Effect of Time Management on Staff Performance of Selected Federal Medical Centres in the South Eastern Zone of Nigeria

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Abstract

This study examined the effect of Time Management on Staff Performance within selected Federal Medical Centres located in the South Eastern Zone of Nigeria. The study focused on five dimensions of time management: punctuality, delegation, and time monitoring, and their influence on staff performance indicators including task completion, productivity, efficiency, and service quality. The population comprised 1,157staff members across three Federal Medical Centres, encompassing clinical and non-clinical personnel. A quantitative cross-sectional survey design was adopted, and data were collected from 327 staff using a structured five-point Likert scale questionnaire. Stratified and proportionate sampling techniques were employed to ensure representative selection across staff categories. Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS software. The findings revealed that punctuality and delegation had a positive and significant effect on staff performance. However, time monitoring exhibited a negative but significant effect. Based on the findings, the study recommended that Federal Medical Centres should institutionalise robust delegation mechanisms, enforce punctuality policies, and strengthen time monitoring systems through feedback and performance integration. The study contributes to the literature on organisational behaviour and

healthcare management by offering empirical insights into the role of time management in improving staff performance in Nigerian Federal Medical Centres.

Keywords: Time management, punctuality, delegation, time monitoring, staff performance

Introduction

Global literature positions staff performance as a central determinant of health-system efficiency and patient outcomes across different regions. International studies reveal persistent disparities in productivity, responsiveness, service accuracy and clinical throughput, driven largely by workforce shortages, high patient loads and systemic operational constraints (Ahmat et al., 2022). The World Health Organization reports widening gaps in the availability of skilled personnel across the African region, noting that workload intensity and staffing deficits reduce the ability of workers to meet clinical expectations and administrative standards (World Health Organization, 2020). These constraints translate into delays in patient processing, increased medical errors, reduced documentation accuracy and weakened compliance with professional standards, all of which directly affect staff performance metrics. Nigeria reflects these global patterns. Evidence from national health workforce assessments shows low staff-to-patient ratios, fragmented workflow structures, resource shortages and unstable administrative coordination across federal tertiary hospitals (WHO Afro, 2024). Federal Medical Centres in the South Eastern face high case loads, overpopulated outpatient units and irregular flow of support services, which hinder staff productivity, slow task completion and create operational backlogs. These realities affirm the need for deeper understanding of the behavioural and organisational factors that shape staff performance within these institutions.

Time management functions as a critical operational mechanism that strengthens staff performance by improving the organisation, sequencing and utilisation of working hours. Time management represent a structured process of planning, prioritisation, scheduling, coordination and monitoring of activities to achieve timely task completion and higher productivity levels (Filomeno et al., 2023). Empirical studies demonstrate that workers who effectively manage their time

record improved task accuracy, better workflow balance, stronger punctuality and enhanced coordination with colleagues (Benstowe & Obianwu, 2023). In healthcare settings, poor time management increases task overlap, lengthens waiting periods, disrupts handovers, reduces service reliability and intensifies staff fatigue (Addis et al., 2023). On the other hand, hospitals that incorporate structured time-management interventions, such as scheduling tools, workflow charts and time-monitoring systems, record stronger staff performance across clinical and administrative roles (Filomeno et al., 2023; Vizeshfar et al., 2022). These findings support the idea that time management, as a multidimensional construct, plays an essential role in determining performance outcomes within Federal Medical Centres.

To begin with, punctuality represent a dimension of time management that shapes staff performance. Punctuality ensures timely commencement of duties, smooth shift transitions and full availability during scheduled working hours. Studies in hospital and public-sector contexts show that lateness disrupts workflow, increases delays in patient treatment and diminishes overall organisational productivity (Benstowe & Obianwu, 2023). High levels of absenteeism or inconsistent attendance create service gaps, increase workload pressure on available staff and reduce continuity of care. In environments such as Federal Medical Centres where patient volume is high and staffing resources are limited, irregular attendance and poor punctuality have severe effects on team coordination, task completion and patient satisfaction. Empirical findings confirm that institutions with stronger attendance monitoring systems experience higher staff performance and fewer workflow disruptions.

Nevertheless, delegation and role clarity also influence staff performance through their impact on efficient use of time. Delegation involves distributing tasks across staff categories based on competence, availability and workload capacity. Studies in nursing and hospital management show that effective delegation improves workflow movement, reduces delays, enhances collaborative functioning and prevents task overload among skilled personnel (Filomeno et al., 2023). Poor role clarity results in duplication of duties, confusion, idle periods and reduced task accountability, undermining performance in high-demand hospital environments

(Addis et al., 2023). For Federal Medical Centres in the South Eastern , effective delegation is critical due to the complex mix of clinical responsibilities, administrative duties and support functions carried out across departments. Strengthening delegation and clarifying responsibilities improves task organisation, reduces fatigue and increases performance across units.

