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Green Human Resource Management Practices and Employee Performance in Pharmaceutical Firms in Nigeria

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Abstract

The study assessed green human resource management practices and employee performance in Pharmaceutical firms in South-east Nigeria. The specific objectives of this study were to: examine the effect of green recruitment and selection on employee engagement of Pharmaceutical firms and ascertain the effect of green training and development on employee satisfaction of Pharmaceutical firms. Research design was descriptive survey research. Study Area was South East, Nigeria. The sample size of 332 respondents were taken from 2,455 staff out population of 11 registered Pharmaceutical companies in South-East Nigeria (Manufacturer Association of Nigeria, 2023). Research questions of the study were answered using mean score and standard deviation. The hypotheses stated were tested using t-statistic and f-statistic. The empirical results showed that

green recruitment and selection has significant effect on employee engagement of Pharmaceutical firms in South-east Nigeria (t-statistic; 5.046; P-value; 0.000 < Sig-value; 0.05); there is significant effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria. The study concluded that green human resource management practices have positive and significant effect on employee performance in Pharmaceutical firms in South-east Nigeria. The study recommends that management of Pharmaceutical firms in South-east Nigeria should pay adequate attention to induction training as it provides opportunity to the new employees to get familiarize with their current posts and makes them apprehend the general aims, policies, scope, challenges, and organization of the industry.

Keywords: Green Recruitment Employee Referral External Recruitment

1. Introduction

1.1 Background of the Study

Green human resource management (GHRM) is an emerging area in management that focuses on ensuring that an organization's management system is ecologically balanced and environmentally friendly. GHRM encompasses HR practices such as planning, recruitment, training, performance appraisal, rewards management, and human relations to align staff with an organization's environmental policies. GHRM is also seen as an employment model designed to retain, develop, and preserve talent to achieve future business initiatives and strategies while promoting sustainable practices and increasing employee awareness and commitment to sustainability (Onyekwelu, 2019) [19].

Green human resource management (GHRM) aims to create, enhance, and retain environmentally friendly practices within an organization's employees, thereby maximizing their individual contributions. GHRM can be implemented in all HR practices such as recruitment, hiring, training, compensating, developing, and improving an organization's human capital. Green recruitment involves paper-free recruitment processes with minimal environmental impact, and sustainable development issues must be integrated into the recruitment process. Green training and development educate employees on environmental management, energy conservation, and waste reduction. Compensation packages should be customized to reward green skills acquisition and achievements by employees (Olanipekun & Ishola, 2023) [18]. Organizations can use incentives and disincentives to produce desirable behaviors, such as verbal feedback from supervisors, recognition-based awards, and monetary incentives. Companies that minimize their toxic material utilization, eliminate or dispose of random product components, and reduce the environmental impact of their products can gain distinct advantages in sales and revenues.

Recruitment is the process of attracting and identifying potential candidates, while selection involves choosing the most suitable individuals to fill specific job roles. Recruitment is the discovering of potential candidates for actual or anticipated

organizational vacancies. It can also be seen as act of linking/bringing together those with jobs vacancy and needs to fill the vacant with those seeking for the vacant job. While selection is the second step in the process of man power planning and acquisition. It is the process of choosing the appropriate candidate that matches the job requirements in the organization (Oderinde, Olanipekun & Ukutegbe, 2024) ^[15]. Selection process in large organizations may be lengthy and will be wider for manufacturing organizations and differs from one industry to other depending on the task and competitiveness of the industry. An effective recruitment and selection strategy not only helps in hiring competent individuals but also sets the foundation for employee satisfaction and long-term retention. Internal recruitment and selection practices entails the process of filling job vacancies with existing employees through promotions, job posting, job bidding, lateral moves, or rehiring former staff. It leverages internal talent to boost morale, reduce hiring costs/time, and ensure a better cultural fit (Kumar & Fashola, 2023) ^[11].

