

# **GREEN EMPLOYEE RELATIONS AS A PREDICTOR OF ENVIRONMENTAL SUSTAINABILITY: EVIDENCE FROM SELECTED PHARMACEUTICAL FIRMS IN OGUN STATE, NIGERIA**

**OLANIPEKUN LATEEF OKIKIOLA**

Lagos State University, Ojo, Lagos, Nigeria  
afolabiseyo@yahoo.com

**AJAYI MOBOLANLE ADUNOLA**

Bells University of Technology, Ota, Nigeria

## **Abstract**

Due to continuous degradation of the environment by the activities of pharmaceutical firms, its sustainability has become imperative for managements who are forward thinkers in this current age. Consequent on the above analogy, this study examined green employee relations as a predictor of environmental sustainability among selected Pharmaceutical Firms in Ogun State, Nigeria. The study was established on the resource based view theory and social exchange theory, respectively. The study employed a descriptive research design, with a population of one thousand three hundred and sixty-six (1,366) and data were collected using the purposive sampling method in selecting the case study firms; while stratified and simple random sampling techniques were used in selecting two hundred and seventy three (273) employees of three selected pharmaceutical firms in Ogun State. Results from the two stated and tested hypotheses reflected that (i) green employee involvement significantly affect employee green creativity with ( $R^2 = 0.828$ ;  $p = 0.000 < 0.05$ ); (ii) green employee advocacy have a significant relationship with corporate environmental responsibility with ( $r = 0.911$ ;  $p = 0.000 < 0.05$ ). The study concluded that since initiatives for managing the environment is not a one sided event, its responsibility thus required a shared commitment of both management and employees to collaboratively harness their plans towards improving its standard. Therefore, management should make green employee involvement a priority; as it is an engine for unlocking employees' green creativity, which will make them advocates of the green mantra whose outcome, will make management, become more environmentally responsible.

**Keywords:** Corporate Environmental Responsibility, Employee Green Creativity, Green Employee Advocacy, Green Employee Involvement and Green Employee Relations.

**JEL Classification:** F16

## 1. INTRODUCTION

Sustainability as a concept is fast gaining momentum globally with premium being placed on environmental sustainability as a medium for ensuring a safe haven for mankind. The issue of sustainability cuts across many parts; thus, saying sustainability is interdisciplinary, trans-disciplinary and trans-organizational in scope is not gainsaying (Laszlo & Goyal, 2020). Business activities have gone past the traditional era of just mere economic gains; hence, commitment towards sustainability and effective management of the environment where production related activities takes place requires a dual responsibility of both management and employees working as partners towards environmental enhancement (Yong, Yusliza, Ramayah, & Fawehinmi, 2019). Consequently, management of the environment is a collective responsibility of all stakeholders, which include management, employees, practitioners and so on; based on the notion and position that strategically implementing effective environmental management and revitalization is paramount to organizations as a means of reacting to externalities for increased competitive advantage (Ambec & Lanoie, 2021). Environmental sustainability has been on the front burner of debates worldwide and has gained increased attention from scholars in the human resource management parlance who have ceaselessly champion the course of sustainability as a way of ensuring the safety of all and sundry; meaning that while organizations are meeting their current needs, their activities should bear in mind the needs of future generations must not be compromised or infringed upon (Pham, Tuckova & Jabbour, 2019).

Green employee relation is a philosophy which involves employee contributions in the organization's green decision, functions and processes. It represents the procedure for involving and ensuring employees' participation in green related initiatives by amplifying their capabilities as a way of integrating them into the consciousness of the green culture (Ullah, 2017). In the opinion of Sarkis, Gonzalez-Torre and Adenso-Diaz, (2020), employee involvement improves environmental effectiveness through increased resource efficiency and waste reduction in the organization. Therefore, imbibing the culture of effective employee engagement in environmental concerns will result in a positive and successful environmental innovativeness; because initiatives on the appropriate management of the environmental is not just the sole obligation of the management; consequently, employee involvement in green concerns becomes an avenue for shared commitment (Atiku & Fapohunda, 2020).