To round it up, time monitoring and control serve as the final dimension of time management influencing staff performance. Time monitoring involves tracking task duration, assessing schedule compliance, regulating work pace and identifying time-wasting behaviours. Evidence shows that workers who monitor their time complete tasks more consistently, respond more effectively to clinical demands and demonstrate stronger accountability in daily operations (Addis et al., 2023). Hospitals that adopt systematic time-control mechanisms report reduced occurrences of procedural delays, fewer backlogs and enhanced accuracy in documentation and service delivery (Qtait, 2025). In Federal Medical Centres, time control ensures stability in service provision and enhances overall performance, especially in departments that depend on rapid task turnover and strict adherence to workflow timelines.

Despite the strong evidence linking time management to staff performance, significant gaps exist in the literature. First, most recent studies emphasise general public-sector institutions or private hospitals, leaving limited empirical focus on federal tertiary hospitals where workload pressures and workflow complexity are uniquely high (Benstowe & Obianwu, 2023; Filomeno et al., 2023). Moreover, several studies examine individual dimensions of time management such as prioritisation or punctuality without integrating all core components in a single analytical framework, which constrains understanding of how the dimensions interact to influence performance in real-world hospital environments (Addis et al., 2023; Vizeshfar et al., 2022). Third, available research in Nigeria remains concentrated in the South-West and North-Central regions, with limited evidence from the South-Eastern zone despite persistent staffing shortages and operational delays documented in this region (WHO Afro, 2024). Furthermore, few studies apply severe quantitative designs to examine the predictive strength of each time-management dimension on staff performance, limiting generalisability and policy

relevance (Qtait, 2025). These gaps justify the need for a systematic analysis of how planning, prioritisation, punctuality, delegation and time monitoring influence staff performance in selected Federal Medical Centres in the South Eastern of Nigeria, namely FMC, Umuahia (Abia State), FMC, Owerri (Imo State) and FMC, Enugu, (Enugu State).

Across Africa, workforce shortages and weak management practices in health facilities are linked to reduced productivity, longer waiting times, and lower efficiency. Absenteeism among healthcare workers in Sub-Saharan primary care settings ranges from 14% to 49% and is associated with delayed access to services, increased workload for present staff, and reduced care delivery capacity (Klootwijk et al., 2025). Analyses of health workforce governance during the COVID-19 response showed that redeployment of staff without adequate scheduling and oversight negatively affected essential service provision in many African countries (Ahmat et al., 2024). At the regional level, the state of the health workforce review highlights persistent shortages and uneven distribution of health workers, which constrain service delivery and performance outcomes across public health institutions in the WHO African Region (Asamani et al., 2024). These continental perceptions show that poor time planning, weak delegation structures, and insufficient monitoring contribute to operational setbacks, service bottlenecks, and lower employee efficiency in African healthcare systems.

National empirical evidence shows that time-management gaps continue to affect staff productivity and service outcomes in Nigerian health institutions. A national health workforce assessment reported high levels of absenteeism, weak supervision, and inconsistent adherence to duty schedules across several states, with direct implications for service delivery efficiency (Abimbola et al., 2021). Evidence from tertiary facilities also indicates that weak managerial capacity and poor coordination of clinical tasks disrupt workflow and reduce performance effectiveness (Oleribe et al., 2019; Adeloye et al., 2021).

Studies conducted after the COVID-19 period further show that Nigerian health workers faced workload pressure, poor scheduling structures, and limited organisational support, which contributed to fatigue, delayed service delivery, and

declining patient satisfaction (Eze et al., 2022). Research examining governance and accountability mechanisms in Nigerian public hospitals found that ineffective delegation and limited performance monitoring reduced responsiveness and weakened staff output (Ogbuabor & Onwujekwe, 2022). Reports reviewing Federal Medical Centres also highlighted structural management gaps, including weak task allocation systems and inadequate supervisory feedback, which undermined operational efficiency (Federal Ministry of Health, 2023). These findings confirm that habitual lateness, absenteeism, weak prioritisation of duties, and ineffective monitoring remain persistent challenges in Nigerian tertiary healthcare institutions. Despite broader workforce reform discussions, limited empirical focus has been placed on how structured time-management practices directly influence measurable staff performance outcomes.

