International Journal of Management Foresight and Strategy | ISSN 3087-4386
Published by BIRPUB https://birpub.org/ijmfs
Imp. Factor: 7.256

Influence of Reward Systems on the Performance of Employees in Allied Health Institutions in Enugu State, Nigeria

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Abstract

Background: Allied health institutions in Nigeria are characterized by high workforce demands, chronic underfunding, and persistent challenges of employee motivation, retention, and performance. Reward systems, encompassing financial and non-financial incentives such as leave allowances, promotion, health insurance schemes, and bonuses, constitute critical human resource management tools that can significantly shape employee performance outcomes. Despite growing theoretical interest in reward management, empirical evidence examining the specific effects of distinct reward components on performance dimensions among allied health workers in Enugu State remains limited. Objectives: This study examined the influence of reward systems on employee performance in three selected allied health institutions in Enugu State, specifically investigating the effects of leave allowance on employee production, promotion on employee loyalty, health insurance scheme on employee commitment, and Christmas bonus on employee motivation. Method: A descriptive cross-sectional survey design was adopted. Primary data were collected through a structured five-point Likert scale questionnaire administered to 347 employees drawn from the National Orthopaedic Hospital Enugu, Federal University of Allied Health Sciences Enugu, and Federal Neuropsychiatric Hospital Enugu, selected using stratified random sampling with Yamane's (1967) formula applied to a population of 2,600. Data were analyzed using descriptive statistics, Pearson correlation, and multiple regression. Results: Leave allowance significantly and positively affected employee production ($\beta = 0.384$, $p < 0.001$); promotion significantly improved employee loyalty ($\beta = 0.347$, $p < 0.001$); health insurance scheme significantly enhanced employee commitment ($\beta = 0.312$, $p < 0.05$); and Christmas bonus significantly boosted employee motivation ($\beta = 0.298$, $p < 0.05$). The combined model explained 61.7% of variance in employee performance. Conclusion: Reward systems are significant determinants of employee performance in allied health institutions in Enugu State. Strategic investment in comprehensive reward frameworks is essential for improving healthcare workforce motivation and performance.

Keywords: *Reward systems, employee performance, allied health institutions, leave allowance, health insurance, Christmas bonus*

Cite: Chikadibia, R. O. (2026). Influence of Reward Systems on the Performance of Employees in Allied Health Institutions in Enugu State, Nigeria. *International Journal of Management Foresight and Strategy, 4*(5), 372-384. https://doi.org/10.5281/zenodo.20817198

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Introduction

The management of human resources in healthcare organizations represents one of the most critical and complex challenges confronting health systems globally, particularly in low- and middle-income countries where resource constraints, workforce shortages and motivational deficits combine to undermine service delivery quality (World Health Organization, 2016; Mathauer & Imhoff, 2006). Within the Nigerian healthcare sector, allied health professionals, including medical laboratory scientists, radiographers, physiotherapists, pharmacists, nurses, and administrative staff, constitute an indispensable workforce whose motivation, commitment, and productivity are fundamental determinants of healthcare quality and organizational effectiveness (Emejulu, 2020; Ahmed et al., 2022). Yet, these professionals are frequently characterized as undervalued, insufficiently rewarded, and inadequately motivated, contributing to high turnover intentions, brain drain, industrial actions, and suboptimal service delivery outcomes that undermine Nigeria's healthcare system performance.

Reward systems, broadly defined as the totality of financial and non-financial benefits that organizations provide to employees in recognition of their contributions and as incentives for sustained high performance, are widely acknowledged in the human resource management literature as among the most powerful tools available to organizations for enhancing employee motivation, loyalty, commitment, and productivity (Armstrong & Taylor, 2017; Ojo et al., 2021). The range of reward components relevant to Nigerian public sector health institutions includes financial rewards such as salaries, leave allowances, bonuses, and allowances, as well as non-financial rewards including promotions, health insurance coverage, career development opportunities, recognition, and job security (Okeke et al., 2020; Chukwuma et al., 2022). The strategic configuration and effective administration of these reward components can significantly determine whether allied health workers perform at optimal levels or withdraw effort, disengage, and ultimately exit the organization.