Green training emerges as the primary independent variable capable of bridging the gap between current and expected workforce performance states. Green training encompasses structured educational interventions designed to develop employee competencies in environmental awareness, sustainable practices, eco-friendly technologies, and environmental compliance procedures (Kumar & Fashola, 2023) ^[11]. The theoretical foundation for green training effectiveness rests on human capital theory, which posits that investments in employee knowledge and skills generate measurable returns through enhanced productivity and performance outcomes (Roberts & Ahmed, 2023). In the Pharmaceutical firms, green training programs typically integrate technical skills development with environmental consciousness, creating a workforce capable of implementing sustainable practices while maintaining or improving operational efficiency (Okoliko & Kadiri, 2022) ^[17].

Training is needed to help workers perform better; also enable them to be creative and competent. With that ecological issue, however, the companies are more inclined to provide its workers with green training. Green training allows workers to learn those skills to tackle organization's environmental issues (Mohammed, Yakubu & Mohammed, 2023) ^[13]. Designing specific ecological management training programs for employees: Designing and developing advanced training programs, education initiatives focused on the organization's needs, such as recycling education, waste management etc. (Anastasi, 2025; Aswini, 2024) ^[5, 8]. It consists of teaching/ impacting employees on working practices that minimize waste, use resources properly, energy efficiency and the causes of ecological degradation (Anastasi, 2025) ^[5]. However, the implementation of green policies in emerging economies, such as Nigeria, is unclear.

1.2 Statement of the Problem

Inadequate Green Human Resource Management (GHRM) in Nigeria leads to poor operational efficiency, lower productivity, increased environmental pollution (like gas flaring), poor corporate image, higher health risks for communities, employee disengagement, difficulty attracting/retaining talent, and hinders sustainable development, resulting in financial losses and reduced global competitiveness, especially in Pharmaceutical firms

in Nigeria. Additionally, inadequate implementation of Green HRM in Nigeria leads to lower profitability, operational inefficiency (high resource use, waste), decreased productivity, poor employee engagement/retention, damaged reputation, and non-compliance with global sustainability standards, hindering long-term growth and competitiveness, especially in sectors like Pharmaceutical firms and manufacturing. This failure results from neglecting green training, recruitment, and rewards, ultimately costing businesses money and harming their environmental image.

Organizational performance and green human resources management (GHRM) practices entail the adoption of environmentally friendly hiring, training, engagement, performance management, and remuneration methods, policies, and procedures. Failure of Pharmaceutical firms to adopt green human resource management may result to reduced productivity. This is because the organization's failure to adopt green human resource management principles could result in serious health issues, which could make employees less productive at work since they believe their business is unfriendly to the environment.

In Pharmaceutical firms, failing to use green human resource management strategies may also be a factor of decline in employee performance. It's possible that a Pharmaceutical firms' lack of commitment to green human resource management practices is to blame. Based on these anomalies, this study examined the employee performance in southeast Nigeria and green human resource management strategies.

1.3 Objectives of the Study

The main objective of this study was to examine green human resource management practices and employee performance in Pharmaceutical firms in South-east Nigeria. The specific objectives of this study were to:

1. Examine the effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria.
2. Ascertain the effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria.

1.4 Research Questions

This study sought to provide answers to the following research questions.

1. What is the effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria?
2. To what extent does green training and development affects employee satisfaction of Pharmaceutical firms in South-east Nigeria?

1.5 Significance of the Study

The study would be benefit the following individuals and groups:

Customers: The study is very important for customers because they demonstrate a company's commitment to environmental sustainability, which can enhance brand image, attract environmentally conscious customers, build customer loyalty, and ultimately influence buying decisions by positively impacting perceptions of the company's social responsibility.

Employee: The study is important to employee because it help in understanding how to positively impact employees by promoting environmental responsibility, increasing employee engagement, fostering a positive company image, attracting eco-conscious talent, and ultimately contributing to a more sustainable workplace.

Researcher: The study is crucial for researchers and students as it cultivates environmental awareness, promotes sustainable research practices, enhances employability by aligning with industry trends, and provides opportunities to contribute to impactful research projects focused on environmental solutions, ultimately shaping a future workforce that prioritizes sustainability.

