



## Impact of Flexible Work Arrangements on Employee Engagement among Healthcare Professionals at University of Ilorin Teaching Hospital

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**Abstract.** Healthcare professionals in tertiary hospitals operate under heavy workloads, staffing pressures and increasing emotional strain, conditions that can weaken employee engagement and ultimately affect service delivery. This study examined the effect of flexible work arrangements on employee engagement among healthcare professionals at University of Ilorin Teaching Hospital, Kwara State. A descriptive survey design was adopted. Data were collected in 2025 through a structured five-point Likert questionnaire administered to healthcare professionals drawn from a staff population of 3,010, with 307 valid responses used for analysis. Descriptive statistics and multiple regression were employed. The findings show that flexible work arrangements significantly improve employee engagement. In particular, shift rotation, job-sharing arrangements and perceived autonomy in organising daily tasks exerted positive and statistically significant effects, whereas predictable scheduling showed a positive but statistically insignificant effect. The study concludes that flexible work arrangements are an important organisational resource for sustaining vigour, dedication and absorption among healthcare professionals in a resource-constrained hospital setting. It recommends institutionalising fair shift systems, expanding opportunities for task-sharing and strengthening employee autonomy within service requirements.

**Keywords:** Flexible Work Arrangements; Employee Engagement; Healthcare Professionals; Tertiary Hospital; Nigeria.

### 1. Introduction

Healthcare systems across the world are experiencing sustained pressure from rising patient demand, staff shortages and increasingly complex clinical needs.

Within such environments, the well-being of healthcare professionals is no longer only a personnel issue; it is also a service-delivery concern because exhausted and disengaged staff are less able to sustain high-quality care. Ghahramani et al., (2021), in a global systematic review and meta-analysis conducted during the COVID-19 period, reported substantial levels of burnout among healthcare workers, confirming that emotional exhaustion and depersonalisation remain widespread in the sector.

Nigerian evidence suggests that the problem is equally serious in tertiary facilities. At University of Ilorin Teaching Hospital (UIITH), resident doctors have been reported to experience notable levels of burnout and stressful working conditions (Salihu et al., 2023), while a subsequent study on the same institution linked job satisfaction to demanding work conditions and limited rest opportunities (Salihu et al., 2025). These findings indicate that the local hospital context presents a credible setting for examining organisational practices that may strengthen workforce commitment and resilience.

One organisational response that has attracted growing scholarly attention is flexible work arrangement. In hospital settings, flexibility may not always imply remote work; rather, it may involve more realistic and controllable forms such as fair shift rotation (SHR), predictable scheduling (PRS), job-sharing arrangements (JSA) and greater perceived autonomy in organising daily work tasks (PAO). These four dimensions constitute the independent variables examined in this study. Evidence from systematic reviews suggests that employee-oriented flexibility can reduce psychological strain and emotional exhaustion (Shiri et al., 2022), yet the implications for employee engagement, which serves as the dependent

variable, remain less settled, especially in lower-resource settings.

Employee engagement, as defined by Schaufeli and Bakker (2004), refers to a positive, work-related psychological state characterised by vigour (energy and mental resilience), dedication (sense of significance and enthusiasm) and absorption (full concentration and engrossment in work). These three dimensions constitute the operationalised measure of the dependent variable in this study. Engaged professionals typically invest energy in their roles, identify strongly with their work and remain cognitively immersed in their tasks. In healthcare, such engagement is especially valuable because it supports persistence, discretionary effort and quality interaction with patients. Despite the practical relevance of this construct, few studies have directly examined whether flexible work arrangements influence employee engagement among healthcare professionals in Nigerian tertiary hospitals.

This study therefore investigated the effect of flexible work arrangements on employee engagement among healthcare professionals at UITH. Specifically, it examined the influence of shift rotation, predictable scheduling, job-sharing arrangements and perceived autonomy in organising daily work tasks on employee engagement. The study tested the null hypothesis that flexible work arrangements have no significant effect on employee engagement among healthcare professionals at UITH.

## 2. Literature Review

### 2.1 Flexible Work Arrangements

Flexible work arrangements are organisational practices that give employees some degree of control over when and how work is performed. In the broader human-resource literature, the concept includes practices such as adjustable start and closing times, job-sharing, compressed workweeks, shift flexibility and autonomy in task organisation. In healthcare, the concept is necessarily adapted to the realities of continuous service delivery; therefore, the most relevant forms are those compatible with face-to-face patient care rather than purely location-based flexibility.