Despite growing scholarly attention to healthcare performance, notable gaps remain within existing literature. Many global investigations assessed time management in broad organisational terms without isolating specific behavioural components such as planning discipline, prioritisation, punctuality, delegation, and time monitoring or clearly stating their distinct effects on individual staff performance. African studies largely concentrated on institutional or patient outcomes rather than examining how structured time-management behaviours influence employee productivity directly. Nigerian research frequently focused on isolated indicators such as absenteeism or lateness without presenting an integrated framework that captures the multidimensional nature of time management in tertiary hospitals. Furthermore, recent empirical evidence focusing specifically on Federal Medical Centres within the South Eastern remains scarce despite documented operational challenges in these facilities. In view of these gaps, critical questions emerge: What role does punctuality play in shaping staff output? How does delegation contribute to performance improvement? To what degree does time monitoring determine overall staff effectiveness in these institutions?
The primary objective of the study is to examined the effect of time management on staff performance within selected Federal Medical Centres located in the South Eastern of Nigeria. The specific objectives however are to:

i. assess the effect of punctuality on staff performance in selected Federal Medical Centres in the South Eastern of Nigeria;

ii. evaluate the effect of delegation on staff performance in selected Federal Medical Centres in the South Eastern of Nigeria; and
iii. investigate the effect of time monitoring on staff performance in selected Federal Medical Centres in the South Eastern of Nigeria.

In line with the research questions and objectives, the following hypotheses were formulated to guide the study.

H_{01}: Punctuality has no significant effect on staff performance in selected Federal Medical Centres in the South Eastern of Nigeria.

H_{02}: There is no significant relationship between delegation and staff performance in selected Federal Medical Centres in the South Eastern of Nigeria.

H_{03}: Time monitoring has no significant effect on staff performance in selected Federal Medical Centres in the South Eastern of Nigeria.

Literature Review

Staff Performance

Staff performance is defined as the extent to which employees fulfilled assigned roles in accordance with organisational standards and expected outputs (Koopmans et al., 2020). Onyishi et al. (2024) stated that staff performance in public institutions reflected both efficiency and adherence to administrative procedures. In addition, Colquitt et al. (2021) defined staff performance as the degree to which employees met role expectations embedded within organisational systems. Boxall et al. (2022) stated that staff performance represented the effective deployment of human capital to achieve institutional objectives.

The study measured staff performance using non-financial performance indicators that focused on behavioural efficiency, service delivery quality, and task accomplishment rather than monetary outcomes. Performance was assessed through observable workplace behaviours such as timeliness in completing assigned duties, adherence to work schedules, accuracy and thoroughness in executing clinical and administrative responsibilities, responsiveness to patients and colleagues, level of cooperation within units, and consistency in meeting departmental targets.

Time Management

Time management refers to the process through which individuals plan, organise, and control how much time is spent on specific activities in order to increase efficiency and productivity. Lakein (2019) defined time management as the act of determining what one wants to achieve, prioritising tasks, and allocating available time resources in a structured manner to accomplish those objectives. Häfner and Stock (2019) viewed time management as a set of self-regulatory strategies such as scheduling, goal setting, and monitoring progress, which assist individuals in reducing stress and improving performance outcomes. Furthermore, Aeon and Aguinis (2021) conceptualised time management as a decision-making process that focuses on the intentional distribution of limited temporal resources among competing demands to enhance effectiveness and well-being.

Punctuality

Punctuality, according to Allen et al. (2020) represent an observable behavioural norm through which individuals demonstrated respect for institutional time structures. Shockley et al. (2021) stated that punctuality had reflected temporal self-regulation, whereby individuals aligned personal schedules with externally imposed deadlines. In a similar view, Waller et al. (2021) described punctuality as a time-based coordination mechanism that supported predictability in collective task execution. Rosa (2022) defined punctuality as a socially constructed expectation that regulated interactions by minimising temporal uncertainty.

Delegation

According to Yukl and Gardner (2020), delegation had been defined as a managerial process through which authority and responsibility for specific tasks were transferred from a superior to a subordinate while accountability remained with the delegator. Mintzberg (2021) stated that delegation had involved the intentional redistribution of decision rights to enable managerial focus on strategic functions. In a similar vein, Daft (2021) described delegation as a structural mechanism that clarified role boundaries and enhanced managerial efficiency. Robbins and Judge (2022) viewed delegation as a formal assignment of task ownership that empowered employees to act within predefined limits.

Punctuality and Staff Performance

Kulal et al. (2025) conducted an empirical cross-sectional study examining the relationship between employee punctuality, psychological orientation, work life balance, occupational stress, and job performance. They studied diverse sectors and recruited full-time employees from multiple regions. Data collection used validated self-reported instruments assessing punctuality, psychological well-being, work life satisfaction, stress, and job performance through supervisor ratings. Analysis involved hierarchical multiple regression to test mediational and moderation effects. The findings revealed that higher punctuality correlated with increased occupational stress, which negatively affected job performance, suggesting strict punctuality could hurt performance. Conversely, psychological flexibility and a balanced work life dynamic were linked to better performance, advocating for a focus on holistic well-being. Limitations included a cross-sectional design and reliance on self-reports, necessitating longitudinal studies with objective metrics.

