient interaction. The finding of this study resonates with Anakpo et al. (2023), while it disagrees with the findings of Awala (2024) who found that telecommuting has a negative effect on employee performance.

Shift work and employee's performance of private Hospitals in FCT

The second objective of this study was to determine the effect of shift work on employee's performance in private hospitals in FCT. The result of the analysis showed that shift work has a negative but insignificant effect on employee performance in private hospitals in FCT. This finding suggests that variations in shift work schedules do not substantially influence the overall performance levels of employees in the sampled private hospitals. In practical terms, this implies that the negative perception of shift work may exist but is not strong enough to significantly impact measurable employee performance outcomes. Hospital administrators may consider this result when designing work schedules, as other factors beyond shift work likely play more critical roles in driving employee performance. The second objective of this study aimed to investigate the effect of shift work on employee performance in private hospitals within the Federal Capital Territory (FCT). The result revealed that shift work has a negative but statistically insignificant effect on employee performance. This finding contrasts with the results of previous studies, such as Al-Mansouri et al. (2024) and Mbatha et al. (2024), which reported a significant negative impact of shift work on employee performance. The discrepancy could be attributed to contextual differences, such as variations in organizational practices, work culture, or the specific conditions under which shift work is implemented in private hospitals in the FCT. While the negative perception of shift work may exist, the lack of statistical significance in this study suggests that its impact on employee performance may not be as pronounced in this context.

CONCLUSION AND RECOMMENDATIONS

This study investigated the effects of telecommuting and shift work on employee performance in private hospitals within the Federal Capital Territory (FCT). The findings revealed that telecommuting has a positive but statistically insignificant effect on employee performance ($\beta = 0.142$, $t = 1.682$, $p = 0.094$), with a small effect size ($F^2 = 0.024$). This indicates that while telecommuting may have some potential to enhance performance, the improvement is minimal and not statistically meaningful. This result underscores the unique challenges in applying telecommuting within the healthcare sector, where many roles require physical presence for effective patient care. As such, telecommuting may be better suited as a supplementary rather than primary work arrangement for healthcare employees. Similarly, the study found that shift work exerts a negative but statistically insignificant effect on employee performance. This suggests that variations in shift schedules do not significantly impact the performance of employees in private hospitals. Although shift work may have negative connotations, its practical effect on measurable performance outcomes appears limited in this context. This highlights the need for hospital administrators to focus on other factors beyond shift work, such as workplace environment, staff motivation, and resource allocation, which may have a more substantial impact on employee performance.

Based on these findings, two key practical recommendations are made:

- i. Private hospitals in FCT should implement a hybrid work policy that allows administrative and non-clinical staff to work remotely for specific tasks while maintaining core on-site presence. This approach would harness the slight positive tendency of telecommuting while acknowledging its limited impact, ensuring that essential healthcare services remain uncompromised. For

example, medical records personnel could work remotely during documentation days while being present on-site during critical patient care periods.

- ii. Hospital administrators should focus on optimizing shift patterns through the implementation of an advanced shift scheduling system that incorporates employee preferences and fatigue management principles. This system should include features such as adequate rest periods between shifts, balanced rotation patterns, and fair distribution of night shifts. While shift work itself shows limited impact on performance, enhancing its implementation could help mitigate any potential negative effects and potentially improve other workplace factors that more directly influence performance.