Scholars generally present flexible work arrangements as job resources because they improve the fit between work demands and employees' personal capacities. Allen et al., (2021) and Carvalho et al. (2022) describe such arrangements as mechanisms through which workers gain greater control over temporal and role demands, thereby reducing strain and improving

adjustment. Adisa et al. (2022) similarly argue that, in African work settings, flexibility is meaningful where it improves employees' ability to reconcile organisational expectations with personal responsibilities. In this study, flexible work arrangements are operationalised as shift rotation, predictable scheduling, job-sharing arrangements and perceived autonomy in organising daily work tasks.

### 2.2 Employee Engagement

Employee engagement is commonly defined as a positive and fulfilling work-related state of mind composed of vigour, dedication and absorption. Schaufeli and Bakker (2004) view engagement as the extent to which workers feel energetic, strongly involved in their work and deeply concentrated during task performance. Bakker et al., (2008) further describe engaged employees as individuals who invest personal energy in their roles and remain psychologically connected to organisational goals.

In healthcare settings, employee engagement is particularly important because work demands are intense, emotionally charged and often time-sensitive. High engagement helps practitioners sustain effort, cope with pressure and maintain professional commitment under difficult conditions. Consistent with the dominant literature, this study treats employee engagement as a measurable psychological condition reflected in energy at work, enthusiasm for work and concentration on work tasks.

### 2.3 Flexible Work Arrangements and Employee Engagement

The relationship between flexible work arrangements and employee engagement is grounded in the idea that employees are more likely to invest themselves in work when organisational systems provide manageable and supportive conditions. When workers perceive some control over shifts, schedules and daily task organisation, work becomes less draining and more meaningful. Conversely, rigid and poorly managed schedules can intensify exhaustion, reduce commitment and weaken sustained concentration. Thus, flexible work arrangements are expected to strengthen employee engagement by reducing avoidable strain and increasing perceived support.

### 2.4 Theoretical Underpinning

This study is anchored on the Job Demands–Resources (JD-R) model. The model posits that job demands such as long working hours, high patient load and emotional labour can deplete employees' energy, whereas job resources such as autonomy, supportive scheduling

and manageable work design stimulate motivation and engagement. The JD-R framework is appropriate for this study because the key dimensions of flexible work arrangements examined here represent job resources that can buffer demanding hospital work and promote vigour, dedication and absorption among healthcare professionals.

## 2.5 Empirical Review and Research Gap

Recent evidence from Nigerian hospitals largely points to a positive association between supportive work arrangements and favourable employee outcomes. Amadi and Okoro (2024), using a correlational survey of nurses in Rivers State government hospitals and analysing the data with multiple regression, found that flexible work arrangements reduced stress and improved work enthusiasm. Lawal et al., (2024), in a questionnaire-based study of nurses at Babcock University Teaching Hospital, reported that better work-life balance was associated with higher job satisfaction and better mental well-being.

Related findings have also been reported in broader African contexts. Carvalho et al., (2022) showed that flexible work arrangements in healthcare settings are associated with better employee outcomes, while Adisa et al., (2022) found that flexible working arrangements in sub-Saharan African organisations support positive employee outcomes when implementation is credible and institutionally supported. These studies strengthen the expectation that flexibility functions as a valuable organisational resource.

At the level of specific hospital scheduling practices, Oladejo and Raji (2021) studied resident doctors using a mixed-method design that combined questionnaire data with semi-structured interviews and found that participatory rostering was associated with lower burnout and higher commitment. Danladi and Aminu (2020), using survey data from a federal medical centre, also reported that structural flexibility in work arrangements improved engagement and reduced absenteeism linked to stress.

Although these studies are informative, three specific gaps remain unaddressed in the existing literature. First, the majority of prior studies measure job satisfaction, burnout or general well-being rather than employee engagement as a conceptually distinct outcome with its own tripartite structure of vigour,

dedication and absorption. Second, most studies restrict their samples to a single professional cadre, particularly nurses or doctors, thereby limiting the applicability of findings to a broader healthcare workforce. Third, notwithstanding documented evidence of stress, burnout and job dissatisfaction at UITH (Salihu et al., 2023; Salihu et al., 2025), no known study has directly examined the effect of flexible work arrangement dimensions on employee engagement within that institution. The present study addresses these three gaps by simultaneously examining the effects of shift rotation, predictable scheduling, job-sharing arrangements and perceived autonomy on employee engagement among a heterogeneous population of healthcare professionals at UITH.