Allen et al. (2023) conducted a longitudinal study on work–life balance, punctuality, and productivity. The research included 847 participants from various occupational categories over a twelve-month period. They employed validated surveys to measure work-life satisfaction, attendance, performance, and engagement. Analysis utilized multilevel structural equation modeling to capture temporal dynamics. Results indicated that employees with flexible scheduling and strong boundary management showed significant performance improvements ($b = .42$, $p < .001$), mediated by work engagement. Rigid punctuality expectations correlated positively with performance when coupled with supportive work cultures. Limitations included response attrition and potential selection bias, suggesting future research should involve diverse cultural samples and objective performance data.

Delegation and Staff Performance

Alshemmari (2023) undertook an empirical examination of employee empowerment mechanisms, delegation effectiveness, and their impact on job performance across various organizational contexts. The research incorporated a quantitative survey design with multi-dimensional measurements of delegation, psychological empowerment, trust, and performance outcomes. The study

included diverse organizational samples and employed validated psychometric instruments. Findings revealed direct positive correlations between effective delegation and employee performance, with psychological empowerment serving as a significant mediating mechanism. Limitations included reliance on self-report measures and absence of objective performance metrics, necessitating future research with cross-cultural samples and objective data.

Mathebula and Barnard (2020) conducted a qualitative empirical investigation into the success factors of delegation, specifically exploring accountability mechanisms, work quality standards, and competency requirements. Using semi-structured interviews with 34 respondents from various organizations, the study analyzed themes related to delegation challenges and success factors. Findings identified essential elements like clear communication of expectations and managerial confidence in subordinates. Limitations included a small, non-representative sample and potential bias in data collection methods, suggesting future quantitative studies could validate these qualitative findings through larger samples and objective performance tracking.

Time Monitoring and Staff Performance

Ravid et al. (2020) examined the effects of video monitoring on employee affect, emotional labor, and service performance within customer service contexts. Utilizing a quantitative survey design and objective performance data from call center operations in Israel, the study assessed perceived monitoring intensity, emotional responses, and performance metrics. Findings revealed that increased monitoring intensity predicted negative affect and heightened emotional labor, resulting in decreased service performance. The study noted that monitoring effects varied across work periods and that employees with high intrinsic motivation were more resilient to performance decrements. Limitations included a single-organizational sample and geographic restrictions, indicating a need for longitudinal investigations in diverse contexts.

Dadario (2023) examined employee perceptions of workplace surveillance systems, trust erosion, and performance implications across various organizations. The quantitative survey included 326 employees from organizations employing

electronic performance monitoring technologies. Findings indicated that perceived surveillance intensity significantly predicted reduced organizational trust, which subsequently led to diminished job performance. Trust in surveillance fairness moderated these relationships, highlighting that transparent monitoring could maintain trust and performance while opaque systems eroded them. Limitations included a cross-sectional design, self-report measures, and potential bias, suggesting future longitudinal studies with objective performance metrics would enhance empirical validity.

Frederick Taylor's Scientific Management Theory

Scientific Management Theory was developed by Frederick Winslow Taylor in 1911 through his seminal work titled *The Principles of Scientific Management*. Taylor, an American mechanical engineer, introduced a systematic approach to analysing work processes with the objective of maximising efficiency and productivity. His propositions were later supported and expanded by scholars such as Gilbreth and Gilbreth (1917), Urwick (1947), and Wren (2005), who acknowledged Taylor's pioneering contribution to modern management science. Taylor argued that productivity improves when tasks are studied scientifically, standardised, and allocated based on worker competence rather than intuition or tradition. In the context of Federal Medical Centres, this theory suggests that staff performance improves when time-related duties such as scheduling, task sequencing, punctual attendance, delegation of clinical roles, and time monitoring are structured using objective and measurable procedures.

The present study adopted Frederick Taylor's Scientific Management Theory as its primary theoretical foundation because the theory provides a systematic and measurable framework for analysing how time-related work behaviours influence employee productivity and organisational outcomes. Scientific Management emphasises task standardisation, time measurement, supervision, and efficiency optimisation, all of which align closely with the core variables of this research, namely punctuality, delegation, and time monitoring. In Federal Medical Centres, where clinical schedules, administrative duties, and patient management require precision and coordination, staff effectiveness depends heavily on structured allocation of time and disciplined execution of tasks.

Methodology

The study adopted a cross-sectional survey research design. The study population consists of all administrative and clinical staff employed in Federal Medical Centres (FMCs) within the South Eastern of Nigeria. This population was deliberately chosen to provide a representative cross-section of personnel working within federal healthcare institutions in the region. The three centres selected (FMC Umuahia, FMC Owerri, and respondents for FMC Enugu) represent major federal health institutions in their respective states, each serving as a tertiary healthcare faculty with substantial workforce requirements. The distribution of staff across these centres is presented in Table 1.