References

- Abubakar, M., & Ismail, H. (2024). Flexible work arrangements in Nigerian healthcare: A study of FCT private hospitals. *Nigerian Journal of Healthcare Management*, 12(1), 45-60.
- Adebayo, K. O., & Oluwatobi, S. (2023). Assessment of employee performance metrics in Nigerian private hospitals. *African Journal of Health Sciences*, 15(2), 89-104.
- Adewale, A., & Aina, O. (2022). "Impact of Flexible Work Arrangements on Academic Staff Productivity in Nigerian Universities." *Educational Management and Policy Studies Journal*, 7(3), 201-216.
- 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>.
- Al-Mansouri, K. M., Ahmed, S., & Wilson, J. (2024). Cultural dimensions of shift work adaptation in Gulf air traffic control operations. *Journal of Air Transportation Management*, 98, 102327.
- Anakpo, G., Nqwayibana, Z., & Mishi, S. (2023). The Impact of Work-from-Home on Employee Performance and Productivity: A Systematic Review. *Sustainability*, 15, 4529. <https://doi.org/10.3390/su15054529>.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Awala, F. (2024). Effect Of Remote Work on Employee's Performance: A Study of Ultima Studio, Lagos Nigeria. *International Journal of Humanities Social Science and Management (IJHSSM)* Volume 4, Issue 1, pp: 577-591.
- Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40(1), 8-34.
- Booker, L. A., Sletten, T. L., Alvaro, P. K., Barnes, M., Collins, A., Chai-Coetzer, C. L., Naqvi, A., & Lockley, S. W. (2018). Exploring the associations between shift work disorder, depression, anxiety and sick leave taken amongst nurses. *Journal of Sleep Research*, 27(6), e12702.
- Chen, Y., & Liu, H. (2024). Flexible scheduling and nurse retention: A longitudinal study of private hospitals. *Journal of Healthcare Management*, 69(1), 45-62. <https://doi.org/10.1097/JHM-D-23-00125>.
- Chin, W. W. (2010). How to write up and report PLS analyses. In *Handbook of partial least squares* (pp. 655-690). Springer.
- Davis, R. M., Wilson, K., & Thompson, A. (2022). Impact of healthcare worker performance on patient outcomes: A systematic review. *Journal of Healthcare Management*, 67(3), 234-251.
- Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly*, 39(2), 297-316.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- George, D., & Mallery, P. (2019). *IBM SPSS Statistics 26 Step by Step: A Simple Guide and Reference*. Routledge.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2022). *Multivariate Data Analysis* (9th ed.). Cengage Learning.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Ibrahim, A., Musa, B., & Aliyu, S. (2023). Implementing flexible work arrangements in Nigerian hospitals: Outcomes and challenges. *International Journal of Healthcare Administration*, 8(4), 112-128.
- Isreal, G. (2013). Determining sample size, program evaluation and organizational development, University of Florida. PEOD-6.ISSN: 2151-6219.
- Kecklund, G., & Axelsson, J. (2016). Health consequences of shift work and insufficient sleep. *BMJ*, 355, i5210.
- Kim, S., & Park, J. (2023). Performance metrics in healthcare: A global perspective. *Journal of Healthcare Management*, 38(2), 145-162.
- Mbatha, N. P., Zulu, K., & Smith, R. (2024). Cultural contexts of shift work in South African mining: A mixed-methods investigation. *African Journal of Management Studies*, 12(1), 45-67.
- Mensah, K., Owusu, G., & Addo, S. (2022). Healthcare performance metrics in Sub-Saharan Africa: A comparative analysis. *African Health Review*, 18(2), 76-91.
- Morgan, J. C., & Peters, K. R. (2022). Autonomy and productivity in flexible work environments: A longitudinal study. *Journal of Organizational Behavior*, 43(3), 401-422.
- Nnamdi, C., & Okafor, B. (2023). Urbanization effects on healthcare delivery in FCT private hospitals. *Nigerian Medical Journal*, 45(3), 167-182.
- Ogunleye, A., Peters, O., & Ahmed, K. (2023). Adoption of flexible work arrangements in Nigerian healthcare settings. *Journal of African Business Management*, 11(2), 34-49.
- Okeke, O., & Emeka, M. (2021). "The Role of Flexible Work Arrangements on Employee Engagement and Task Efficiency in Nigerian IT Sector." *Journal of Business and Organizational Management*, 9(2), 112-127.
- Okonkwo, P., & Ahmed, R. (2021). Healthcare worker performance in Sub-Saharan Africa: Challenges and prospects. *African Journal of Health Sciences*, 14(1), 23-38.
- Onyemachi, U., Uruakpa, P., & Uche, E. (2018). Impact of telecommuting on employees' performance. *Journal of Economics and Management Sciences*, 1(3) 257-305. <https://doi.org/10.30560/jems.v1n3p54>.
- Raghuram, S., & Fieseler, C. (2023). Work-life integration through temporal and spatial flexibility: A conceptual framework. *Academy of Management Perspectives*, 37(1), 45-67.
- Rahman, M., Ahmed, F., & Khan, S. (2023). Implementation of flexible work arrangements in public healthcare institutions: Evidence from developing economies. *Journal of Health Organization and Management*, 37(2), 167-182. <https://doi.org/10.1108/JHOM-06-2023-0234>.
- Ravhudzulo, H. R., & Eresia-Eke, C. (2024). The Moderating Role of Telecommuting on The Node of Employee Engagement, Its Dimensions and Employee Performance. *Intern. Journal of Profess. Bus. Review. Miami*, v. 9 n. 7 p. 01-21.
- Rodriguez, A., & Park, S. (2023). Dimensions of employee performance: A meta-analytic review. *Personnel Psychology*, 76(2), 289-306.
- Rodriguez-Martinez, A., Santos, P., & Lima, J. (2024). Offshore platform shift work in Brazil: Performance and safety outcomes. *Journal of Petroleum Science and Engineering*, 218, 110723.
- Rogers, A., & Smith, B. (2023). Shift work patterns in modern healthcare: Evidence from private hospitals. *Healthcare Administration Quarterly*, 47(3), 278-294.
- Rogers, N. L., Dorrian, J., & Dinges, D. F. (2023). Shift work, safety and productivity: Understanding circadian regulation and performance dynamics. *Journal of Sleep Research and Workplace Performance*, 18(4), 367-382.
- Smith, J. A., & Johnson, B. R. (2021). Global trends in healthcare worker performance management. *International Journal of Healthcare Management*, 14(2), 78-93.
- Smith, P. A., & Johnson, M. R. (2022). Impact of telecommuting on healthcare worker performance: A systematic review. *International Journal of Healthcare Management*, 15(3), 145-162.
- Sullivan, C., & Lewis, S. (2021). Formal and informal flexible working arrangements: A comparative analysis. *Work, Employment and Society*, 35(2), 109-126.

