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CHALLENGES AND PROSPECTS OF TERTIARY HEALTHCARE DELIVERY IN NIGERIA: A CASE STUDY OF THE UNIVERSITY COLLEGE HOSPITAL (U.C.H.), IBADAN.

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ABSTRACT
Nigeria's tertiary healthcare system faces persistent challenges, particularly regarding facility adequacy and optimal work environments. Despite existing studies, there is a notable gap in detailed operational assessments and evaluations of work-related factors affecting healthcare providers in Nigerian tertiary institutions. This study addresses these gaps by examining the challenges and prospects of tertiary healthcare delivery at the University College Hospital (UCH), Ibadan.
Guided by an organisational and operational effectiveness framework, the study adopted a quantitative, cross-sectional survey design. A total of 120 health workers were randomly selected as participants. Data were collected through structured questionnaires and supplemented by literature reviews from textbooks, academic journals, and reputable internet sources. Statistical analyses included descriptive statistics, an independent-samples T-test, simple percentages, Pearson's Product-Moment Correlation, one-way ANOVA, a Least Significant Difference (LSD) test, and multiple regression analysis.
Participants' age was 37.5 ± 7.47 years; 51.7% were male, while 35.8% were nurses and years of experience varied widely. The findings revealed that inadequate healthcare facilities remain a critical challenge, although patient care has improved. Job type, gender, and experience did not have significant effects on healthcare delivery outcomes, except for increased work pressure among nursing staff and the influence of supervision style on job experience. Remuneration and opportunities for involvement in decision-making emerged as the strongest predictors of positive work environment perceptions.
The study recommends increased investment in healthcare infrastructure, improved remuneration and benefits, greater staff participation in decision-making, and targeted support to alleviate work pressure among nursing staff as essential strategies for enhancing tertiary healthcare delivery and staff satisfaction.

Keywords: *Healthcare delivery, Healthcare providers, Operational assessment, Tertiary healthcare, Work environment*

INTRODUCTION
In 2006, Nigeria, the most populous country in Africa, had about 140 million people and was growing at a rate of 3.2% per year (National Population Commission [NPC], 2006; World Bank, 2022). Despite a diverse socio-economic landscape, the nation faces severe health challenges, including high rates of illness and mortality, limited healthcare coverage, and low health literacy (World Health Organization [WHO], 2006). The adult literacy rate is just 56%, and both childhood and maternal mortality rates are alarmingly high (UNICEF, 2007). The leading causes of childhood death include malaria, measles, polio, tetanus, diarrhoea, and acute respiratory infections (WHO, 2006). Life expectancy at birth during 2000–2005 was only about 43.3 years (WHO, 2006).
The health of mothers and children reflects the overall effectiveness of a society and its healthcare system. Socio-economic challenges and weak health infrastructure hinder the uptake of modern disease management tools and vaccines, despite their availability. Essential medicines are frequently unattainable due to financial constraints, as resources are inequitably directed towards costly treatments that fail to address common health issues (Adebayo *et al*., 2022). Consequently, Nigeria has struggled to achieve key Millennium Development Goals, ranking 187th out of 191 countries in health system performance in 2000. Its infant, under-five, and maternal mortality rates exceed sub-Saharan African averages. However, Nigeria has

improved its global health ranking since 2000, moving from 187th to 163rd by 2021. However, recent data from the 2025 Health Preparedness Index show that no Nigerian state achieved even 30% readiness to respond to health emergencies, while life expectancy remains among the lowest globally and out-of-pocket payments account for around 70% of total health expenditure, with health insurance coverage below 3% (SBM Intelligence, 2025; United Nations, 2025; Okechukwu and Adeyemi, 2025).