2.1 Conceptual Literature

2.1.1 Green Human Resource Management

The term Green Human Resource Management (Green HRM) was coined 10 years ago (Renwick, Redman & Maguire, 2008) and is defined as “integration of environmental management program into human resource management system of an organization. It is the process of aligning HRM policies and practices strategically towards environmental friendly policies and practices. It aims to reducing carbon footprint of each employee working in the organization providing them with healthy and motivated work culture. Thus it has two elements: (a) Preservation of knowledge capital and (b) Environmental friendly practices (Ogbu, 2021) ^[16].

Environmentally Friendly Human Resource Administration According to research, HRM systems have evolved from antiquated work practices and low levels of human interaction to more accommodating and engaging phases that encourage employees to improve their skills, knowledge, and methods (Nwankwo, Orga & Ugwu, 2019) ^[14].

GHRM refers to HRM techniques that focus on the economic and environmental impacts of businesses in an era of increased awareness of environmental protection and natural resource production (Mesigo, Okeke & Okeke, (2022) ^[12]. It is associated with excellent environmental practices and employee green activities. We believe that GHRM represents sound environmental management practices and is an important part of the literature on sustainable HRM. GHRM acts as a link between environmental management programs and human resource management approaches (Ansari *et al.*, 2020; Masri & Jaaron, 2017).

2.1.2 Key components of Green Human Resource Management

Green recruitment is the process of hiring individuals with a focus on sustainability and environmental responsibility. It involves incorporating environmental considerations into the recruitment process to ensure that the organization attracts and selects candidates who are not only qualified for the job but also aligned with the organization's sustainability goals (Arago & Jabbour, 2020).

Using environmentally friendly recruiting strategies, such as online methods and low paper usage throughout the recruitment process, as well as evaluating green attitudes during selection are among the tactics that make up the process of green recruitment and selection (Zirra, Ogbu, & Ojo, 2023) ^[24]. Green aptitudes are crucial for pro-environmental performance (Ukpabi & Salaudeen, 2021) ^[23]. Therefore, taking into account those who appreciate eco-

friendly practices and practice fundamental eco-friendly behaviors like recycling, carpooling, and energy conservation are particularly valuable in achieving this goal. However, even candidates who place high importance on environmental responsibility are likely to be drawn to businesses that have earned the title of "Green Employer" (Phillips, 2007).

A study by Olufemi *et al.* (2020) investigated the influence of green recruitment practices on organizational performance in Nigerian universities. The findings revealed a positive correlation between the adoption of green recruitment strategies, such as incorporating sustainability criteria into job descriptions and candidate evaluations, and organizational productivity. Institutions that prioritized environmental values in their recruitment process were found to have higher levels of employee engagement, commitment, and performance, ultimately contributing to enhanced productivity.

Green Training and Development

Green Training and Development refers to the educational programs and activities within an organization designed to enhance employees' knowledge, skills, and attitudes toward environmental sustainability. It focuses on equipping staff with the competencies needed to contribute to the organization's environmental goals and to adopt sustainable practices in their daily work.

To achieve strong environmental performance, it might be viewed as necessary to raise all levels of organizational staff to be environmentally conscious. Therefore, it is crucial to provide environmental education that can influence organizational members' attitudes and behaviors (Shayista *et al.* 2019). This is a crucial component of GHRM that requires staff members to become aware of environmental issues and make the connection between corporate behavior and green behavior. It prevents individuals from applying their professional talents in a way that adheres to environmental norms (Bansal and Roth 2020). These abilities include knowledge of environmental preservation, environmental literacy, and waste minimization (May and Flannery 1995). Employees on the front lines deal with data management, and this training equips them with managerial abilities for waste management in their daily tasks.

2.1.3 Employee Performance

Employee performance is described as an employee's ability to complete his or her mission in accordance with the organization's expectations. It is a measurement of how well a job task is completed. Employee performance is the foundation upon which overall company success is built, and it includes monetary and non-monetary outcomes for employees (Tessema, 2021). Aderibigbe and Dunmade (2019) opined that metrics of employee performance includes quality of work, employee's honesty, initiative, attendance, attitude, reliability, cooperation, and proper knowledge of job.