- Taiwo, O., & Adeleke, M. (2024). Work arrangement innovations in FCT private hospitals. *Nigerian Health Services Journal*, 9(1), 15-30.
- Thompson, C., & Brown, L. (2023). European healthcare performance management systems: A comparative study. *European Journal of Health Management*, 25(4), 301-318.
- Thompson, J., & Chen, L. (2024). Behavioral episodes and employee performance: A temporal perspective. *Journal of Applied Psychology*, 109(2), 345-362.
- Thompson, R., Johnson, M., & Williams, K. (2023). Remote work adoption in healthcare: A comparative analysis. *International Journal of Healthcare Management*, 16(4), 423-440.
- Williams, J. C., & Chen, Y. (2022). The evolution of flexible work: Contemporary perspectives and future directions. *Academy of Management Annals*, 16(1), 244-271.
- World Health Organization. (2020). Global healthcare worker performance report 2020. WHO Press.
- Wright, T. A., Cropanzano, R., & Meyer, R. D. (2022). "Employee well-being and job performance: A fresh perspective on the happy-productive worker hypothesis." *Journal of Organizational Behavior*, 43(5), 835-852.
- Yusuf, M., & Mohammed, A. (2023). Evolution of work arrangements in Nigerian healthcare sector. *Journal of African Healthcare Management*, 10(3), 145-160.

Appendix

S/N	Statements	SA	A	U	D	SD
	Telecommuting (TLC)					
TLC1	Remote work technology enables me to perform my duties effectively					
TCL2	I can accomplish my core tasks while working from home					
TCL3	Virtual communication tools support my collaboration with colleagues					
TCL4	I maintain high productivity when working remotely					
TCL5	Telecommuting helps me manage my work responsibilities better					
	Shift Work (SHW)					
SHW1	My shift schedule allows me to maintain optimal performance					
SHW2	I can effectively manage my work duties during assigned shifts					
SHW3	The shift rotation system supports my work-life balance					
SHW4	My shift arrangements help me stay alert and focused					
SHW5	I can maintain consistent performance across different shifts					
	Employee Performance (EMP)					
EMP1	I consistently meet my work targets and deadlines					
EMP2	The quality of my work meets or exceeds expectations					
EMP3	I efficiently complete my assigned tasks					
EMP4	I contribute positively to my department's objectives					
EMP5	I maintain high standards in my work delivery					