In Enugu State, Nigeria's southeastern healthcare hub, allied health institutions including the National Orthopaedic Hospital Enugu, the Federal University of Allied Health Sciences Enugu, and the Federal Neuropsychiatric Hospital Enugu collectively represent critical pillars of the regional healthcare delivery system. These institutions employ a diverse, multidisciplinary workforce of allied health professionals who are exposed to various reward mechanisms under Nigeria's Integrated Payroll and Personnel Information System (IPPIS) and the harmonized conditions of service of the Federal Government of Nigeria. However, systemic challenges including delayed salary payments, inconsistent implementation of allowances, limited promotional opportunities, and inadequate welfare benefits have been consistently documented as major sources of employee dissatisfaction and performance decline in these and similar institutions across Nigeria (Musa & Olowookere, 2019; Akpom & Ibegbulam, 2023).

Despite the growing body of literature on reward management and employee performance in Nigeria, important empirical gaps persist. Existing studies have tended to focus on the manufacturing sector (Okeke et al., 2020; Ojo et al., 2021), banking sector (Odunayo, 2022), or general public service contexts (Musa & Olowookere, 2019), with limited attention to the specific dynamics of reward systems and performance in allied health institutions. Furthermore, most existing studies examine reward systems as an aggregate construct rather than investigating the distinct effects of individual reward components, such as leave allowance, promotion, health insurance, and bonuses, on specific performance dimensions. This study addresses these gaps by examining four specific reward components and their individual effects on corresponding performance outcomes among allied health workers in Enugu State.

Statement of the Problem

The performance of employees in allied health institutions in Enugu State has been a subject of growing concern among healthcare administrators, policymakers, and professional bodies. Anecdotal evidence and limited empirical reports document persistent challenges including low employee motivation, high absenteeism, frequent industrial actions, inadequate productivity, declining patient satisfaction, and rising staff turnover, all of which negatively affect the quality of healthcare service delivery. A key factor commonly attributed to these performance deficits is the inadequacy, inconsistency, and perceived inequity of reward systems in these institutions. Specifically, delays in the payment of leave allowances, opaque and politically influenced promotion processes, limited health insurance

coverage, and irregular payment of bonuses are frequently cited by allied health workers as major sources of dissatisfaction and demotivation. If these challenges persist without evidence-based intervention, the consequences for healthcare quality, patient outcomes, and the institutional viability of allied health institutions in Enugu State could be severe and enduring.

Research Objectives

The specific objectives of this study are to:

1. Determine the effect of leave allowance on employee production in allied health institutions in Enugu State.
2. Assess the effects of promotion on employee loyalty in allied health institutions in Enugu State.
3. Ascertain the relationship between health insurance scheme and employee commitment in allied health institutions in Enugu State.
4. Evaluate the effects of Christmas bonus on employee motivation in allied health institutions in Enugu State.

Research Hypotheses

H01: Leave allowance has no significant effect on employee production in allied health institutions in Enugu State.

H02: Promotion has no significant effect on employee loyalty in allied health institutions in Enugu State.

H03: Health insurance scheme has no significant relationship with employee commitment in allied health institutions in Enugu State.

H04: Christmas bonus has no significant effect on employee motivation in allied health institutions in Enugu State.

Theoretical Framework

This study is anchored on the Expectancy Theory of Motivation originally proposed by Vroom (1964). Expectancy Theory posits that individuals are motivated to behave in certain ways when they believe their efforts will lead to expected performance (expectancy), that performance will lead to a valued reward (instrumentality), and that the reward holds sufficient value to justify the effort expended (valence). Applied to the reward systems-employee performance relationship in allied health institutions, Expectancy Theory predicts that allied health workers will invest effort and exhibit high performance when they: (i) believe that their efforts will result in successful task completion (expectancy); (ii) trust that high performance will be rewarded through leave allowances, promotion, health insurance benefits, and bonuses (instrumentality); and (iii) value these specific rewards sufficiently to motivate sustained effort (valence). Each of the four reward components examined in this study, leave allowance, promotion, health insurance, and Christmas bonus, represents a potential instrumentality link in the expectancy theory chain: the degree to which employees perceive these rewards as reliable, equitable, and valuable outcomes of their performance effort will determine the extent to which they generate motivational impulses that translate into production, loyalty, commitment, and motivation outcomes.

The complementary theoretical framework is the Equity Theory developed by Adams (1963), which posits that employees compare their input-outcome ratio with those of referent others and experience motivation when they perceive equitable treatment, and demotivation when they perceive inequity, whether advantageous or disadvantageous. In the context of reward systems in allied health institutions, Equity Theory explains how perceptions of fairness in the distribution of leave allowances, promotion decisions, health insurance coverage, and bonus payments influence employee attitudes and performance. When allied health workers perceive that their rewards are commensurate with their contributions and comparable to what colleagues in similar roles receive, equity theory predicts positive performance outcomes. Conversely, perceived reward inequity, such as differential access to health insurance among professional grades or politically influenced promotion decisions, generates dissatisfaction and performance withdrawal. Together, Expectancy Theory and Equity Theory provide the motivational theoretical scaffolding for examining why and how specific reward components influence specific performance dimensions among allied health workers in Enugu State.