Table 1: Distribution of Target Population Across Selected Federal Medical Centres

S/N	Name of Federal Medical Centre	State Location	Population of Administrative Staff
1	Federal Medical Centre, Umuahia	Abia State	425
2	Federal Medical Centre, Owerri	Imo State	312
3	Federal Medical Centre, Enugu	Enugu State	420
Grand Total			**1,157**

Source: National Bureau of Statistics, 2025 (Staff Audit Report)

Due to the impracticality of studying the entire population of 1,157 administrative staff, a representative sample was determined using Taro Yamane's (1973) simplified formula for finite populations. The formula is expressed as:

The formular thus is n= $\frac{N}{1+N(e)^2}$

Where n = Sample size or respondents for the study.

N = Population size

e = the level of precision (95% confidence level or 5% error of sampling)

$$\text{Hence, } n = \frac{1{,}157}{1+1{,}157(0.05)^2}$$

$$= \frac{1{,}157}{1+1{,}157(0.0025)}$$

$$= \frac{1{,}157}{3.88}$$

$$= 298$$

The calculation produces a sample size of 298. This figure represents the minimum number of administrative staff required to achieve a 95% confidence level with a ±5% margin of error. Recognizing that a 100% response rate is rarely attainable in organizational research due to staff absenteeism, refusal to participate, incomplete questionnaires, and administrative constraints, a 10% attrition adjustment was incorporated into the sample size calculation. Therefore, the final sample size is 327 respondents.

Table 2: Proportional Allocation of the Sample Across the Study FMCs

S/N	Medical Centre	Population (N_i)	Proportion of Total Population	Calculated Sample	Final Sample Allocation
1	FMC Umuahia	425	36.73%	120.1	120
2	FMC Owerri	312	26.97%	88.2	88
3	FMC Enugu	420	36.30%	118.7	119
Total	1,157	100%	327.0	**327**	

Source: Author's Computation, 2025

The study adopted a sequential multi-stage sampling approach that combined purposive sampling, stratified random sampling, and convenience sampling. In the first stage, purposive sampling was used to deliberately select the three Federal Medical Centres based on geographical representation across three states, comparable institutional status as tertiary federal health institutions, substantial

administrative staff complement, accessibility and security considerations, and willingness of management to participate. This non-probability approach was appropriate since the research specifically targeted federal medical centres with defined administrative characteristics.

In the second stage, stratified random sampling was applied within each centre. The administrative staff population in each centre was treated as a homogeneous stratum, and simple random sampling was used to select respondents according to the allocated sample size. Sampling frames were obtained from the human resources departments, and random number generation ensured equal probability of selection for all staff members.

The third stage involved convenience sampling during actual participation. Although respondents were randomly selected, their participation depended on availability and willingness during the data collection period. This pragmatic approach acknowledged workplace realities such as staff assignments, leave, or other legitimate reasons for non-participation. To minimize bias, the study incorporated a 10% attrition buffer and implemented follow-up protocols to maximize response rates.

Primary data were collected using a structured questionnaire on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. The questionnaire consisted of sections on planning, prioritisation, and staff performance. The instrument was adapted from established and validated time management and employee performance scales used in previous studies, including Macan (2020), Claessens et al. (2021), and Nguyen and Malik (2022). The adaptation process ensured contextual relevance to Federal Medical Centres in Nigeria while maintaining reliability and content validity.

Validity and Reliability Test

Content validity was established to ensure that the research instrument adequately covered all the constructs examined in the study. The questionnaire items were carefully adapted from established and validated instruments used in previous studies on time management and staff performance. To further strengthen content

validity, the questionnaire was subjected to expert review by three specialists in management and organisational behaviour, as well as one senior healthcare administrator.

A pilot test was conducted prior to the main survey to assess the suitability of the instrument and to identify potential ambiguities. The pilot study involved 40 staff drawn from a Federal Medical Centre outside the South-Eastern zone to avoid contamination of the main study sample. Data obtained from the pilot test were analysed to evaluate the internal consistency of the instrument using Cronbach's alpha coefficient. The pilot testing process confirmed that the questionnaire items were understandable, relevant, and capable of capturing the intended constructs. The results of the reliability analysis showed that all constructs exceeded the recommended threshold, indicating a high level of internal consistency.