The Nigerian government has developed several policies over the years to improve healthcare. A national health policy created in 1988 set the rules for how the health system should be run. Its goal was to make sure that everyone could get all levels of care through a good referral system (Federal Ministry of Health, 2016). However, programmes, particularly those from the 1980s influenced by the "trickle-down" approach, generally failed to significantly reduce mortality rates (Aregbeshola and Khan, 2018). Medical knowledge alone has not yielded dramatic improvements in health outcomes. The Third National Development Plan (1975–1980) was the first to attempt a comprehensive approach via the Basic Health Services Scheme (BHSS), which focused on infrastructure development and preventive care at the local level. Each local government area was to be equipped with a specified number of health facilities and mobile clinics, supported by a cadre of auxiliary health workers. Ultimately, these plans were financially unsustainable and challenging to implement at scale (Abimbola *et al*., 2015). The Fourth National Development Plan (1981–1985) continued these efforts but achieved limited progress, and subsequent strategies shifted to rolling plans without clear timelines or targets (Federal Ministry of Health, 2016).

Nigeria made a number of changes to its health care system between 1985 and 1994. The first national health policy came out in 1988. It was then changed, and the most recent full update came out in 2016 (Federal Ministry of Health, 2016). The development of this policy involved broad stakeholder consultation and was aligned with international frameworks such as the New Partnership for Africa's Development (NEPAD) and the Millennium Development Goals (MDGs) (Federal Ministry of Health, 2016). The policy prioritised improvements in health system management, resource allocation, service delivery, health information systems, research, partnerships, and regulatory mechanisms.

The Bamako Initiative, which started after a WHO/UNICEF conference in 1987, was an important intervention during this time. Its goal was to make sure that all local government areas (LGAs) had access to essential drugs through community-based financing and management (Onwujekwe *et al*., 2019). The Petroleum Trust Fund later supported the initiative's expansion, helping to extend drug provision to all LGAs by 1999. However, despite these efforts, persistent challenges with logistics, supply chains, and health system capacity significantly limited the effectiveness of the Bamako Initiative in improving health outcomes (Oluwole *et al.,* 2016; Onwujekwe *et al*., 2019). By the early 2000s, evaluations suggested that these investments had not led to substantial improvements in health indicators (Aregbeshola and Khan, 2018).

The era of Professor Ransome-Kuti as Minister of Health in 1985 saw the health sector receive up to 5% of the national budget, demonstrating political will for primary health care (PHC). The National Primary Health Care Development Agency was set up, and training for community health workers was made easier (FMOH, 2004). Despite increased awareness and support for PHC, real improvements in community health indices were not achieved, often due to the absence of robust community health services and challenges in data collection (Aregbeshola and Khan, 2017).

Since 2004, Nigeria's health sector has made progress through frameworks like the National Economic Empowerment and Development Strategy (NEEDS), the New Partnership for Africa's Development (NEPAD), and the Millennium Development Goals (MDGs) (Abimbola *et al.,* 2015; Ichoku *et al*., 2021). These reforms have involved policy updates, the development of new

strategic health plans, and increased collaboration between public and private sectors. The national health policy now serves as a comprehensive guide for planning and managing the health system, with periodic updates to address emerging needs and incorporate lessons learned from previous initiatives (Federal Ministry of Health, 2016). Additionally, the policy encompasses related areas such as HIV/AIDS, malaria, vaccinations, reproductive health, and traditional medicine, each supported by dedicated program documents and guidelines (Ichoku *et al*., 2021).

Despite these policy measures and successive governments' efforts, tangible progress has remained limited. Childhood immunisation rates have stagnated or declined in some regions, and life expectancy continues to hover around the mid-50s (National Bureau of Statistics & UNICEF, 2017; World Bank, 2023). Over the past decade, significant setbacks have occurred, undermining previous gains in public health. Nigeria's progress toward achieving the Millennium Development Goals by 2015 fell short in several key areas, emphasising the constant demand for sustained commitment, improved resource allocation, and more effective health system implementation (Aregbeshola and Khan, 2018; Uthman *et al*., 2019).