From the above, it can be concluded that green employee relations can be adduced as an instrument employed by the management for developing a healthy relationship with the employees on green related concerns (Ojiaku, Achi & Aghara, 2018). Therefore, this study examined green employee relations as a predictor of environmental sustainability with evidence from selected pharmaceutical firms in

Ogun State, Nigeria with green employee involvement and green employee advocacy as indicators for measuring green employee relations while employee green creativity and corporate environmental responsibility served as indicators for measuring environmental sustainability.

## **2. STATEMENT OF THE PROBLEM**

The pharmaceutical industry has been adjudged as the engineer of economic growth and social change; which has over the years assist in reduction of poverty through employment bridged the gap of inequality which is one of the biggest challenges bedeviling the Nigerian society (Wright, 2015; Charles, 2020); but in spite the significant and positive contributions of this industry; its operations and activities have been marred with negative environmental consequences and one of these most prominent of this is pollution; which is becoming not just a national but a global threat to both the ecosystem and human lives and existence (Akintoye & Hassan, 2018).

This apparent manifests and reflects on water surfaces as a negative products of pharmaceutical wastes and effluents from sewages, groundwater, drinking water, soil and manure all of which have become threats to the environment and human on a broader spectrum (Abdulhaq & Muhamed, 2017; Mohammed, Abubakar, Ahmed, Garba, & Bashir, 2020). In compounding the degree of pollution witnessed by the environment; study by Mohammed, Yusuf, Bashir, Aishatu and Muhammad, (2020) submitted that activities of pharmaceutical firms in recent times have reflected significant increase in Antimicrobial Resistance, which has been diagnosed as one of the biggest concerns and issues of environmental defacement both locally and globally. Additionally, a study by Solomon, (2017), Murphy, (2019), Mohammed, (2019), pointed out that activities of the Nigerian pharmaceutical firms is associated with Carbon Dioxide (Co<sub>2</sub>) emissions; which is a significant contributory factor to global warming and climate changes; with immeasurable environmental consequences.

## **3. EMPIRICAL REVIEW**

Renwick, Redman and Maguire, (2018) whose study review the effect of employee green involvement in firms environmental performance; findings from their study brought to the fore that involving employees in environmental concerns allows them to creatively suggest novel ideas as mechanisms for enhancing environmental quality of the firm. In this study, the authors employed descriptive style of research with a population of 800 staff of a municipal Council in the United Kingdom; four research objectives, questions and hypotheses were considered for this study at 0.05 Significance Alpha level; One-way ANOVA, T-Test independent sample were used as analyses for the data obtained and all the null hypotheses were

rejected with (9.651,  $p = .002$ , (Beta = 0.304,  $p = 0.011$ ) and (Beta = 0.138;  $p = 0.021$ ), respectively; this delineated that employee green involvement significantly and positively affects employees green creativity.

A study by Ahmad (2017) investigated the connection between involving employees in green related issues on employee green creativity in selected municipal councils in Poland. It was discovered that green employee involvement to a great extent led to high degree of job satisfaction and engagement which significantly translated into critically addressing environmental challenges emerging from the organization through employees' novel suggestions. Descriptive and inferential research design was employed in this study with a sample size of 300 employees which were randomly selected. The outcome of this study provided that green employee involvement is a gateway for unleashing employees' green creativity with (Beta = 0.981,  $p = 0.000$ ).

Another study by Jabbour, and Santos, (2020) which was established on assessing the effect of green employee involvement practices on employee green creativity with reference to ten (10) selected Firms in the Pakistan manufacturing sector; finding revealed that management policies on employee involvement in environmental concerns should be simultaneously implemented; as this will help in promoting employees green suggestion schemes on environmental activities at work; also, by providing employees with opportunities for contributing innovatively, it will significantly strengthen environmental performance, especially when green employee involvement levels are high and constantly allowed. Three hundred and fifty (350) employees were selected from ten (10) manufacturing firms in the study and findings proved that there is a significant effects of green employee involvement on employee green creativity for managing and sustaining the environment with ( $R^2 = 0.893$ ;  $p = 0.000 < 0.05$ ).