Table 2: Pilot Test Reliability Results (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha (α)
Punctuality	5	0.79
Delegation	5	0.86
Time Monitoring	5	0.83
Staff Performance	6	0.88

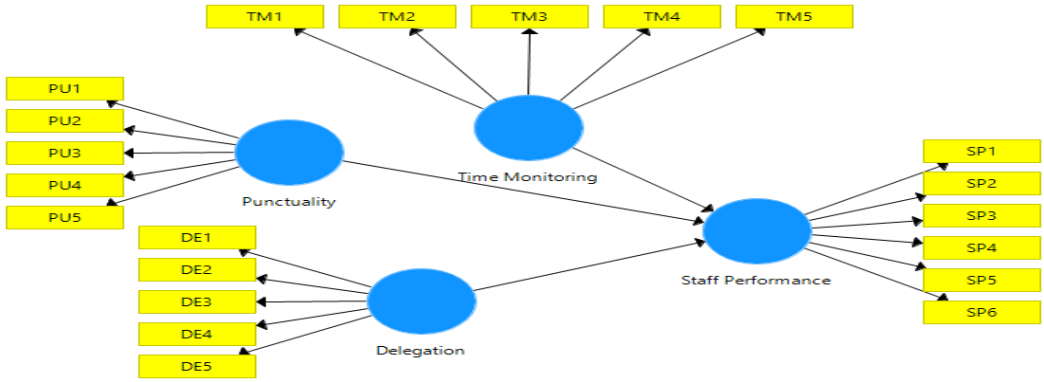
Note: *All values exceed the recommended threshold of 0.70 (Nunnally & Bernstein, 1994).*
The Cronbach's alpha values obtained from the pilot test demonstrated that the research instrument possessed satisfactory reliability for all constructs.

Techniques of Data Analysis and Model Specification

The data collected was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). PLS-SEM enables simultaneous evaluation of both measurement and structural models, offering a robust approach for testing the

relationship between time monitoring, punctuality, delegation, and staff performance. A diagrammatic model was accompanying the analysis to visually illustrate the relationships among variables and enhance interpretation of findings:

Figure 1: Graphical Model



Note: SP = Staff Performance, TM = Time monitoring, PU = Punctuality, DE = Delegation

Results and Discussions

Table 4: Questionnaire Response Rate

Description	Frequency	Percentage
Questionnaire Distributed	327	100.0%
Questionnaire Completed and Retrieved	321	98.2%
Eliminated after Data Cleaning	7	2.1%
Total Respondents after Data Cleaning	314	96.0%

Source: Researchers Computation, 2026

Table 4 presents the response rate for the study on the effect of time management on staff performance at selected medical centres in the South Eastern of Nigeria. Out of 327 questionnaires distributed, 321 were returned, representing a high response rate of 98.2%. This demonstrates strong engagement and willingness among staff to participate in the study, reflecting their interest in the subject of time management. Following data cleaning, 7 questionnaires were excluded due to issues such as incomplete responses or inconsistencies, accounting for 2.1% of the

total distributed questionnaires. Consequently, 314 valid responses were retained, representing 96.0% of the original distribution.

This high percentage of usable responses enhances the reliability and validity of the study's findings. It indicates that the majority of staff members not only engaged with the research but also provided sufficiently complete and accurate data to support meaningful analysis.

To test the hypothesised measurement model, confirmatory factor analysis was conducted using SmartPLS. Indicator reliability was assessed through factor loadings, with a recommended threshold of 0.70 (Hair et al., 2021). As shown in Table 6, most indicators loaded above the threshold. Items TM5, PU1, and DE1 recorded loadings below 0.70 and were therefore removed to improve construct reliability. The retained indicators demonstrated adequate loadings, indicating that each construct explained more than 50% of the variance in its indicators. This confirmed acceptable item reliability and supported the adequacy of the measurement model (see Figure 2).