Fernando and Dissanayake (2019) defined employee performance as how employees carry out the tasks assigned to them within stipulated deadlines. To improve value to consumers, reduce costs, and function effectively, organizations typically create performance goals for individual employees and the organization as a whole (Fidyah & Setiawati, 2020; Kiruja & Mukuru, 2018). Thus, performance relates to the efficacy, quality, and efficiency of a task for an individual employee. According to Khayinga

and Muathe, (2018), employees' performance is more likely to be enhanced when they are allowed to participate in decision-making and contribute to the implementation of change that affects them. Employee performance is viewed as an ongoing process, and it is based on the quality of work, cost-effectiveness, punctuality, and response to one's task (Deku, 2021).

2.2 Theoretical Literature

2.2.1 Resource-Based View Theory (RBV)

The foundation of the Resource-Based View (RBV) can be traced back to the works of Barney (1986) and Dierickx and Cool (1989), who contend that a relationship exists between a firm's resources (such as employees and systems) and the attainment of sustained competitive advantages. In alignment with this perspective, Wright *et al.* (2001) emphasize that human resources represent a crucial asset for firms to gain sustainable competitive advantages. Previous research corroborates that the Based View identifies human resources as a key source of sustainable competitive advantage, enhancing the Environmental Performance (EP) of a firm (Magsi *et al.*, 2018). Similarly, Schmit *et al.* (2012) assert that human resources play a vital role in a firm's ability to secure a sustainable competitive advantage. Furthermore, Barney (2001) underscores that the effective management of resources and skills is essential for an organization's sustainable competitiveness, emphasizing the importance of not just possessing resources but also managing them strategically.

Therefore, according to the Resource-Based View, green recruitment and selection, green training and development, green performance appraisal, and green reward systems are effective tools for enhancing EP. In support of this perspective, Saifulina and Carballo-Penel (2017) provide evidence that green Human Resource Management (HRM) practices foster employee engagement in ecological innovation, contribute to the reduction of waste and recycling, mitigate the emissions of toxic chemicals, decrease the consumption of electricity, promote the use of renewable energy and sustainable fuels, and enhance product quality.

2.3 Empirical Literature

2.3.1 The effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria

Suardana, Martini & Yuesti (2024) [22] conducted a study on the effect of employee engagement, job satisfaction, and superior-subordinate relationships on the desire to change job and its implications in employee resignation. The study sought to analyze the effect of work engagement, job satisfaction and superior-subordinate relations on the desire to change jobs; analyze the effect of the desire to change jobs, work engagement, job satisfaction and the relationship between superiors and subordinates on employee resignation. The study adopted quantitative research design. Data were analyzed using Partial Least Square (PLS). the sample size of eighty three was used. The finding showed that work engagement; job satisfaction; negative and significant effect on employees' desire to change jobs, also the relationship between superiors and subordinates has a negative and significant effect on employees' desire to change jobs. The study recommended that high rate of employee resignation is a serious problem in this private

hospital.

Adepoju and Oluranti (2024) [1] conducted a study on the impact of employee engagement on service quality in Nigerian Public Agencies. The study sought to examine the key dimensions of employee engagement – absorption, vigor, and dedication and their effects on service quality. The study utilized a mixed-methods approach. The findings of this study are expected to contribute to a theoretical understanding of the impact of employee engagement on service quality within the asset management sector. The study recommended that to provide practical insights for AMCON, potentially improving service delivery strategies and effectiveness in fulfilling its mandate.

Anjali and Sapna (2024) [6] conducted a study on the green human resource management and work engagement: Linking HRM performance attributions. The study sought to investigate the role of green human resource management practices by examining their direct and indirect effect on work engagement. The sample size of 362 was used. The study adopted. The findings showed that valuable insights for organizations aiming to enhance employee engagement and HRM performance attributions through the strategic integration of GHRM. The study recommended that socially responsible companies are adopting sustainability measures to mitigate their impact on the environment.