Empirical Review

A substantial and growing body of empirical literature has examined the relationship between reward systems and employee performance in Nigerian organizations and comparable healthcare contexts. Okeke et al. (2020), in a study of reward management and employee performance in selected manufacturing firms in Enugu State published in the International Journal of Management and Entrepreneurship, found that financial rewards including bonuses and allowances significantly and positively predicted employee performance outcomes, with bonus payments showing the strongest effect. Their finding that context-specific reward systems in Enugu State institutions generate significant performance improvements provides direct regional precedent for the present study's investigation in allied health institutions within the same state.

Ojo et al. (2021), examining the influence of reward system on employee performance in selected manufacturing firms in Osun State published in the BERJAYA Journal of Services and Management, found that reward components including leave benefits, bonuses, and recognition significantly predicted performance. Their study documented that leave allowance, one of the constructs examined in the present study, was particularly effective in improving employee productivity by reducing burnout and enhancing work-life balance. This finding directly informs the present study's first hypothesis regarding leave allowance and employee production.

Ahmed et al. (2022), in a study of the impact of reward system on employee job commitment among health workers at the University of Ilorin Teaching Hospital published in the Redeemers' University Journal of Management and Social Sciences, found that financial reward components including salaries, allowances, and health benefits significantly predicted employee commitment in a tertiary hospital setting. Their hospital-sector focus makes this study among the closest methodological analogues to the present investigation, and their finding that health-related benefits generate the strongest commitment effects directly informs the present study's third hypothesis on health insurance and employee commitment.

Emejulu (2020), in a study on employee rewards and performance implications drawing on South-Eastern Nigeria experience published in the Asian Journal of Economics, Business and Accounting, found that reward components including bonuses and allowances significantly influenced employee performance in public sector organizations in the South-East geopolitical zone. The geographical alignment with the present study's Enugu State context makes Emejulu's (2020) findings particularly relevant, while his focus on allowance-based rewards corroborates the theoretical expectations of the present study regarding leave allowances.

Chukwuma et al. (2022), examining the effect of reward on employee performance in a local government study in Anambra State published in the Journal of Policy and Development Studies, found that financial rewards including bonuses and allowances significantly predicted employee performance, with promotion identified as the strongest motivational driver among the reward components studied. The consistent finding across multiple Nigerian public sector studies that promotion has particularly strong effects on employee loyalty and performance reinforces the theoretical expectation embedded in H02 of the present study.

Muhati and Makhamara (2023), in a study on employee promotion and performance at the Technical University of Kenya published in the Strategic Journal of Business and Change Management, found that promotion systems, when perceived as fair, transparent, and merit-based, significantly and positively predicted employee performance, job satisfaction, and organizational commitment. Their finding that the fairness perception of promotion processes is a critical moderating variable in the promotion-performance relationship has important implications for allied health institutions in Enugu State, where promotion processes have historically been characterized by opacity and perceived inequity.

Musa and Olowookere (2019), examining the effect of reward system on employee satisfaction in the Nigerian public service published in the Journal of Human Resource and Leadership, found that both financial and non-financial rewards significantly predicted employee satisfaction and indirectly influenced performance through the satisfaction mediating pathway. Their study's public service context and Nigerian focus provides strong empirical precedent for the present study's application to federal allied health institutions.

Akpom and Ibegbulam (2023), in a study on the relationship between rewards system and employee intention to leave among librarians in federal university libraries in Nigeria published in the Journal of Academic Librarianship, found that inadequate reward systems, particularly insufficient leave benefits and limited promotion opportunities, significantly predicted intention to leave federal institutions, indirectly documenting the negative performance consequences of reward deficiency. Their federal institution focus and Nigerian context makes this study directly relevant to the present investigation of federal allied health institutions in Enugu State. The empirical literature converges on the conclusion that specific reward components, including leave allowances, promotion, health benefits, and bonuses, are significant and positive predictors of employee performance outcomes in Nigerian public sector and healthcare contexts, establishing a robust empirical basis for the four hypotheses tested in this study.

The remainder of this article is structured as follows: Section 2 presents the methodology; Section 3 reports the results and discussion; and Section 4 concludes with recommendations.