Figure 2: Measurement Model

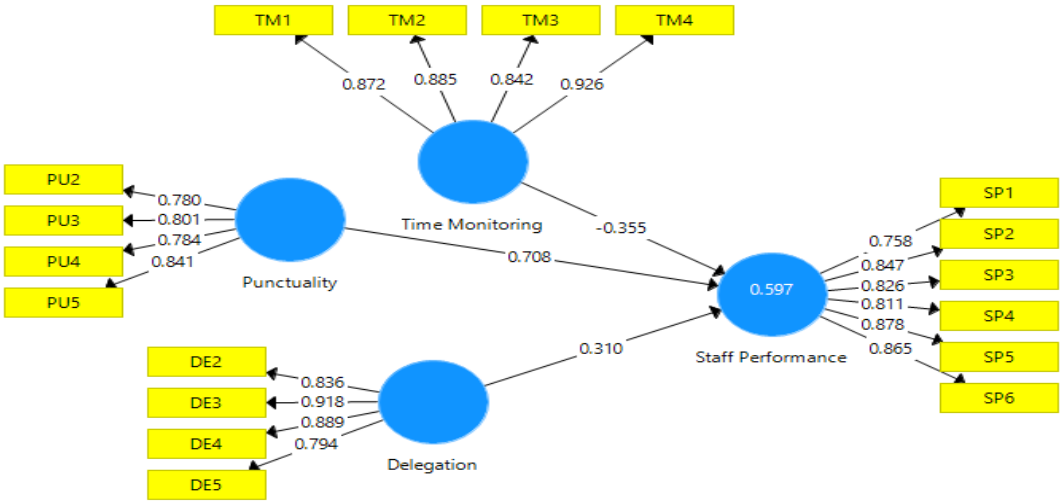


Table: Convergent Validity and Reliability of the Constructs and Indicators

Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Delegation		0.882	0.919	0.740
DE2	0.836			
DE3	0.918			
DE4	0.889			
DE5	0.794			
Punctuality		0.816	0.878	0.643
PU2	0.780			
PU3	0.801			
PU4	0.784			
PU5	0.841			
Staff Performance		0.91	0.931	0.692
SP1	0.758			
SP2	0.847			
SP3	0.826			
SP4	0.811			
SP5	0.878			
SP6	0.865			
Time Monitoring		0.904	0.933	0.778
TM1	0.872			
TM2	0.885			
TM3	0.842			
TM4	0.926			

Source: SmartPLS Output, 2026

Internal consistency reliability was assessed using Cronbach's alpha and composite reliability, with threshold values set at 0.70 (Collier, 2020). Table 5 showed that time monitoring,, punctuality, delegation, and staff performance all recorded Cronbach's alpha and composite reliability values exceeding the recommended threshold. This indicated strong internal consistency among the measurement items. Convergent validity was assessed using the average variance extracted, with

a minimum acceptable value of 0.50. All constructs recorded AVE values above 0.50, confirming that each construct explained at least 50% of the variance of its indicators.

Furthermore, discriminant validity was examined using the heterotrait–monotrait ratio. Henseler et al. (2015) suggested a threshold of 0.90 for closely related constructs and a more conservative value of 0.85 for conceptually distinct constructs. As presented in Table 7, all HTMT values were below both threshold levels. This confirmed the absence of discriminant validity concerns and showed that time monitoring, punctuality, delegation, and staff performance were empirically distinct constructs within the model.

Table 6: Heterotrait-Monotrait Ratio (HTMT)

	Delegation	Punctuality	Staff Performance	Time Monitoring
Delegation				
Punctuality	0.823			
Staff Performance	0.704	0.779		
Time Monitoring	0.512	0.772	0.274	

Source: *SmartPLS Output, 2026*

Base on the result in Table 6, there is no discriminant validity issue because both condition of a maximum value of 0.9 and minimum value of 0.85 were not exceeded.

Table 7: Coefficient of Determination

	R Square	R Square Adjusted
Staff Performance	0.597	0.589

Source: *SmartPLS Output, 2026*

The explanatory power of the structural model was assessed using the coefficient of determination. Table 7 reported an R^2 value of 0.597 for staff performance, indicating that time monitoring, punctuality, delegation jointly explained 59.7% of the variance in staff performance. The adjusted R^2 value of 0.589 further confirmed model stability and consistency. This level of explanatory power was considered substantial for behavioural and management research, suggesting that time

management-related factors played a dominant role in explaining performance outcomes.

Figure 3: Structural Model

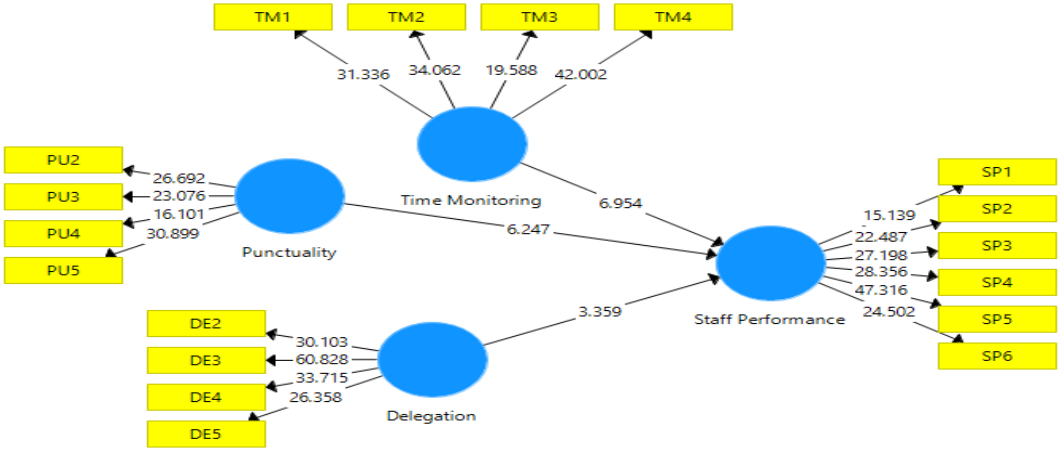


Table 8: Path Coefficient

Hypotheses	Beta	Sample Mean	Std Dev	T Statistics	P Values
Punctuality -> Staff Performance	0.708	0.703	0.113	6.247	0.000
Delegation -> Staff Performance	0.310	0.321	0.092	3.359	0.001
Time Monitoring -> Staff Performance	-0.355	-0.355	0.051	6.954	0.000