Adeoti and Adekunle (2025) say that Nigeria's poor healthcare delivery is due to rising costs, a lack of money, ineffective health systems, and a huge disease burden, all of which hurt national productivity and the development of human capital. They highlight persistent health inequalities, inadequate primary care infrastructure, and ethical lapses as key constraints on achieving the country's demographic dividend. As a result, workforce readiness is compromised, and mortality rates remain disproportionately high. (Adeoti and Adekunle 2025). A recent analysis by scholars reinforces these concerns, noting that shifting social, technological, and economic circumstances have compounded the strain on effective healthcare delivery. Studies highlight fragmented services, poor regulatory oversight, and inequitable distribution of care. They also point out that out-of-pocket payments and underfunding have led to widespread reliance on private providers, with systemic weaknesses undermining access to essential services (Uzochukwu *et al.*, 2015; Onwujekwe et al., 2012; Aregbeshola & Khan, 2018). Other consequences of these highlighted causes include excessive mortality at younger ages, reducing average life expectancy; staggering health inequities; and disparities among the poor due to treatable, avoidable illnesses. Despite ongoing reforms, Nigeria's life expectancy remains alarmingly low, around 54.6 years in 2024, far behind peer countries (World Health Organization, 2023). Experts attribute this condition to deep-rooted poverty, a fragile emergency care system, and limited universal health coverage, all of which disproportionately affect marginalised populations (Aregbeshola and Khan, 2017; Onwujekwe *et al.,* 2019).

Generally, healthcare services exhibit fragmentation, skewed distribution, limited coverage, and inequity. This fragmentation is evident in the high out-of-pocket spending (about 75% of total health expenditure), weak regulation of private providers, and poor coordination across levels of care, as identified by Onwujekwe *et al.* (2025) in the Country Health System and Services Profile. (Onwujekwe *et al*., 2025). These systemic flaws have dire consequences: maternal mortality rates are still among the highest in the world. For example, Guardian (2025) reports that Nigeria suffered approximately 75,000 maternal deaths in 2023, nearly one-third of the global total, largely due to inequities in healthcare access, malnutrition, early pregnancies, and chronic underfunding. (Guardian, 2025). As a result, local pharmaceutical manufacturers have lost market share, contributing less than 20% of domestic consumption. Life expectancy at birth remains low, and these challenges in both access to high-quality medicines and their rational use demonstrate the importance of healthcare reform.

Adeoti and Adekunle (2025) further argue that the federal government's continued neglect of general hospitals, and favouring only primary and tertiary care, will not yield meaningful improvements in the national health index. They contrast this with a previously effective system that featured adequate personnel, high morale, functional equipment, and a clean, conducive

working environment. Today, however, maternal deaths in hospitals remain unacceptably high. Equipment, infrastructure, and personnel have deteriorated, and many patients die needlessly while professionals are powerless to intervene. (Adeoti and Adekunle, 2025)

The University College Hospital (UCH) in Ibadan stands as the undisputed flagship of tertiary health care in Nigeria and the broader West African sub-region, responsible for training approximately 70% of the nation's medical professionals. Established by a Parliamentary Act in 1952 to meet the urgent need for skilled healthcare personnel in the region, UCH has grown significantly since its formal commissioning in November 1957 with an initial capacity of 500 beds. Today, the hospital boasts a total of approximately 1,445 bed spaces: 1,072 in the main hospital, 100 at the Otunba Tunwase National Paediatrics Centre, 60 at the Okuku Comprehensive Healthcare Centre, 50 at the Sepeteri centre, and 163 examination couches (Ohaeri, 2011; University College Hospital, Ibadan, 2022).

Statement of the Problem

The University College Hospital (UCH) Ibadan was established by an Act of Parliament in 1952; however, it was not officially commissioned until 1957. Over the years, the hospital has experienced significant growth and resilience, overcoming challenges such as inadequate government funding, deteriorating infrastructure due to ageing, a shortage of equipment and consumables, a shortage of personnel, and an overabundance of patients due to a weak referral system in primary and secondary healthcare (Ohaeri, 2011).

The Federal Government of Nigeria, through the Presidential Project Implementation Committee (PPIC/VAMED Engineering), chose in 2002 to rehabilitate eight teaching hospitals in the first phase, with UCH, Ibadan, as a beneficiary. The primary goal of the federal government's health intervention was to refurbish these eight institutions so that they were completely functional and equipped with the most contemporary diagnostic and investigative instruments in order to ensure the greatest possible level of clinical care (Adepoju and Adepoju, 2014).