## 3. Methodology

The study adopted a descriptive survey design. This design was considered appropriate because the study sought to obtain standardised responses from a large and heterogeneous population of healthcare professionals and to test the relationship between flexible work arrangement variables and employee engagement at a single point in time (Sekaran & Bougie, 2013). The study area was University of Ilorin Teaching Hospital (UITH), Kwara State, Nigeria.

The target population comprised 3,010 healthcare professionals in UITH, based on records from the Human Resource Department (2024). Using Taro Yamane's formula, a sample size of 353 respondents was determined. Structured questionnaires were administered in 2025, and 307 valid copies were retrieved and used for the analysis, representing an 86.97 per cent response rate. The instrument employed a five-point Likert scale and captured employee engagement together with four dimensions of flexible work arrangements: shift rotation, predictable scheduling, job-sharing arrangements and perceived autonomy in organising daily work tasks.

A pilot test indicated acceptable reliability. Employee engagement items produced a Cronbach's alpha of 0.897 and composite reliability of 0.877, while the flexible work arrangement items produced a Cronbach's alpha of 0.773 and composite reliability of 0.771. Data were analysed using descriptive statistics and multiple regression. The overall significance of the regression model was assessed with the omnibus F-test, while the individual predictors were assessed with t-tests.

**Table 1:** Reliability Statistics of Research Variables

S/N	Variable	Items	Cronbach's Alpha	Composite Reliability	Remark
1	Employee Engagement (EEL)	5	0.897	0.877	Reliable
2	Flexible Work Arrangement Items	5	0.773	0.771	Reliable

Source: Authors Computation, 2025.

The regression model estimated for the hypothesis is expressed as:

$$EEL_t = \beta_0 + \beta_1SHR_t + \beta_2PRSt + \beta_3JSAt + \beta_4PAOt + \epsilon_t$$

where

EEL<sub>t</sub> = employee engagement

SHR<sub>t</sub> = shift rotation

PRSt = predictable scheduling

JSAt = job-sharing arrangements

PAOt = perceived autonomy in organising daily work tasks

β<sub>0</sub> = constant term

β<sub>1</sub>–β<sub>4</sub> = slope coefficients; and ε<sub>t</sub> = error term.

#### 4. Results and Discussion

Of the 353 questionnaires administered, 307 were returned in usable form, yielding a response rate of 86.97 per cent. The respondents were fairly diverse: 58.96 per cent were female and 41.04 per cent were male; the largest age group was 31–40 years (37.14 per cent); 71.99 per cent were married; 50.81 per cent held a first degree or equivalent; and the highest proportion had between 10 and 14 years of service (36.81 per cent). The profile suggests that the study drew from respondents with sufficient maturity and work experience to evaluate the hospital's work arrangement practices.

**Table 2:** Response Rate

Response	Frequency	Per cent
Returned	307	86.97
Not returned	46	13.03
Total	353	100.00

Source: Author's Computation, (2025).

**Table 3:** Descriptive Statistics of Study Variables

Variable	N	Mean	Standard Deviation
Employee Engagement (EEL)	307	4.43	0.664
Shift Rotation (SHR)	307	3.85	1.082
Predictable Scheduling (PRS)	307	4.32	0.999
Job-sharing Arrangements (JSA)	307	4.15	0.995
Perceived Autonomy (PAO)	307	3.43	1.141

Source: Author's Computation, (2025).

The descriptive statistics show generally high mean scores for employee engagement and the flexible work arrangement dimensions, suggesting that respondents perceived the hospital's work arrangement practices and their own engagement levels relatively favourably. Employee engagement recorded the highest mean score (4.43), while perceived autonomy recorded the lowest mean (3.43), indicating some room for improvement in the degree of control employees exercise over daily work organisation.

**Table 4:** Regression Model Fit

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	F-statistic	p-value
0.732	0.536	0.532	0.332	132.739	0.000

Source: Author's Computation, (2025).

The model fit statistics indicate that the regression model is statistically sound. The correlation coefficient (R = 0.732) shows a strong positive association between the explanatory variables and employee engagement. The coefficient of determination (R<sup>2</sup> = 0.536) indicates that shift rotation, predictable scheduling, job-sharing arrangements and

perceived autonomy jointly explain 53.6 per cent of the variation in employee engagement. The omnibus F-statistic is statistically significant ( $F = 132.739, p < 0.05$ ), confirming that the model as a whole is significant.

**Table 5:** Regression Coefficients

Variable	B	Beta	t	p-value
Constant	6.186		61.247	0.000
Shift Rotation (SHR)	1.188	1.937	42.428	0.000
Predictable Scheduling (PRS)	0.099	0.149	3.807	0.064
Job-sharing Arrangements (JSA)	0.876	0.664	39.818	0.000
Perceived Autonomy (PAO)	0.250	0.430	6.756	0.000

*Source:* Author's Computation, (2025).