It was further reported by another study conducted in Tanzania by Mashala, (2019) whose report demonstrated that the positive connection between green employee advocacy and corporate environmental responsibility cannot be overemphasized as green employee advocacy served as an engine for enthusing and endearing management of firms in being environmentally responsible. This study raised three objectives, questions and tested three (3) null hypotheses at 0.05 alpha level of significance, respectively. Data obtained from the study were analyzed by employing One-way Analysis of Variance, T-test independent sample as statistical tools. All the null hypotheses were rejected; finding thus proved that green employee advocacy positively influences corporate environmental responsibility.

Another study conducted by Chowdhury, Sanju and Asaduzzaman (2017) revealed that green employee advocacy aid minimization and reduction of pollution in the area of wastages and serving as an avenue for conserving and preserving the natural resources, thus a very strong and positive relationship exists between among

green employee advocacy and corporate environmental responsibility; a sample size of 300 employees was drawn for the study and finding revealed that employees green advocacy has a huge significant and direct effect on corporate environmental responsibility; it serves as means for awakening management consciousness towards environmental sustainability with ( $R^2 = 0.846$ ;  $p = 0.000 < 0.05$ ).

## **4. METHODOLOGY**

### **4.1 RESEARCH DESIGN**

Descriptive survey design was adopted; this design was found useful and appropriate because the study was cross-sectional questionnaire was employed as a means of data collection.

### **4.2 POPULATION OF THE STUDY**

Based on the information obtained from the human resource desk of the selected firms; the population of the study was a total of one thousand three hundred and sixty-six (1,366). These firms were selected based on their long-standing service in the pharmaceutical business which has spanned over three decades; thus, the “green” concept is well known to them and it reflects in their policy statements.

### **4.3 STUDY AREA**

Area selected for this study was Ogun State and locations highlighted for selecting the pharmaceutical firms were Sango, Atan, and Agbara, respectively.

### **4.4 SAMPLING SIZE AND SAMPLING TECHNIQUE**

The sample size for the study was (300) three hundred, which was obtained at 95% confidence level and 0.05 error rate through the sample size determination table by Krejcie and Morgan, (1970). To ensure proportionate representation from the selected firms, the probability proportional to size measure was utilized. Probability proportional to size denotes a method of selection of sample size wherein the propensity of adequately selecting a sampling unit of analysis is directly proportional to its size and measure.

The multistage sampling technique was study employed using both the probability sampling technique (stratified and simple random sampling techniques) and non-probability sampling technique (purposive and convenience). The researchers found the method appropriate because it reflected a high degree of satisfactory representation of various subgroups present in the population of the study. The **first stage** involved the purposive sampling technique under the non-probability sampling technique, the study used in the selection of the three (3) Pharmaceutical Firms in the selected locations in Ogun State. The **second stage** which comprised the stratified random sampling method which the study utilized in ensuring equal and evenly represented sample size from each firm. Therefore, in

doing this, the researchers splitted the population was divided into sub-groups that are homogenous and validly compatible; and at the **third stage**, respondents for the study were selected via the simple random sample.

#### 4.5 METHOD OF DATA COLLECTION

A structured questionnaire was designed to obtain primary data for this study. The questionnaires were divided into two sections with the first section detailing respondents' biographical information and the second section hinged on the objectives of the study.