Despite the government's attempts to provide basic equipment and manpower, there is a need to improve the quality of healthcare services. There is still a dearth of desire and passion among health workers to provide a sustainable and adequate healthcare delivery system in Nigeria (Josiah *et al.,* 2024). How do healthcare providers (doctors, nurses, paramedical staff, administrative staff, and technical staff) perceive deeper aspects of their work environment, such as supervision style, work pressure, remuneration, relationships with peers, and opportunities to contribute to decision-making and influence hospital healthcare delivery?

Previous research has mostly focused on the challenges and opportunities in terms of equipment, medical consumables, infrastructure and staff. However, precise operational assessments and evaluations of work-related issues impacting healthcare providers have not been thoroughly investigated.

METHODS

Design

The cross-sectional design research was used to collect the data. For the present study, descriptive, t-tests for independent group design, factorial, and correlational as well as multiple regression were used.

The Study Population and Sample

The subjects for this study consisted of 120 randomly selected healthcare providers at the University College Hospital, Ibadan. The subjects were made up of 62 (51.7%) males and 58 (48.3%) females. Out of these, 43 (35.8%) were nursing staff, while 77 (64.2%) were other categories of staff. For valid years of job experience, 51 falls under (1-5 years), 36 in (6-10

years) and 33 in (16 years and above). The participating subjects had a valid age of 18-25 years (2.5%), 26-35 years (40.0%), 36-45 years (43.3%), or 46 years and above (14.2%).

Instruments and Measures

The instruments comprise three sections. They are demographic information, operational assessments, and work environments. Section A was used to tap demographic/personal information, like gender, age, type of job, marital status, job experience and educational qualification. Section B measures operational assessment. While, Section C assesses work environment, the scale consisted of five sub-scales: Supervision style, Work pressure, Remuneration, Relationship with peers and Opportunity to contribute to decision making.

Analysis of Data

The data obtained through the questionnaire were analysed using statistical methods, including descriptive statistics, a t-test for independent groups, simple percentages, Pearson's product-moment correlation, analysis of variance (ANOVA), supplemented with a least significant difference (LSD) group comparison test, and multiple regression analysis.

Simple percentages were used to test hypotheses 1 and 2; a t-test for independent groups was utilised to test hypotheses 3 and 8; Pearson's product-moment correlation was employed to test hypotheses 4 and 5; a one-way ANOVA was used to test hypothesis 9, while multiple regression analysis was employed to test hypotheses 6 and 7.

All the analysis was done with the aid of a computer, using Statistical Packages for Social Sciences (SPSS).

RESULTS

Table 1: ***Descriptive Statistics and Reliability Coefficients for Study Variables***

Variable	N	Min	Max	M	SD	α
Operational Assessment	120	13.00	24.00	19.20	2.67	.68
Work Environment	120	33.00	78.00	53.13	9.01	.83
Supervision Style	120	3.00	15.00	12.60	2.12	.87
Work Pressure	120	3.00	15.00	7.58	3.05	.81
Remuneration	120	2.00	10.00	6.84	1.98	.72
Relationship with Peers	120	4.00	15.00	10.73	2.29	.64
Opportunities	120	6.00	20.00	12.91	3.52	.76

Note. N = Sample size; Min = Minimum; Max = Maximum; M = Mean; SD = Standard Deviation; α = Cronbach's Alpha Reliability.
Source: Computed using SPSS.

Table 2: ***Frequency and Percentage Distribution of Operational Assessment Categories***

Variable	Adequate	Inadequate	Not Sure
Physical Infrastructure	79 (65.8%)	38 (31.7%)	2 (1.7%)
Health Care Facilities/Equipment	58 (48.3%)	57 (47.5%)	5 (4.2%)
Availability of Drugs	51 (42.5%)	59 (49.2%)	9 (7.5%)
Availability of Consumables	52 (43.3%)	60 (50.0%)	7 (5.8%)
Availability of Water Supply	68 (56.7%)	50 (41.7%)	1 (0.8%)
Alternative Energy Supply	56 (46.7%)	58 (48.3%)	5 (4.2%)
Staff Strength	38 (31.7%)	75 (62.5%)	6 (5.0%)
Staff Welfare	34 (28.3%)	78 (65.0%)	6 (5.0%)
Patient Care	84 (70.0%)	23 (19.2%)	13 (10.8%)

Note. Values are presented as frequency (percentage).
Source: Computed using SPSS.