Methodology

Research Design

This study adopted a descriptive cross-sectional survey research design. The cross-sectional design is appropriate for this study because it enables the simultaneous collection of primary data on reward system perceptions and employee performance outcomes from a large, diverse sample of allied health workers across three institutions at a single point in time, facilitating comparisons across professional groups without experimental manipulation (Creswell & Creswell, 2018). The descriptive component enables the characterization of reward system adequacy and performance dimensions across the study institutions. All data were collected through primary means, specifically a structured self-administered questionnaire, and no secondary data were incorporated into the empirical analysis.

Study Area and Population

The study was conducted in Enugu State, located in the southeastern geopolitical zone of Nigeria. Enugu State is a major administrative and healthcare hub in the region, hosting a high concentration of tertiary and specialized healthcare institutions that collectively constitute a critical healthcare delivery system for the South-East. The study specifically focused on three purposively selected federal allied health institutions: The National Orthopaedic Hospital Enugu, which provides specialized orthopaedic and trauma care; the Federal University of Allied Health Sciences Enugu, which trains allied health professionals and conducts healthcare research; and the Federal Neuropsychiatric Hospital Enugu, which provides mental health services and psychiatric rehabilitation. These institutions were selected because they are federally funded, employ structured human resource management systems with defined reward policies, house diverse multidisciplinary allied health workforces, and represent different segments of the allied health system.

The target population comprised all employees, clinical and non-clinical, across the three institutions, including medical laboratory scientists, radiographers, physiotherapists, pharmacists, nurses, and administrative staff. Based on official administrative records obtained from the human resource departments of the three institutions, the total population was estimated at approximately 2,600 employees. This population is considered appropriately large for meaningful statistical analysis and generalizable findings.

Sample Size Determination

The sample size was determined using the Yamane (1967) formula for finite populations:

$$\mathbf{n = N / [1 + N(e^2)]}$$

Where: n = required sample size; N = total population = 2,600; e = level of precision = 0.05 (5%)

$$n = 2{,}600 / [1 + 2{,}600 \times (0.05)^2]$$

$$n = 2{,}600 / [1 + 2{,}600 \times 0.0025]$$

$$n = 2,600 / [1 + 6.5] = 2,600 / 7.5$$

n = 346.67 ≈ 347 respondents

A sample of 347 employees was therefore required. To account for potential non-response and incomplete questionnaires, 380 copies of the questionnaire were distributed across the three institutions. After data collection and cleaning, 347 usable responses were retained, achieving exactly the required minimum sample and yielding an effective response rate of 91.3%.

Sampling Technique

A stratified random sampling technique was employed. The three selected institutions served as strata, with the 347-respondent sample proportionally allocated based on the estimated workforce size of each institution: National Orthopaedic Hospital Enugu (n = 124), Federal University of Allied Health Sciences Enugu (n = 118), and Federal Neuropsychiatric Hospital Enugu (n = 105). Within each institution, professional categories (clinical and non-clinical) served as sub-strata, with respondents randomly selected from staff nominal rolls obtained from respective human resource departments. Stratified random sampling was adopted to ensure that all three institutions and all professional categories are proportionally and representatively included in the sample, reducing sampling bias and improving the generalizability of findings.

Research Instrument

Primary data were collected using a structured self-administered questionnaire developed specifically for this study. The questionnaire comprised two sections. Section A captured respondents' demographic and professional profile information including age, gender, educational qualification, professional category, years of service, and institution. Section B contained items measuring the study's four independent variables (leave allowance, promotion, health insurance scheme, and Christmas bonus) and four dependent variable dimensions (employee production, employee loyalty, employee commitment, and employee motivation). All items in Section B used a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Items were adapted from validated instruments used in prior reward management studies in the Nigerian healthcare and public sector contexts (Okeke et al., 2020; Ahmed et al., 2022; Ojo et al., 2021), with modifications to ensure contextual relevance to allied health institutions in Enugu State. The questionnaire was pre-tested through a pilot administration to 30 allied health employees at the Enugu State University of Science and Technology Teaching Hospital, an institution not included in the main study, to refine item clarity and confirm scale reliability before the main data collection.

Validity and Reliability

Content validity was established through expert review: five academic specialists in human resource management, health services management, and organizational behavior reviewed all questionnaire items and confirmed their relevance, coverage, and appropriateness for measuring the specified constructs. Three items were revised and two were deleted based on expert feedback. Face validity was confirmed through the pilot study, where respondents were asked to assess the clarity and comprehensibility of each item. Construct validity was assessed through exploratory factor analysis (EFA), with all retained items loading above 0.60 on their respective factors.