**Table 1:** Cronbach Alphas of the study Variables

S/N	Variables	Authors	Number of Items	Initial Cronbach Alpha	Cronbach Alpha after the pilot Study
<b>Green Employee Relations</b>					
1.	Green Employee Involvement	Tang, Chen, Jiang, Paillé, and Jia, (2018)	5	0.870	0.792
2.	Green Employee Advocacy	Kim, Kim, Han, Jackson and Ployhart, (2017)	5	0.922	0.831
<b>Environmental Sustainability</b>					
1.	Green Employee Creativity	Chen and Chang, (2017)	5	0.892	0.793
2.	Corporate Environmental Responsibility	Turker, (2009)	5	0.870	0.801

*Source: SPSS (2023)*

#### 4.6 VALIDITY

According to (Mugenda & Mugenda, 2003), validity indicates the length and extent through which an instrument captures and measures what it was intended for as well as its purpose of formation; this further expresses that data should not only reflect reliability; it must be accurate and precise. Therefore, the instrument involved must be in alignment with the study's definition. This delineates that before ascertaining that the items or statements of an instrument are certified valid, there must be a high degree of propensity such also reliable. As a result of this opinion, the validity of the study's instrument was tested using content, construct, face and criterion validity.

#### 4.7 RELIABILITY

The reliability of the instrument was determined using the result of an analysis from a pilot study which was conducted among sixty (60) employees which represents twenty percent (20%) of the sample size of the study. This pilot study took place among three pharmaceutical firms which are (Neros pharmaceuticals, Drugfield pharmaceuticals and Topway Pharmaceuticals) situated in Ogun State, Nigeria. The researchers ensured that the reliability test result did not yield less than 0.70 co-efficient as this is a standard research practice globally.

#### 4.8 METHOD OF DATA ANALYSIS

Data obtained were analyzed at both descriptive and inferential level of statistics by engaging the frequency distribution and simple percentage with the aid of Statistical Package for Social Sciences (SPSS) version 26.0. In testing the two stated hypotheses statements for the study, correlation and regression analyses were employed as statistical tools, respectively.

### 5. RESULTS AND DISCUSSIONS

#### Testing of Hypotheses with Correlation and Regression Analyses

##### Hypothesis One

**H0<sub>1</sub>:** Green employee involvement does not significantly affect employee green creativity.

**Table 2:** Model Summary of regression analysis on the Effect of Green Employee Involvement on Employee Green Creativity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.910 <sup>a</sup>	.828	.827	.577	1304.805	.000 <sup>b</sup>

The above summary table presented the extent at which green employee involvement affect employee green creativity among selected pharmaceutical firms. The coefficient of determination ( $R^2 = 0.910$ ,  $p\text{-value} < 0.05$ ) indicated that 91.0% variation in employee green creativity. Consequently, green employee involvement has positive significant effect on employee green creativity.

##### Hypothesis Two

**H0<sub>2</sub>:** There is no significant relationship between green employee advocacy and corporate environmental responsibility.

**Table 3:** Correlation analysis on the Relationship between green employee advocacy and corporate environmental responsibility

		<b>Green Employee Advocacy</b>	<b>Corporate Environmental Responsibility</b>
<b>Green Employee Advocacy</b>	Pearson	1	.911**
	Correlation		
	Sig. (2-tailed)		.000
	N	273	273
<b>Corporate Environmental Responsibility</b>	Pearson	.911**	1
	Correlation		
	Sig. (2-tailed)	.000	
	N	273	273

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The above correlation table reflected that there exists a strong, positive and significant nexus between green employee advocacy and corporate environmental responsibility with ( $r=0.911$ ,  $p\text{-value}<0.05$ ). This indicated and inferred that a significant association and connection exists between green employee advocacy and corporate environmental responsibility. Therefore, the null hypothesis was rejected because results communicated that green employee advocacy which is an indicator of green employee relations have a significant nexus with corporate environmental responsibility.

## 5.1 DISCUSSION OF FINDINGS

From the above tested hypotheses; result evidenced and indicated that for hypothesis one, green employee involvement significantly have an effect on employee green creativity; this epitomizes that when employees' are given the autonomy and opportunities to innovatively advance or suggest plausible ideas towards enhancing the environment; they become a partner in progress which awaken their consciousness for efficiency in resource usage; which will lead to creativity and mapping out plans, strategies and designing modalities on how to make their management responsible in the area of environmental sustainability through uninterrupted prevent of pollution from workplaces.