Table 3: ***Independent Samples t-Test Comparing Job Role and Work Environment Characteristics***

Variable	Job Role	n	M	SD	t	df	p
Supervision Style	Nursing	43	12.88	2.15	1.06	118	.291
	Others	77	12.45	2.11			
Work Pressure	Nursing	43	8.91	3.52	3.73	118	.000*
	Others	77	6.84	2.50			
Remuneration	Nursing	43	6.53	2.12	-1.27	118	.206
	Others	77	7.01	1.90			
Relationship with Peers	Nursing	43	11.26	2.45	1.88	118	.062
	Others	77	10.44	2.17			
Opportunities	Nursing	43	12.81	4.28	-0.24	118	.812
	Others	77	12.10	3.04			

Note. M = Mean; SD = Standard Deviation; * p < .05.
Source: Computed using SPSS.

Table 4: ***Correlation Matrix for Job Experience, Operational Assessment, and Work Environment Variables***

Variable	1	2	3	4	5	6	7	8
1. Job Experience	—							
2. Operational Assessment	.01	—						
3. Work Environment	-.02	.38**	—					
4. Supervision Style	.17	.15	.44**	—				
5. Work Pressure	-.18*	.10	.63**	-.02	—			
6. Remuneration	.11	.40**	.59**	.38**	-.05	—		
7. Relationship with Peers	-.03	.30**	.72**	.26**	.31**	.41**	—	
8. Opportunities	-.01	.39**	.80**	.17	.37**	.45**	.48**	—

Note. *p* < .05, **p* < .01.
Source: Computed using SPSS.

Table 5: ***Summary of Multiple Regression Analysis Predicting Operational Assessment from Work Environment Factors***

Predictor	β	t	p
Supervision Style	-0.02	-0.23	.820
Work Pressure	-0.04	-0.39	.700
Remuneration	0.26	2.60	.010**
Relationship with Peers	0.10	0.97	.334
Opportunities	0.24	2.20	.030*

Note. Dependent variable: Operational assessment.
R^2 = .22, Adjusted R^2 = .19, F (5, 114) = 6.56, p < .05.

- p < .05. ** p < .01.
  Source: Computed using SPSS.

Table 6: ***Summary of Multiple Regression Analysis Predicting Work Environment from Demographic Factors***

Predictor	β	t	p
Gender	-0.17	-1.60	.112
Age	-0.01	0.29	.770
Job	0.24	0.95	.346
Marital Status	0.13	0.91	.365
Job Experience	-0.10	-0.07	.944
Education	0.01	1.20	.232

Note. Dependent variable: Work environment.
$R^2 = .07$, Adjusted $R^2 = .02$, $F(6, 113) = 1.44$, $p > .05$.
*No significant predictors identified.
Source: Computed using SPSS.

Table 7: ***Independent Samples t-Test of Gender Differences in Work Environment Characteristics***

Variable	Gender	n	M	SD	t	df	p
Work Environment	Male	62	53.76	8.53	0.78	118	.438
	Female	58	52.47	9.54			
Supervision Style	Male	62	12.85	1.96	1.32	118	.188
	Female	58	12.34	2.27			
Work Pressure	Male	62	7.45	2.86	-0.49	118	.627
	Female	58	7.72	3.26			
Remuneration	Male	62	7.34	1.88	2.92	118	.004*
	Female	58	6.31	1.97			

Note. N = 120 (Male = 62, Female = 58).

- $p < .05$.
  Source: Computed using SPSS.