Reliability was assessed using Cronbach's Alpha coefficient, with the widely accepted threshold of $\alpha \geq 0.70$ adopted following Nunnally (1978). All constructs exceeded this threshold, as presented in Table 2. The overall instrument alpha was $\alpha = 0.891$, indicating excellent internal consistency across all scales. Individual construct alphas ranged from 0.847 to 0.876, confirming the reliability of each specific reward and performance scale.

Method of Data Analysis

Quantitative data were analyzed using IBM SPSS Statistics Version 26.0. Three analytical techniques were employed: (i) descriptive statistics, frequency distribution, mean, and standard deviation, to profile respondents and characterize variable distributions; (ii) Pearson product-moment correlation to examine bivariate relationships and detect multicollinearity among predictor variables; and (iii) multiple regression analysis to test all four null hypotheses by examining the individual and joint effects of the four reward system components on employee

performance outcomes. The decision rule for hypothesis testing was set at $\alpha = 0.05$: null hypotheses were rejected where the p-value of the coefficient t-statistic was less than 0.05.

Model Specification

The multiple regression model for testing all four hypotheses simultaneously within a unified performance outcome framework is specified as:

$$EP = \beta_0 + \beta_1(LA) + \beta_2(PR) + \beta_3(HIS) + \beta_4(CB) + \varepsilon$$

Where: EP = Employee Performance (composite dependent variable encompassing production, loyalty, commitment, and motivation); LA = Leave Allowance; PR = Promotion; HIS = Health Insurance Scheme; CB = Christmas Bonus; β_0 = constant intercept; β_1, β_2, β_3, β_4 = standardized regression coefficients representing the independent effect of each reward component on employee performance, holding all other reward components constant; ε = error term. Individual hypothesis testing is conducted using the significance of each beta coefficient: a significant β_1 rejects H01; significant β_2 rejects H02; significant β_3 rejects H03; and significant β_4 rejects H04.

Results and Discussion

Demographic Profile of Respondents

Of the 347 valid responses analyzed, 56.8% (n = 197) were male and 43.2% (n = 150) were female. The age distribution showed that 18.4% were aged below 30 years, 43.2% were aged 31–40 years, 28.8% were aged 41–50 years, and 9.6% were aged above 50 years. Regarding professional category, 24.2% were medical laboratory scientists, 18.4% were nurses, 15.3% were pharmacists, 12.7% were radiographers, 10.9% were physiotherapists, and 18.4% were administrative staff, reflecting the multidisciplinary professional diversity of the sampled institutions. In terms of educational attainment, 12.4% held National Diploma or equivalent qualifications, 48.7% held bachelor's degrees (B.Sc., B.Pharm, or equivalent), 28.2% held postgraduate degrees, and 10.7% held other professional qualifications. Regarding years of service, 23.1% had worked in their institution for less than 5 years, 38.3% for 5–10 years, 27.4% for 11–20 years, and 11.2% for more than 20 years. Institution distribution was: National Orthopaedic Hospital Enugu (35.7%), Federal University of Allied Health Sciences Enugu (34.0%), and Federal Neuropsychiatric Hospital Enugu (30.3%).

Descriptive Statistics and Reliability

Table 1: Descriptive Statistics and Reliability Coefficients of Study Constructs (N = 347)

Construct	N	Mean	Std. Dev.	Min	Max	Cronbach's α
Leave Allowance (LA)	347	2.847	0.924	1.00	5.00	0.864
Promotion (PR)	347	2.612	0.971	1.00	5.00	0.857
Health Insurance Scheme (HIS)	347	3.041	0.887	1.00	5.00	0.847
Christmas Bonus (CB)	347	2.784	0.947	1.00	5.00	0.861
Employee Production (EProd)	347	3.124	0.912	1.00	5.00	0.876
Employee Loyalty (ELoy)	347	3.087	0.934	1.00	5.00	0.869
Employee Commitment (EComm)	347	3.214	0.891	1.00	5.00	0.871
Employee Motivation (EMot)	347	2.941	0.962	1.00	5.00	0.858

Note: All constructs measured on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Higher scores indicate more positive perceptions of reward adequacy and performance outcomes. Source: Field Survey (2026).

The descriptive statistics in Table 1 reveal several important patterns. Among the independent variables (reward components), Health Insurance Scheme recorded the highest mean (M = 3.041, SD = 0.887), the only reward component exceeding the scale midpoint of 3.00, indicating that respondents were marginally more satisfied with health insurance provisions than with other reward components. This finding is consistent with the National Health Insurance Scheme (NHIS) coverage of federal government employees, which, while imperfect, provides at least nominal health coverage. By contrast, Promotion recorded the lowest mean (M = 2.612, SD = 0.971), indicating widespread dissatisfaction with promotion practices, reflecting the documented challenges of inconsistent, opaque, and often delayed promotion processes in Nigerian federal health institutions.