Finding from this study is in alignment and concur with the study by Sarkis, Gonzalez-Torre and Adenso-Diaz, (2020), whose study submitted that involving employees helps in improving environmental sustainability procedures in the area of increased resource efficiency and waste reduction in the organization. The finding of this study also correlates with Jones, Willness and Glavas, (2018) whose study findings reported that involving employees in green related activities allows them to creatively exchange perceptions, offer suggestions and devoting strong allegiance



during interaction and in the context of discharging their duties; thereby, making management a good steward of environmental sustaining. This finding was also in agreement with the resource based view theory which postulated that green employee involvement remains a core and significant medium for welcoming suggestions and availing opportunities for employees to innovatively contribute towards organization's green agenda

Hypothesis two, which examined the relationship between green employee advocacy and corporate environmental responsibility; finding proved that green employee advocacy has a strong and positive significant relationship with corporate environmental responsibility which is an indicator of environmental sustainability. Findings from this study are in line with the submission of Boiral, Talbot and Paillé, (2018) which provided that employee green advocacy helps in initiating positive actions and encouragement towards making management more environmentally conscious and responsible. This finding is also in agreement with the position of Kim, McGinley, Choi, and Agmapisarn, (2020); whose study revealed that green employee advocacy helps in strengthening the emotional link between employees and management towards consistent engagement in pro-environmental activities. Finding obtained from this study also align with the position of the social exchange theory which stressed that management and employees enjoy mutual trust and quality relationship in terms of adherence to the rules of exchange; and knowing fully well that there exists a reward for employees who are conscious of their environment and creatively mapping out modalities and measures for its revitalization.

## **6. CONCLUSION AND RECOMMENDATIONS**

A positive culture towards involving employees in environmental concerns and sustainability programmes will help management align employees' capabilities, goals and motivation towards green practices thereby strengthening employees to intuitively and creatively assist in mapping out strategies for efficient resource usage, elimination and reduction in environmental waste, revamping human resource processes at lower costs and achieving greater efficiency. Since initiatives for managing the environmental is not a one sided event, its responsibility thus required a shared commitment of both management and employees; hence, it is pertinent for both parties to collaboratively harness their plans towards improving environmental standard.

Based on the findings of the study, the researcher recommended as follows:

- i. Management should make green employee involvement a priority; as it is an engine for unlocking employees' green creativity which will make them advocates of the green mantra whose outcome will make management become more environmentally responsible.

- ii. Developing employees' capacity by management makes them aware of the scope of change and the level of commitment needed for the process of environmental sustainability.
- iii. Implementing an organization's sustainability efforts and involving employees in such scheme will serve as an effective and positive tool for green human capital development for increased competitive advantage and sustainable business performance.

## REFERENCES

- Abdulhaq, A. S., & Muhamed, N. A. (2017). Countering the problem of environmental degradation of pharmaceutical firms. *South East Asia Journal of Contemporary Business, Economics and law*, 7(1), 2015, 40-47.
- Ahmad, S. (2017). Green human resource management: policies and practices. *Cogent Business and Management*; 2, 103-118.
- Akintoye, A., & Hassan, A. R. (2018). The environmental impact of pharmaceutical firms on environmental degradation. *Journal of Business Ethics*, 96(3), 2010, 435-451.
- Ambec, S., & Lanoie, P. (2021). Employee involvement and environmental performance of manufacturing firms. *Journal of human resources for environmental sustainability*. 2(1) 21–35.
- Atiku, O.S., & Fapohunda, T.M. (2020). *Human Resource Management Practices for Promoting Sustainability*. A volume in the Advances in Human Resources Management and Organizational Development (AHRMOD) Book Series. Hershey, PA: IGI Global.
- Boiral, O., Talbot, D & Paillé, P. (2018). Leading by example: A model of organizational citizenship behaviour for the environment. *Business Strategy for the Environment*. 2015, 24, 532–550.
- Charles, C. (2020). The power of pharmaceutical businesses to driving social changes: The importance of CSR programmes. *Journal of Cleaner Production*, 12 (5), 185-194.
- Chowdhury, S. R., Sanju, N. L., & Asaduzzaman, A. K. M. (2017). Green HRM practices as a means of promoting CSR: Suggestions for garments industry in Bangladesh. *Global Journal of Management and Business Research: Administration and Management*, 7(4), 29-35.
- Jabbour, C., Santos, F. (2020). Relationships between human resource dimensions and environmental management in companies: Proposal of a model. *Journal of Cleaner Production*, 16, 51–58.