Wicaksari, Saputra & Rahmah (2024) conducted a study on the influence of green quality of work life, green employee engagement, and green rewards on green employee retention in SME employees. The study sought to determine the influence of green quality of work life, green employee engagement, and green rewards on green employee retention. The study employs a quantitative approach. A sample size of two hundred and four (204) was employed. The finding showed that green quality of work life does not significantly affect green employee retention. however, green employee engagement and green rewards have a significant impact on green employee retention. The study recommended that quality of work life should not only focus on improving the quality of work for a better life but also ensure adequate salaries and rewards as benchmarks for quality of work life.

2.3.2 The effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria

Charles, Robert & Edwin (2024) [9] examined on the analysis of the impact of green training and development practices on employee performance in Western Kenya Public Universities. The study sought to examine the impact of green training and development practices on employee performance in public universities in Western Kenya. The study adopted a positivist philosophy and an explanatory research design. The population was 438. A sample of 209 was employed. Data was analyzed using inferential statistic of correlation and multiple regression analysis. The findings showed that green training enhances employees' knowledge, competencies and skills which in turn improves their performance. The study concluded that the role of green human resource management practices, particularly green training, on employee performance in Kenyan public universities remains relatively unexplored. The study recommends that universities should prioritize and invest in green training by increasing budgetary allocations for staff capacity building programs on environmental conservation. Agu, Onuorah, Emeka & Dike (2024) [2] conducted a study

on the organisational climate and employee satisfaction in Pharmaceutical firms in South-East, Nigeria. The objectives were; to determine the extent to which communication affects employee satisfaction; to evaluate the effect of leadership style on employee satisfaction; to examine how organizational structure affects employee satisfaction in pharmaceutical firms in South-East, Nigeria. Survey research design was adopted. The population of the study was two thousand eighty seven (2087). The sample size of (400). The population used in the analysis was 350. Multiple Regression Analysis (MRA) method was used in testing the hypotheses. The finding showed that communication had a significant positive effect on employee satisfaction in pharmaceutical firms in South-East, Nigeria. The study concluded that organizational climate had a significant positive effect on employees' satisfaction in pharmaceutical firms in South-East, Nigeria. The study recommended that management of pharmaceutical firms should provide the right tools for their employees to communicate effectively such as instant message platforms, be open and transparent, organize team-building activities and facilitate frequent feedback.

Mampuru, Mokoena & Isabirye (2024) conducted a study on the training and development impact on job satisfaction, loyalty and retention among academics. The study sought to examine the relationships between training and development programmes and job satisfaction, loyalty and retention among academic staff. The study used a quantitative research methodology. Data were analyzed using regression analysis. The sample of two hundred and seventy (270) was used. The findings showed training interventions can foster a positive work environment and enhance staff members' commitment and long-term engagement, ultimately improving the overall quality and reputation of the institution. The study recommended that universities should prioritise the development of tailored training initiatives that address the specific needs and aspirations of their academic staff.

Aham (2024) [4] conducted a study on the examining the impact of employee training and development programs on their job satisfaction and performance. The study sought to investigate the impact of training and development programs on job satisfaction and employee performance within private commercial banks in South Sudan. The study adopted a quantitative research design. The population of one thousand nine hundred and twelve (1,912), and sample size of three hundred and ninety seven (397) was used. Data were analyzed using Covariance-Based Structural Equation Modeling. The finding showed that training and development programs significantly enhance job satisfaction. The study recommended by providing practical insights for managers, recommending ongoing investment in training initiatives to foster better job satisfaction and performance.

2.4 Literature Gaps

There exist research gap between this study and past researches. The research gap covers subject gap, gap on geographical location of the study, gap on the variables and contents of the study.

Subject gap: The subject matter of this work and some reviewed empirical studies has some differences. There are limited studies on green human resource management practices and employee performance in Pharmaceutical

firms in South-east Nigeria. The study is geared to bridge the time gap in literature.

Gap on geographical location of the study: This work covers Pharmaceutical firms in South-east Nigeria and specifically Pharmaceutical firms that operate in South East. None of the past studies used Nemel Pharmaceutical Industry, Paucos Pharmaceutical Limited, A.C. Drugs Ltd, Orange Drugs, Juhel Nigeria Limited. None of past studies failed to use these organizations under study and this study is geared to bridge the study organizational gaps in literature.