Among the dependent variables (performance dimensions), Employee Commitment recorded the highest mean (M = 3.214), suggesting that despite reward dissatisfaction, allied health workers in the sampled institutions maintain a moderate to reasonable level of organizational commitment, possibly sustained by professional identity, job security considerations, and pension scheme incentives rather than intrinsic reward satisfaction. Employee Motivation recorded the lowest mean (M = 2.941), indicating that motivational levels fall slightly below the scale midpoint, reflecting the demotivating effects of inadequate bonuses and inconsistent financial reward delivery. All Cronbach's Alpha values exceeded 0.84, substantially above the 0.70 threshold (Nunnally, 1978), confirming excellent instrument reliability across all eight constructs.

Correlation Analysis

Table 2: Pearson Correlation Matrix, Reward Components and Performance Outcomes

Variable	LA	PR	HIS	CB	EProd	ELoy	EComm	EMot
Leave Allowance (LA)	1.000							
Promotion (PR)	0.587**	1.000						
Health Insurance (HIS)	0.521**	0.498**	1.000					
Christmas Bonus (CB)	0.614**	0.541**	0.487**	1.000				
Employee Production (EProd)	0.647**	0.521**	0.498**	0.587**	1.000			
Employee Loyalty (ELoy)	0.574**	0.684**	0.514**	0.547**	0.714**	1.000		
Employee Commitment (EComm)	0.541**	0.574**	0.641**	0.512**	0.687**	0.724**	1.000	
Employee Motivation (EMot)	0.587**	0.541**	0.524**	0.621**	0.698**	0.674**	0.687**	1.000

*Note: ** Correlation significant at 0.01 level (2-tailed). N = 347. LA = Leave Allowance; PR = Promotion; HIS = Health Insurance Scheme; CB = Christmas Bonus; EProd = Employee Production; ELoy = Employee Loyalty; EComm = Employee Commitment; EMot = Employee Motivation. Source: Field Survey (2026).*

The Pearson correlation matrix confirms that all four reward components are significantly and positively correlated with all four employee performance dimensions at the 1% level. The strongest correlation with Employee Production is observed for Leave Allowance (r = 0.647), providing preliminary bivariate support for H01. The strongest correlation with Employee Loyalty is for Promotion (r = 0.684), supporting H02. Health Insurance Scheme shows the strongest correlation with Employee Commitment (r = 0.641), supporting H03, while Christmas Bonus shows the strongest correlation with Employee Motivation (r = 0.621), supporting H04. Inter-correlations among the independent variables range from 0.487 to 0.614, all below the 0.80 threshold for problematic multicollinearity (Field, 2018), and VIF values in the regression (all below 3.2) confirm the absence of multicollinearity.

Regression Results and Hypothesis Testing

Table 3: Multiple Regression Results, Dependent Variable: Employee Performance (Composite)

Variable	Unstd. B	Std. Error	Std. Beta (β)	t-value	p-value	Decision
Constant	0.847	0.214		3.957	0.000	
Leave Allowance (LA)	0.384	0.074	0.361	5.189	0.000***	Reject H01
Promotion (PR)	0.347	0.081	0.312	4.284	0.000***	Reject H02
Health Insurance Scheme (HIS)	0.312	0.078	0.287	4.000	0.000***	Reject H03
Christmas Bonus (CB)	0.298	0.083	0.271	3.590	0.000***	Reject H04

*Note: *** $p < 0.001$. $R = 0.785$; $R^2 = 0.617$; Adjusted $R^2 = 0.612$; $F(4, 342) = 137.847$; $p < 0.001$; Durbin-Watson = 1.897. Source: Field Survey (2026).*

The regression model was highly significant ($F(4, 342) = 137.847$, $p < 0.001$), explaining 61.7% of the variance in composite employee performance ($R^2 = 0.617$, Adjusted $R^2 = 0.612$). The Durbin-Watson statistic of 1.897 confirms the absence of serial autocorrelation in the residuals. All four reward components exerted statistically significant positive effects on employee performance, leading to the rejection of all four null hypotheses.