Table 8: ***One-Way ANOVA Summary for Job Experience and Work Environment Factors***

Dependent Variable	Source	SS	df	MS	F	p
Work Environment	Between Groups	24.75	2	12.37	0.15	.860
	Within Groups	9649.11	117	82.47		
	Total	9673.86	119			
Supervision Style	Between Groups	41.24	2	20.62	4.85	.010*
	Within Groups	497.35	117	4.25		
	Total	538.59	119			
Work Pressure	Between Groups	45.30	2	22.65	2.48	.088
	Within Groups	1065.86	117	9.11		
	Total	1111.16	119			
Remuneration	Between Groups	7.37	2	3.68	0.93	.397
	Within Groups	462.62	117	3.95		
	Total	469.99	119			
Relationship with Peers	Between Groups	0.57	2	0.28	0.05	.946

	Within Groups	628.89	117	5.37		
	Total	629.46	119			
Opportunities	Between Groups	22.88	2	11.44	0.92	.401
	Within Groups	1452.28	117	12.41		
	Total	1475.16	119			

Note. SS = Sum of Squares; MS = Mean Square.

- $p < .05$.

Source: Computed using SPSS.

Table 9: ***Post Hoc Least Significant Difference (LSD) Test Comparing Job Experience Groups on Work Environment Factors***

Dependent Variable	Group (Job Experience)	n	M	SD	1 vs 2	1 vs 3	2 vs 3
Work Environment	1. 1–5 years	51	53.54	8.61	1.07	0.33	0.73
	2. 6–15 years	36	52.47	7.46			
	3. 16+ years	33	53.13	11.16			
Supervision Style	1. 1–5 years	51	11.98	1.49	1.38*	0.77	-0.60
	2. 6–15 years	36	13.36	1.60			
	3. 16+ years	33	12.75	1.78			
Work Pressure	1. 1–5 years	51	8.29	2.59	1.15	1.32	-0.16
	2. 6–15 years	36	7.13	3.05			
	3. 16+ years	33	6.96	3.54			
Remuneration	1. 1–5 years	51	6.66	2.15	-0.05	-0.57	-0.52
	2. 6–15 years	36	6.72	1.70			
	3. 16+ years	33	7.24	2.01			
Relationship w/ Peers	1. 1–5 years	51	2.40	1.62	0.08	0.16	-0.08
	2. 6–15 years	36	1.73	1.73			
	3. 16+ years	33	2.70	1.43			
Opportunities	1. 1–5 years	51	3.82	1.47	0.96	0.03	-0.93
	2. 6–15 years	36	2.91	1.13			
	3. 16+ years	33	3.63	1.32			

Note. M = Mean; SD = Standard Deviation; Group differences are reported as mean differences.

- $p < .05$.

Source: Computed using SPSS.

According to the first hypothesis, UCH, Ibadan has sufficient medical facilities. With regard to healthcare facilities, Table 2 demonstrates that this hypothesis was only partially supported: 58 respondents (48.3%) thought the facilities were adequate, 57 (47.5%) thought they were inadequate, and 5 (4.2%) were unsure. The second hypothesis, which predicted that patients at UCH, Ibadan, would receive satisfactory, high-quality care, received complete support. Table 2 shows that 84 (70.0%) thought patient care was adequate, 23 (19.2%) thought it was inadequate, and 13 (10.8%) were unsure.

The third hypothesis posited that nurses are under a lot more stress than other medical professionals. The findings for work pressure ($t(118) = 3.73$, $p < .05$) in Table 3 corroborated this. The fourth hypothesis predicted that among healthcare providers, job experience, operational assessment, and work environment factors would significantly positively correlate. As shown in Table 4, the majority of results supported this. (i) Job experience and work environment ($r = .38$, $p < .01$), (ii) Work environment and supervision style ($r = .44$, $p < .01$), (iii) Job experience and work pressure ($r = -.18$, $p < .05$); work environment and work pressure ($r = .63$, $p < .01$) (iv) Remuneration and operational assessment ($r = .40$, $p < .01$); Remuneration and work environment ($r = .59$, $p < .01$); Remuneration and style of supervision ($r = .38$, $p < .01$) (v) Peer relationships with operational assessment ($r = .30$, $p < .01$), Peer relationships with work environment ($r = .72$, $p < .01$), Peer relationships with supervision style ($r = .26$, $p < .01$), Peer relationships with work pressure ($r = .31$, $p < .01$), and Peer relationships with remuneration ($r = .41$, $p < .01$) (vi) Opportunities and operational assessment ($r = .39$, $p < .01$); opportunities

and environment ($r = .80$, $p < .01$); opportunities and work pressure ($r = .37$, $p < .01$); opportunities and remuneration ($r = .45$, $p < .01$); and opportunities and peer relationships ($r = .48$, $p < .01$).