Table 5 shows that shift rotation, job-sharing arrangements and perceived autonomy have positive and statistically significant effects on employee engagement because their p-values are below the 0.05 threshold. Predictable scheduling also has a positive coefficient, but its p-value (0.064) indicates that the effect is not statistically significant at the five per cent level. Among the predictors, shift rotation has the strongest effect, followed by job-sharing arrangements and perceived autonomy.

On the basis of the overall regression result, the null hypothesis is rejected. Flexible work arrangements have a significant effect on employee engagement among healthcare professionals at UITH. However, the significance is driven mainly by shift rotation, job-sharing arrangements and perceived autonomy rather than predictable scheduling.

The discussion of the results is broadly consistent with the empirical literature reviewed earlier. The positive effect of flexibility supports the findings of Amadi and Okoro (2024) and Danladi and Aminu (2020), who reported that flexibility in work design improves enthusiasm, engagement and stress-related outcomes. The significance of participatory and manageable scheduling practices is also in line with Oladejo and Raji (2021), who found that doctors with more influence over duty rosters reported better commitment and lower burnout. More generally, the result accords with Adisa et al., (2022) and Carvalho et al., (2022), who argue that flexibility functions as an organisational resource when it is credibly implemented.

The strong effect of perceived autonomy is also consistent with the JD-R model. In a demanding hospital environment, employees are more likely to remain vigorous, dedicated and absorbed when the organisation provides them with some control over how work is organised. By contrast, the insignificant effect of predictable scheduling suggests that schedule stability alone may not be enough to sustain

engagement unless it is accompanied by more substantive forms of flexibility, such as shared responsibility and day-to-day discretion.

### 5. Conclusion and Recommendations

This study investigated the effect of flexible work arrangements on employee engagement among healthcare professionals at the University of Ilorin Teaching Hospital, Kwara State, Nigeria. Grounded in the Job Demands–Resources (JD-R) model, the study conceptualised shift rotation (SHR), predictable scheduling (PRS), job-sharing arrangements (JSA) and perceived autonomy in organising daily work tasks (PAO) as job resources capable of buffering the strain inherent in demanding hospital environments and, by extension, promoting vigour, dedication and absorption among healthcare workers. Using a descriptive survey design with data collected from 307 valid respondents and analysed through multiple regression, the study found that flexible work arrangements, taken as a set, exert a significant positive effect on employee engagement ( $F = 132.739, p < 0.05, R^2 = 0.536$ ). At the level of individual predictors, shift rotation, job-sharing arrangements and perceived autonomy each produced positive and statistically significant effects, while predictable scheduling yielded a positive but statistically insignificant coefficient. These findings reinforce the theoretical proposition that job resources embedded in flexible work systems can meaningfully strengthen employees' psychological investment in their work. They also demonstrate the empirical relevance of the JD-R framework in a resource-constrained tertiary hospital setting in Nigeria, thereby extending its application beyond the high-income and technology-sector contexts in which it has been predominantly tested. Notwithstanding its contributions, this study is not without limitations. First, the cross-sectional design precludes causal inference; the observed associations should be interpreted with appropriate caution. Second, the study was conducted at a single

institution, which limits the applicability of the findings to other tertiary hospitals. Third, the use of self-reported Likert-scale data introduces the possibility of common method bias. Future research should adopt longitudinal or experimental designs, extend the study to multiple healthcare facilities, and explore the moderating or mediating roles of variables such as organisational support, professional identity and supervisor behaviour in the flexibility engagement relationship.

Based on the findings, three practical recommendations are advanced for hospital management and health-system administrators. First, hospital management should institutionalise fair and transparent shift-rotation systems, ensuring that rotation schedules are equitably distributed and communicated in advance so as to reduce avoidable fatigue while maintaining uninterrupted service coverage. Second, management should formally embed job-sharing and collaborative task-arrangement mechanisms in clinical and administrative units characterised by high workload pressure, as this is likely to sustain worker dedication and reduce the risk of disengagement. Third, supervisors and unit heads should be trained and encouraged to grant employees reasonable autonomy in organising their daily work tasks within the boundaries of patient care standards, given that perceived autonomy emerged as a particularly robust predictor of engagement in this study. These recommendations are intended to inform hospital human-resource policies, workforce planning strategies and the design of staff welfare programmes in tertiary healthcare institutions across Nigeria and comparable low-to-middle-income country settings.

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