Discussion of Findings

Hypothesis One (H01): Leave Allowance and Employee Production. Leave allowance emerged as the strongest predictor of employee performance ($\beta = 0.384$, $t = 5.189$, $p < 0.001$), leading to the rejection of H01. This finding indicates that adequate and timely payment of leave allowances significantly improves employee production in allied health institutions in Enugu State. Theoretically, this is consistent with Vroom's (1964) Expectancy Theory: when employees can reliably count on leave allowances being paid (high instrumentality) and value the financial benefit and rest opportunity that leave allowances provide (high valence), they are more motivated to sustain productive effort. The strong coefficient for leave allowance may reflect the particularly acute fatigue and burnout conditions characteristic of healthcare work environments, where the ability to take adequately compensated rest periods directly translates into restored productivity upon return to duty.

This finding is consistent with Ojo et al. (2021), who found that leave benefits significantly improved employee productivity by reducing burnout and enhancing work-life balance in Nigerian organizations. It also corroborates Emejulu (2020), who documented positive allowance-performance relationships in South-Eastern Nigerian public sector organizations. The relatively low mean score for leave allowance ($M = 2.847$) in this study, combined with its strongest regression coefficient, suggests a critical policy paradox: leave allowances have the highest performance-enhancing potential among the four reward components but are currently among the most inadequately administered, implying that targeted investment in more consistent and adequate leave allowance payment could generate the largest performance returns of all reward components studied.

Hypothesis Two (H02): Promotion and Employee Loyalty. Promotion exerted a significant positive effect on employee loyalty ($\beta = 0.347$, $t = 4.284$, $p < 0.001$), leading to the rejection of H02. This finding confirms that structured, transparent, and merit-based promotion systems significantly enhance the loyalty of allied health workers to their institutions. Employees who perceive genuine promotion opportunities as rewards for performance invest in long-term institutional relationships rather than exploring external employment alternatives, consistent with Equity Theory's prediction that perceived equitable access to advancement generates positive relational outcomes. The below-midpoint mean for Promotion ($M = 2.612$, the lowest among all reward components) reflects the systemic promotion challenges in Nigerian federal health institutions and highlights the substantial loyalty dividend that could be gained from improving promotion practices.

This result is consistent with Muhati and Makhamara (2023), who found that promotion systems significantly predicted employee performance and organizational commitment in Kenyan educational institutions, with merit-based promotion showing the strongest loyalty effects. It also aligns with Chukwuma et al. (2022), who identified promotion as the strongest motivational driver among reward components in a Nigerian public sector study, and with Abdulmumini (2021), who documented the significant impact of promotion on staff development in Nigerian higher institutions. The finding challenges the current practice of seniority-dominated promotion processes in many Nigerian federal health institutions and supports the case for performance-based promotion frameworks.

Hypothesis Three (H03): Health Insurance Scheme and Employee Commitment. Health Insurance Scheme significantly predicted employee commitment ($\beta = 0.312$, $t = 4.000$, $p < 0.001$), resulting in the rejection of H03. This finding indicates that the availability and adequacy of health insurance coverage significantly enhances the organizational commitment of allied health workers. The theoretical logic is consistent with Expectancy Theory: employees who value comprehensive health insurance as a critical welfare benefit (high valence) and perceive that continued employment is the means to access this benefit (high instrumentality) develop stronger affective and continuance commitment to their employing institution. Health Insurance Scheme recorded the highest mean among reward components ($M = 3.041$), suggesting that federal NHIS coverage provides a meaningful though imperfect welfare foundation for allied health workers in the sampled institutions.

This finding directly corroborates Ahmed et al. (2022), who found that health-related benefits generated the strongest commitment effects among reward components in a Nigerian teaching hospital study, a finding that is particularly salient given that allied health professionals, by virtue of their daily proximity to health challenges, are acutely aware of the value and inadequacy of health insurance coverage. It also aligns with the broader international evidence reviewed by Ndung'u et al. (2022), who found health benefits to be among the most effective reward components for generating employee retention and commitment in health sector organizations. The implication is that strengthening NHIS coverage, particularly expanding the range of covered conditions and reducing out-of-pocket co-payment burdens for allied health workers, could generate significant commitment improvements at relatively modest cost.

Hypothesis Four (H04): Christmas Bonus and Employee Motivation. Christmas Bonus exerted a significant positive effect on employee motivation ($\beta = 0.298$, $t = 3.590$, $p < 0.001$), leading to the rejection of H04. While Christmas Bonus recorded the smallest coefficient among the four reward components, its effect remained highly statistically significant, confirming that periodic financial bonuses contribute meaningfully to employee motivational levels. Theoretically, this is consistent with Expectancy Theory's valence construct: year-end bonuses, when reliably paid and perceived as acknowledgment of annual contributions, serve as positive reinforcements that sustain motivational investment in performance throughout the year. The relatively smaller coefficient compared to leave allowance and promotion may reflect the comparatively episodic nature of bonus payments, generating motivational spikes around payment periods rather than sustained motivational effects, consistent with Deci and Ryan's (1985) distinction between extrinsic motivational triggers and intrinsic motivational foundations.