Gap on the variables and contents of the study: The variables used in this study as proxies for green human resource management practices includes green recruitment and selection, green training and development, (Independent variable); while proxies for employee performance includes employee engagement, employee satisfaction, (dependent variable). None of past studies failed to use these variables as specified above. The study is geared to bridge the variables gap in literature.

3.1 Methodology

Study area was South East Nigeria. The choice of location was based on proximity, effective coverage and cost minimization. The research design of the study was descriptive survey design. The study used structured questionnaire to obtain data. The selected indigenous Pharmaceutical companies in South-East Nigeria were Nemel Pharmaceutical Industry, Paucos Pharmaceutical Limited, A.C. Drugs Ltd, Orange Drugs, Juhel Nigeria Limited. The population of the study was 2455 staff of selected organizations under study with a sample size of 332 respondents arrived by applying Freund and Williams sampling technique. Research questions of the study were answered using mean score and standard deviation. The data was analyzed using logistic least square method and hypotheses tested at a 5% level of significance using the Statistical Package for Social Sciences [SPSS].

Data Presentation and Analysis

Table 1: Comprehensive Demographic distribution of the Respondents

Title	Frequency	Percentage
Questionnaire Distributed	332	100%
Returned Questionnaire	300	90%
Not Returned Questionnaire	32	10%
Gender		
Female	155	51.6%
Male	145	48.3%
Age Bracket		
20-30 Years	95	31.6%
31-40 Years	111	37%
41-50 Years	66	22%
51 Years – above	28	9.3%
Marital Status		
Married	165	55%
Single	125	41.6%
Widow/widower	7	2.3%
Divorce	3	1%
Educational Qualification		
HND/B.sc	172	57.3%
MBA/M.sc	125	41.6%
Ph.D	3	1%

Sources: Field Survey, 2025

Three hundred and thirty two (332) copies of questionnaire were designed and distributed to the respondents. Out of the 332 Questionnaires distributed, 300 (90%) were completed and returned while 32 (10%) were not returned. Therefore, 90 percent respondents were a good representation. The table showed the respondents profile in frequency and

percentage distribution of gender, age bracket, marital status and educational qualification.

3.2 Data Analysis

Question One: What is the effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria?

Table 2: Mean rating of respondents on what is the effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria

S. No	Question Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Total	Mean	SD
1	Positive recruitment helps to build a strong employer brand and attracts candidates who are genuinely aligned with the company's values and culture.	900 180 60%	248 62 21%	84 28 9%	46 23 8%	7 7 2%	1285 300 100%	4.28	0.0738
2	Recruitment foster a sense of belonging and purpose, making employees feel valued and connected to the company's mission.	630 126 42%	400 100 33%	132 44 15%	40 20 7%	10 10 3%	1212 300 100%	4.04	0.0600
3	Positive recruitment helps to attract the right talent candidates that have new ideas, expertise, and skills to improve their productivity and profitability.	1000 200 67%	252 63 21%	75 25 8%	18 9 3%	3 3 1%	1348 300 100%	4.49	0.0860
4	Positive recruitment helps reduce employee turnover by retaining the right employees to improve organizations goals.	950 190 64%	292 73 24%	45 15 5%	24 12 4%	10 10 3%	1321 300 100%	4.40	0.0808
Grand Mean							4.302	0.0762	

Source: Field Survey, 2025

This table showed the opinion of respondents on what is the effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria. The respondents are in agreement with all the items. The study thereby revealed that green recruitment and selection has significant effect on employee engagement of Pharmaceutical firms in South-east Nigeria since positive

recruitment helps to attract the right talent candidates that have new ideas, expertise, and skills to improve their productivity and profitability (The grand mean 4.302 was greater than the cutoff point 3).

Question Two: To what extent does green training and development affects employee satisfaction of Pharmaceutical firms in South-east Nigeria?