Source: *SmartPLS Output, 2026*

The first hypothesis assessed the effect of punctuality on staff performance. The path analysis revealed a positive and significant relationship, with a beta value of 0.708, a t statistic of 6.247, and a p value of 0.000. This finding was supported by existing literature which showed that punctuality enhanced operational flow and reduced service bottlenecks in healthcare institutions (Aguinis, 2023). Studies in organisational behaviour confirmed that punctuality reflected work discipline and commitment, which positively influenced performance outcomes (Robbins & Judge, 2021). Recent empirical studies in public service organisations also revealed

that punctuality improved coordination and reduced workflow disruptions, especially in service oriented sectors (Koopmans et al., 2020).

The second hypothesis examined the relationship between delegation and staff performance. The results from Table 8 showed a strong positive effect of delegation on staff performance, with a beta coefficient of 0.310, a t statistic of 3.359, and a p value of 0.001. This indicated a statistically significant relationship, confirming that effective delegation significantly improved staff performance. This result aligned with empirical evidence which showed that delegation improved employee autonomy and work output in public organisations (Yukl, 2020). Similar outcomes were reported in healthcare settings where structured delegation reduced workload pressure and improved service delivery outcomes (Northouse, 2022).

However, time monitoring showed a negative significant effect on staff performance, with a beta coefficient of -0.355, a t statistic of 6.954, and a p value of 0.000. This finding contrasted with studies which reported that time monitoring improved self regulation and productivity in structured work environments (Allen et al., 2021). However, an insignificant effects had been reported in public sector organisations where formal time monitoring systems were weakly enforced or perceived as administrative controls rather than performance support tools (Parker & Grote, 2022). Evidence from healthcare settings suggested that excessive monitoring without feedback or autonomy reduced its effectiveness in improving performance (Claessens et al., 2021). The result implied that time monitoring practices in the selected Federal Medical Centres might not have been sufficiently integrated into performance management systems to yield significant outcomes.

Conclusion

In conclusion, the findings showed that time management plays a critical role in shaping staff performance in the selected medical centres in Southeastern Nigeria. Punctuality recorded the strongest positive influence on performance. This confirms that adherence to work schedules improves service coordination, reduces patient waiting time, and strengthens operational efficiency. Staff who resume duties on time contribute to smoother workflow and better healthcare delivery outcomes. Delegation also exerted a significant positive effect on performance. This

result indicates effective delegation reduces workload pressure, improves accountability, and enhances decision making at operational levels.

In contrast, time monitoring showed a significant negative relationship with staff performance. This suggests that existing monitoring practices may create pressure, reduce autonomy, or be perceived as control mechanisms rather than supportive management tools. Without constructive feedback and integration into performance management systems, monitoring appears to weaken rather than strengthen staff output.

Recommendations

Base on the findings, the following policy recommendations were offered:

i. Strict policies on punctuality should be enforced through monitoring attendance, meeting schedules, and deadline compliance to improve operational efficiency and reduce service delays.
ii. Management of Federal Medical Centres should strengthen delegation practices by clearly assigning tasks based on staff skills and competencies, while ensuring that adequate authority and accountability structures are established to enhance performance outcomes.
iii. Time monitoring systems should be redesigned to include constructive feedback and supportive supervision so that time tracking contributes meaningfully to performance improvement rather than being perceived as a control mechanism.

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Appendices

Instruction: Please indicate your level of agreement with each statement using these scale; 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Variable	Statement	1	2	3	4	5
Punctuality	Staff resumed work on time					
	Meetings were attended promptly					
	Deadlines were met consistently					
	Time schedules were strictly observed					
	Late attendance was minimized					
Delegation	Tasks were assigned to appropriate staff					
	Responsibilities were clearly delegated					
	Authority was transferred with responsibility					
	Delegated tasks were monitored effectively					
	Delegation reduced workload pressure					
Time Monitoring	Time spent on tasks was tracked regularly					
	Time wastage was identified and controlled					
	Work progress was reviewed against time targets					
	Time logs were maintained					
	Feedback guided time improvement					
Staff Performance	Tasks were completed within assigned time					
	Work quality met required standards					
	Productivity improved consistently					
	Efficiency in service delivery increased					
	Job targets were achieved					
	Work output met organisational expectations					