- Jones, D. A., Willness, C. R., & Glavas, A. (2018). When corporate social responsibility (CSR) meets organizational psychology: New Frontiers in micro-CSR research, and fulfilling a quid pro quo through multilevel insights. *Frontiers in Psychology*, 8(520), 1–14.
- Kim, W. G., McGinley, S., Choi, H. M., & Agmapisarn, C. (2020). Hotels' environmental leadership and employees' organizational citizenship behaviour. *International Journal of Hospitality Management*, 87, 1–12.
- Krejcie, R.V., & Morgan, D.W., (1970). Determining sample size for research activities. *Educational and Psychological Measurement*.
- Laszlo, A., & Goyal, S. (2020). Impact of Green Human Resource Factors on Environmental Performance in Manufacturing Companies: An empirical evidence. *Journal of environmental management*, 6(1), 23-30.
- Mashala, L.Y. (2019) Green human resource management and environmental sustainability in Tanzania: A Review and research agenda. *International Journal of Academic Multidisciplinary Research (IJAMR)*, ISSN: 2000-006X. 5 (3), 60-68.
- Mohammed, S. D., Abubakar M.A., Ahmed, I.M., Garba, S., & Bashir, A.S. (2020). Options for a Strategic Approach to Pharmaceuticals in the Environment. *International Journal of Accounting and Financial Reporting*, 5(2), 2015, 38-55.
- Mohammed, S. D., Yusuf A. G., Bashir, A. S., Aishatu D. A., & Muhammad, M. S.(2020). An Evaluation of Corporate Social and Environmental Accountability by Listed Nigerian Construction and Building Materials Companies, *International Journal of Advanced Research*, 8(03), 21-35.
- Mohammed, S.D. (2019). Clean development mechanism and carbon emissions in Nigeria, *Sustainability Accounting, Management and Policy Journal*, 11(3), 523-551.
- Mugenda, O., & Mugenda, A. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Murphy, D.M. (2019) “An observationally based energy balance for the earth since 1950”, *Journal of Geophysical Research*, 114(17), 2009, 1-14.
- Ojiaku, O., Achi, B., & Aghara, V. (2018). Cognitive-affective predictors of green purchase intentions among health workers in Nigeria. *Management Science Letters*, 8(10), 1027-1038.
- Pham, N. T., Tuckova, Z., & Jabbour, C. J. C. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behaviour in hotels? A mixed-methods study. *Tourism Management*, 72, 386–399.

- Renwick, D., Redman, T., Maguire, S. (2018). Green human resource management: A review and research agenda. *International Journal of Management Review*, 15, 1–14.
- Sarkis, J., Gonzalez-Torre, P., & Adenso-Diaz, B. (2020). Stakeholder pressure and the adoption of environmental practices: The mediating effect of training,” *Journal of Operations Management*., 28, (2), 163-176.
- Solomon, S., (2017). “Earth’s energy imbalance and implications”. *Journal of Atmospheric Chemistry and Physics*, 11(24), 13421-13449.
- Ullah, M. (2017). Integrating environmental sustainability into human resource management: A comprehensive review on green human resource management. *Maghreb Review of Economics and Management*, 4(1), 6-22.
- Wright, T. (2015). Pharmaceutical firms’ increases impact on global economies. *Journal of Distribution Science*, 17 (5), 39-53.
- Yong, J.Y., Yusliza, M.Y., Ramayah, T., & Fawehinmi, O. (2019). Nexus between Green Intellectual Capital and Green Human Resource Management. *Journal of Cleaner Production*, 215, 364–374.