Table 3: Mean rating of respondents on what extent does green training and development affects employee satisfaction of Pharmaceutical firms in South-east Nigeria

S. No	Question Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Total	Mean	SD
1	Induction training designed for newly engaged employees to get them acquainted with the overall requirement of the organization such as norms, ethics, goals, rules and regulations.	630 126 42%	400 100 33%	132 44 15%	40 20 7%	10 10 3%	1212 300 100%	4.04	0.0600
2	Induction training provide opportunity to the new employees to be acquainted with the organization's structure, culture, work standard and diverse conditions of employment	580 116 39%	400 100 33%	162 54 22%	26 13 4%	17 17 2%	1185 300 100%	3.95	0.0548
3	Formal education provides opportunity for acquiring better skills and experiences resign for a job with higher pay.	610 122 41%	400 100 33%	144 48 16%	46 23 8%	7 7 2%	1207 300 100%	4.02	0.0588
4	Formal education forms the basis training required for employment and further on-the-job training	865 173 58%	276 69 23%	111 37 12%	24 12 4%	8 8 3%	1284 300 100%	4.28	0.0738
Grand Mean							4.072	0.0618	

Source: Field Survey, 2025

This table showed the opinion of respondents on what extent does green training and development affects employee satisfaction of Pharmaceutical firms in South-east Nigeria. The respondents are in agreement with all the items. The study thereby revealed that there is significant effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria since formal education forms the basis training required for employment and further on-the-job training (The grand me 4.205 was greater than the cutoff point 3).

3.3 Test of Hypotheses

The two hypotheses were formulated for this study and will be tested and a decision taken is based on the rule below.

Decision rule: Reject Hi if P-value > 0.01

3.3.1 Test of Hypothesis One

H₁ = Green recruitment and selection has no significant effect on employee engagement of Pharmaceutical firms in South-east Nigeria.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931 ^a	.866	.865	.26055

a. Predictors: (Constant), Green Recruitment and Selection

ANOVA ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	36.920	1	36.920	12.034	.000 ^b
	Residual	1095.276	299	3.068		
	Total	1132.1963	300			

a. Dependent Variable: Employee Engagement

b. Predictors: (Constant), Green Recruitment and Selection

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.712	.089		8.011	.000
	Green Recruitment and Selection	.413	.082	.931	5.046	.000

a. Dependent Variable: Employee Engagement

In testing this hypothesis, green recruitment and selection was regressed against employee engagement. The result of the single-regression analysis showed the model to examine the effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria.

$$\text{Employee engagement} = 0.712 + 0.413 \text{ Green Recruitment and Selection}$$

The empirical result showed that the coefficient of green recruitment and selection had positive effect on employee engagement; it means that green recruitment and selection had positive and direct effect on employee engagement. The results of the t – statistic denoted that the coefficient of green recruitment and selection was statistically significance. This is because observed values of t – statistic

(5.046) was greater than its P-values (0.000). The results of the F – statistical test showed that the overall regression of the hypothesis two was statistically significance. This was because observed value of the F – statistic (12.034) was great than its P-value (0.000). Again, our empirical result showed that the Pearson product moment correlation analysis (r) was 0.931. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that green recruitment and selection has significant effect on employee engagement of Pharmaceutical firms in South-east Nigeria.

3.3.2 Test of Hypothesis Two

H₂ = There is no significant effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 ^a	.766	.865	.26055

a. Predictors: (Constant), Green Training and Development

ANOVA ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	43.789	1	43.789	9.184	.000 ^b
	Residual	1702.176	299	4.768		
	Total	1745.965	300			

a. Dependent Variable: Employee Satisfaction

b. Predictors: (Constant), Green Training and Development

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.418	.075		5.568	.000
	Green Training and Development	.579	.074	.969	7.826	.000

a. Dependent Variable: Employee Satisfaction

In testing this hypothesis, green training and development was regressed against employee satisfaction. The result of the single-regression analysis showed the model to ascertain the effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria.

$$\text{Employee satisfaction} = 0.418 + 0.579 \text{ Green training and development}$$

The empirical result showed that the coefficient of green training and development had positive effect on employee satisfaction; it means that green training and development had positive and direct effect on employee satisfaction. The results of the t – statistic denoted that the coefficient of green training and development was statistically significance. This was because observed values of t – statistic (7.826) was greater than its P-values (0.000). The

results of the F – statistical test showed that the overall regression of the hypothesis three was statistically significance. This was because observed value of the F – statistic (9.184) was greater than its P-value (0.000). Again, our empirical result showed that the Pearson product moment correlation analysis (r) was 0.831. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that there is significant effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria.