There was complete support for the fifth hypothesis ($r = .38$, $p < .01$, Table 4), which predicted a significant positive correlation between operational assessment and work environment. According to the sixth hypothesis, operational assessment would be influenced by both joint and independent work environment factors. Table 5 demonstrates a joint influence ($F (5, 114) = 6.56$, $p < .05$) and that operational assessment was independently predicted by opportunities ($\beta = .24$, $p < .05$) and remuneration ($\beta = .26$, $p < .05$). It was not independently predicted by peer relationships, work pressure, or supervision style. The seventh hypothesis, which predicted that demographic factors would both jointly and independently affect the work environment, was not supported (Table 6: $F (5, 114) = 1.44$, $p > .05$), and none of the demographic factors had an independent impact on the work environment.

Only remuneration supported the eighth hypothesis, which predicted that male healthcare providers would score significantly higher than females on all work-environment sub-scales. There were no discernible gender differences in opportunities, peer relationships, work pressure, or supervision style, as Table 7 illustrates. According to the ninth hypothesis, healthcare professionals with more years of experience would have much lower work pressure scores. Table 8 shows that this was not supported ($F (2, 117) = 2.48$, $p > .05$). On the other hand, supervision style showed a significant difference ($F (2, 117) = 4.85$, $p < .05$). Providers with 1–5 years of service demonstrated a significant difference in supervision style ($M = 11.98$), according to post hoc analysis (Table 9).

DISCUSSION

This study set out to examine the challenges and prospects of tertiary healthcare delivery in Nigeria, using the University College Hospital (UCH), Ibadan, as a case study. The focus was on evaluating operational assessments, work environment factors, and demographic variables essential for achieving a sustainable tertiary healthcare system.

Descriptive Analysis (Operational Assessment)

Hypotheses 1 and 2 were tested using simple percentage analysis. Findings revealed that perceptions of healthcare facility adequacy were mixed: 58 respondents (48.3%) considered them adequate, 57 (47.5%) inadequate, and 2 (1.7%) were unsure. Equipment functionality and maintenance were also identified as major concerns for hospital management. Other operational aspects with low adequacy ratings included:

- **Availability of drugs:** 51 (42.5%) adequate, 59 (49.2%) inadequate, and 9 (7.5%) unsure
- **Staff strength:** 38 (31.7%) adequate, 75 (62.5%) inadequate, and 6 (5.0%) unsure
- **Staff welfare:** 34 (28.3%) adequate, 78 (65.0%) inadequate, 6 (5.0%) unsure.

Conversely, positive ratings were recorded for:

- **Infrastructure:** 79 (65.8%) adequate, 38 (31.7%) inadequate, and 2 (1.7%) unsure
- **Patient care:** 84 (70.0%) adequate, 23 (19.2%) inadequate, 13 (10.8%) unsure

A substantial sum of **N265,278,320.00** was spent on diesel from January to December 2024 to mitigate frequent power outages, underscoring persistent energy challenges.

Independent Samples t-Test

The t-test was applied to evaluate Hypotheses 3 and 8. Hypothesis 3, which posited that nursing staff face significantly greater work pressure than other healthcare workers, was supported ($t(118) = 3.73$, $p < .05$). The eighth hypothesis predicted that male healthcare providers would score significantly higher than females on all dependent measures of the work environment subscales. This prediction was only supported for remuneration ($t(118) = 2.92$, $p < 0.05$).