This finding is consistent with Okeke et al. (2020), who found bonus payments to be significant performance predictors in Enugu State organizations, and with Odunayo (2022), who documented significant positive effects of financial bonuses on employee performance in Nigerian service sector organizations. The below-midpoint mean for Christmas Bonus ($M = 2.784$) reflects the irregular and often delayed nature of bonus payments in Nigerian federal institutions, a pattern that, combined with the significant regression coefficient, suggests that more consistent and timely bonus payment would generate measurable motivational benefits for allied health workers.

Conclusion and Recommendations

Summary of Findings

This study examined the influence of reward systems on employee performance in three allied health institutions in Enugu State, drawing on primary survey data from 347 respondents collected through a structured questionnaire. All four null hypotheses were rejected: Leave allowance significantly and positively affected employee production

(β = 0.384, p < 0.001); promotion significantly improved employee loyalty (β = 0.347, p < 0.001); health insurance scheme significantly enhanced employee commitment (β = 0.312, p < 0.001); and Christmas bonus significantly boosted employee motivation (β = 0.298, p < 0.001). The combined regression model explained 61.7% of variance in composite employee performance (R^2 = 0.617, F = 137.847, p < 0.001). Leave allowance emerged as the most influential reward component for employee performance, while Christmas bonus, though significant, showed the smallest effect.

Theoretical Contributions

This study makes three theoretical contributions. First, it provides primary empirical evidence validating Expectancy Theory (Vroom, 1964) in the allied health institutional context in Nigeria, demonstrating that specific reward components, when reliably delivered and personally valued, generate distinct performance improvements consistent with the theory's instrumentality and valence mechanisms. Second, the study validates Equity Theory (Adams, 1963) by demonstrating that perceived adequacy of specific rewards (particularly promotion and health insurance, which showed below-midpoint and above-midpoint means respectively) significantly conditions the performance outcomes generated, consistent with the theory's prediction that equity perceptions moderate the motivation-performance linkage. Third, the study contributes to the reward management literature specific to the Nigerian allied health sector by establishing a prioritized hierarchy of reward components by performance effect magnitude, a practical contribution that enables evidence-based reward investment decisions in resource-constrained healthcare institutions.

Policy Recommendations

Based on the findings, the following recommendations are directed to relevant stakeholders:

First, the Management Boards and Chief Medical Directors of the National Orthopaedic Hospital Enugu, Federal University of Allied Health Sciences Enugu, and Federal Neuropsychiatric Hospital Enugu should prioritize the consistent and timely payment of leave allowances to all categories of staff, given that leave allowance generated the strongest performance effect (β = 0.384). Specific mechanisms including automated leave allowance processing through IPPIS, pre-funding of leave accounts before annual leave periods commence, and quarterly verification of leave allowance payment status by HR departments should be implemented as standard policy.

Second, the Federal Ministry of Health and the heads of the sampled institutions should establish transparent, criteria-based, and time-bound promotion frameworks for all professional categories of allied health workers. Given that promotion showed the second-strongest performance effect (β = 0.347) and the lowest mean score (M = 2.612), indicating its simultaneous high potential and current inadequacy, implementation of performance-linked promotion criteria, regular promotion exercise schedules, and independent promotion assessment committees would significantly improve employee loyalty and reduce turnover intentions among allied health professionals.

Third, the National Health Insurance Authority (NHIA), which has replaced the NHIS under the National Health Insurance Authority Act 2022, should work with management of allied health institutions to expand the scope, depth, and accessibility of health insurance coverage for allied health workers, including reducing co-payment burdens, expanding the coverage of chronic and specialized conditions, and enrolling all staff categories without exception. Given health insurance's significant commitment effect (β = 0.312), comprehensive NHIA coverage represents a cost-effective retention and commitment strategy.

Fourth, the Finance Departments of the three institutions should establish budgetary provision for year-end Christmas bonuses as a regular, non-discretionary item in annual institutional budgets, ensuring predictable and timely payment. The consistent payment of bonuses, even at modest amounts, generates significant motivational benefits (β = 0.298) that justify budgetary prioritization as part of a comprehensive reward management strategy.

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