4. Discussion of Findings

Effect of green recruitment and selection on employee engagement of Pharmaceutical firms in South-east Nigeria

The findings of the study revealed that green recruitment and selection has significant effect on employee engagement of Pharmaceutical firms in South-east Nigeria since positive recruitment helps to attract the right talent candidates that have new ideas, expertise, and skills to improve their productivity and profitability (t-statistic; 5.046; P-value; 0.000 < Sig-value; 0.05).

The outcome of the study is in line with the study of Adepoju and Oluranti (2024) ^[1] that conducted a study on the impact of employee engagement on service quality in Nigerian Public Agencies. The study sought to examine the key dimensions of employee engagement – absorption, vigor, and dedication and their effects on service quality. The study utilized a mixed-methods approach. The findings of this study are expected to contribute to a theoretical understanding of the impact of employee engagement on service quality within the asset management sector. The study recommended that to provide practical insights for AMCON, potentially improving service delivery strategies and effectiveness in fulfilling its mandate.

Effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria

The findings of the study revealed that there is significant effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria since formal education forms the basis training required for employment and further on-the-job training (t-statistic; 7.826; P-value; 0.000 < Sig-value; 0.05).

The outcome of the study is not in line with the study of Agu, Onuorah, Emeka & Dike (2024) ^[2] that conducted a study on the organisational climate and employee satisfaction in Pharmaceutical firms in South-East, Nigeria. The objectives were; to determine the extent to which communication affects employee satisfaction; to evaluate the effect of leadership style on employee satisfaction; to examine how organizational structure affects employee satisfaction in pharmaceutical firms in South-East, Nigeria. Survey research design was adopted. The population of the study was two thousand eighty seven (2087). The sample size of (400). The population used in the analysis was 350. Multiple Regression Analysis (MRA) method was used in testing the hypotheses. The finding showed that communication had a significant positive effect on employee satisfaction in pharmaceutical firms in South-East, Nigeria.

5. Summary of Findings

The following are the major findings of the study:

1. The study revealed that green recruitment and selection has significant effect on employee engagement of Pharmaceutical firms in South-east Nigeria since positive recruitment helps to attract the right talent candidates that have new ideas, expertise, and skills to improve their productivity and profitability (t-statistic; 5.046; P-value; 0.000 < Sig-value; 0.05).
2. The study revealed that there is significant effect of green training and development on employee satisfaction of Pharmaceutical firms in South-east Nigeria since formal education forms the basis training required for employment and further on-the-job training (t-statistic; 7.826; P-value; 0.000 < Sig-value; 0.05).

5.1 Conclusion

The study concluded that green human resource management practices have positive and significant effect on employee performance in Pharmaceutical firms in South-east Nigeria since the major green human resource management practices were green recruitment and selection, and green training and development. The induction training provides opportunity to the new employees to get familiarize with their current posts and to make them apprehend the general aims, policies, scope, challenges, and organization of the industry, job rotation enables management discover the aptitude of workers, area of interest and determine the area of specialization, formal education provides opportunity to employee to get specialized training and skills capable promoting organizational competitive advantage, programmed instruction provides management with special directive to employee to reduce the need for continuous direction and supervision.

5.2 Recommendations

Based on the findings of this study, the following recommendations were made.

1. Management of Pharmaceutical firms in South-east Nigeria should pay adequate attention to induction training as it provides opportunity to the new employees to get familiarize with their current posts and makes them apprehend the general aims, policies, scope, challenges, and organization of the industry. Management of Management of Pharmaceutical firms should always involve job rotation as it enables them to discover the aptitude of workers, area of interest and determine the area of specialization.
2. Management of Pharmaceutical firms in South-east Nigeria should leverage in programmatic job advertising to attract highly qualified candidates for the vacancies. Organizing and attending recruitment events like virtual job fairs, hackathons, and informal lunch-and-learn sessions.

6. References

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