Correlational Analysis

Bivariate correlations (for hypotheses 4 and 5) investigated the relationships among job experience, operational assessment, and work environment factors. The fourth hypothesis was generally supported, although some relationships were not significant: no significant associations were observed between job experience and operational assessment ($r = .01$, $p > .05$), work environment and job experience ($r = -.02$, $p > .05$), supervision style and operational assessment ($r = .17$, $p > .05$), among others. However, Hypothesis 5, predicting a positive relationship between operational assessment and work environment, was fully supported ($r = .38$, $p < .05$).

Multiple Regression Analysis

Multiple regression identified variables most closely associated with operational assessment and work environment, addressing hypotheses 6 and 7. Hypothesis 6 was supported, with significant joint influence of work environment factors on operational assessment ($F(5, 114) = 6.56$, $p < .05$). Remuneration ($\beta = 0.26$, $p < .05$) and opportunities for decision-making ($\beta = 0.24$, $p < .05$) emerged as key independent predictors. In contrast, Hypothesis 7 found no evidence that demographic factors jointly or independently influenced the work environment ($F(5, 114) = 1.44$, $p > .05$).

Factorial analysis

A one-way ANOVA, supplemented by an LSD post hoc test, assessed Hypothesis 9: whether longer-tenured healthcare providers experience less work pressure. This hypothesis was not supported ($F(2, 117) = 2.48$, $p > .05$). However, a significant difference was found in supervision style among groups ($F(2, 117) = 4.85$, $p < .05$), with providers of 1–5 years' service showing notable differences ($M = 11.98$).

Practical Implications

These findings underscore several challenges in tertiary healthcare: inadequate facilities, poor equipment, shortages of drugs and consumables, unreliable power supply, and insufficient staff welfare. To address these, healthcare administrators should implement policies aimed at reversing negative trends.

Work Environment

Work environment factors play a crucial role in sustaining effective healthcare delivery. Providing adequate resources, equipment, drugs, and infrastructure is essential. Additionally, attention must be paid to supervisory styles, work pressure, remuneration, peer relationships, and participatory decision-making, as these significantly impact service quality. Notably, operational assessment and work environment were significantly correlated ($r = .38$, $p < .05$).

Limitations

The study's primary limitation is its focus on a single tertiary hospital, which may limit generalisability to other institutions across Nigeria. While the sample size was adequate for UCH, unique institutional and regional factors could yield different results elsewhere.

Strengths of the Study
Strengths include the comprehensive approach integrating operational and work environment factors and a thorough literature review. This dual focus provides deeper insight into the challenges and opportunities within tertiary healthcare systems.

Future Research
Future studies should further develop theoretical frameworks around tertiary healthcare challenges and opportunities and conduct cross-sectional research across various Nigerian regions to enhance generalisability.

Recommendations
Improving tertiary healthcare delivery in Nigeria requires collaborative efforts from all stakeholders (Kingpriest *et al.,* 2025). The current state of healthcare is partly due to systemic neglect. Although tertiary care absorbs much of the sector's resources while serving a small proportion of the population, teaching hospitals have a broader mandate, including research, training, and innovation. Investing in these institutions benefits the entire health system by fostering knowledge, innovation, and skill development.

Elechi *et a*l. (2026) highlighted longstanding systemic issues such as inadequate planning, funding, low salaries, outdated technology, and poor infrastructure. These factors lead to shortages and increased disease risk. Developing robust health and pharmaceutical infrastructure is vital for improving care quality and supporting sustainable development.

At UCH, ongoing challenges include maintenance, resource constraints, high energy costs, and limited staff welfare. However, progress is evident in infrastructure, patient care, and partnerships, such as the establishment of a cardiac centre and a modern geriatric centre. Enhancing staff remuneration and opportunities for decision-making are crucial for operational efficiency. Addressing work pressure, particularly among nurses, through increased staffing is also recommended. Management should implement comprehensive policies to address these factors and achieve healthcare objectives.

Conclusion
This study provides valuable insights for healthcare administrators, behavioural scientists, and management practitioners seeking to enhance the effectiveness and sustainability of tertiary healthcare delivery in Nigeria.

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