Fundamental Attributes of Restructuring Environmental Quality on Human Nature in Sustaining Urban Landscape for Sustainable Development

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ABSTRACT

This study analyses the fundamental attributes of restructuring environmental quality and its impact on human behaviour, aiming to safeguard urban environments for future prosperity. The swift progression of global urbanisation undermines environmental quality, imperilling the health and welfare of urban dwellers. This research examines the intricate relationship between environmental quality and human behaviour, analysing how improvements in nature reserves and the disposal of trash influence urban living conditions and sustainable practices. The study emphasises critical attributes that enable effective environmental changes through the integration of multidisciplinary perspectives, including urban planning, environmental science, and social psychology. The findings underscore the importance of holistic initiatives that consider socioeconomic challenges, community engagement, and regulatory structures to enhance urban resilience. The study clarifies methods for fostering harmonious interactions between urban environments and their inhabitants through an in-depth examination of case studies and empirical evidence. This study aims to inform environmentalist, policymakers, urban planners, and stakeholders about effective strategies for developing sustainable urban environments. This study demonstrates a strong correlation and high statistical significance relationship between environmental quality, human nature and urban sustainability, thereby advancing the targets of sustainable development and improving the quality of life for urban residents.

Keywords: Urbanisation; Environmental quality; restructuring; human nature, urban sustainability.

INTRODUCTION

Environmental quality related to human nature is critical for long-term development, influencing city sustainability, accessibility of resources, and social well-being (Akanwa et al., 2019). The importance of environmental sustainability and restoration is a fundamental imperative that extends beyond live human nature to include both biotic and abiotic components (Njar et al., 2019). Cities and metropolitan areas have been a regeneration of growth and incubator of societal civilization and facilitate the development of knowledgeable, cultural heritage and environmental norms and commerce or industries expanding ironically through the internet of things and smart technologies (Boakye et al., 2020). The rate of population is increasing at an increasing posing considerable environmental challenge in Africa however, interaction of environmental quality and human nature is critical for addressing these issues and ensuring sustainable urban development (Simangele, 2021). Human-nature's interconnections have been extensively investigated in

recent decades as a result of rising environmental pressures caused by urban expansion and globalisation (Simangele, 2021).

Environmentally concerned travellers can help municipal planners foster the long-term growth of relaxation places by reviewing their environmental practices. Such people can have an impact on the design and upkeep of green spaces through offering input and ideas based on their personal experiences. Moreover, their support for environmentally friendly activities might motivate local populations to embrace more sustainable practices (Patway, 2022). However, environmental managers continue to face difficulties in reconciling environment and preservation goals environmental quality and its influence on long-term urban development as a result of human conduct are today major global concerns, especially in nations that are developing, such as Nigeria (ALEHILE, 2024). However, the growing number of ecological problems of today are the result of human behaviour, individual consumer choices, and the operations of both small and major corporations (Akintunde, 2017).

Nevertheless, behaviour needs to accommodate natural characteristics consistently to ensure the environment is concurrently economically socially, politically functional, and maintained as well as eco-friendly to optimise human satisfaction. However, with the introduction of information and communication technologies from great point to international communication, the mobility and connectivity of internet devices have secured a transformative as well as rapid economic growth and change in human livelihoods formation (ALEHILE, 2024). This study seeks to evaluate the underlying characteristics of restructuring environmental quality and its effect on human nature in sustaining urban landscapes for sustainable development in Nigeria.

Study Background

Global urban environments face significant challenges due to rapid urbanisation, environmental degradation, and incompatible development practices. These problems profoundly influence human well-being, social cohesion, and the overall quality of urban life. Notwithstanding heightened awareness and numerous initiatives to improve environmental quality in urban settings, a comprehensive understanding of the fundamental attributes that enable effective environmental restructuring remains elusive. The investigation of how these attributes influence human nature and conduct to promote sustainable urban development is inadequate.

The main research focus is to identify and analyse the fundamental attributes of environmental quality reconfiguration that substantially enhance the sustainability of urban environments. This involves understanding the correlation between improvements in environmental quality, such as air quality, green spaces, and waste management, and their impact on human behaviours, attitudes, and practices about sustainability. The study seeks to analyse the socio-economic and cultural settings influencing these processes, emphasising the need for comprehensive and context-sensitive solutions in urban planning and policy development. This problem statement lays the groundwork for an in-depth analysis of the complex interconnections between environmental quality, human behaviour, and urban sustainability, highlighting the need for multidisciplinary approaches to address urban environmental challenges.

LITERATURE REVIEW

Cumulative global emissions have been dominated by industrialisation procedures throughout the Global North, leaving little atmospheric space for similar processes in the Global South if atmospheric concentrations are to be kept below levels that would result in a 1.5- or two-degrees Celsius increase in global average temperature (Klinsky & Mavrogianni, 2020). The green human resource management incorporate environmental sustainability approaches in to human resource (Resource & Green, 2024). Environmental principles and pro-environmental behaviour ease the relationship between green human resources control and environmental achievement in the production firm of developing nations (Aftab et al., 2023). However,

greening implies the change directed to sustainability in which sustainable best practices focus in the change's trends performance engagement, opinions, and activities within the ecosystem (Eya et al., 2022).

Currently, the global practice of human behaviour viewed environmental challenges as a contemporary Industrialisation on human financial capability (Aftab et al., 2023). Human resource management researchers currently exploring the green human resource management (GHRM) viewpoint and examine its performance to meet up with present sustainable development goal agenda (Aftab et al., 2023). However, green human resource management secure environmental achievement and protect institutions long term programme of sustainability goal. Green human resource management in conjunction with human resource management furnished environmental challenges, policies, strategies and performance guidelines directly connected to the organisational goal (Anwar et al., 2020).

Theories of Environmental Behaviour and Human nature

Planned Behavioural Theory

Planned Behaviour Theory, views the desire to act and objective situational elements as direct predictors of pro-environmental behaviour (Fuentes, 2017). The response abilities, and individual variables. Behavioural Planning is based on three major constructs: thoughts about consequences; and anticipation of unanticipated situations that may support behaviour (Sulaiman et al., 2019). A key assumption of the theory is that, at the conceptual level, linkages among influences on behaviour and their consequences are incorporated in one of the model's variables or relationships in the mode (Akintunde, 2017). The model is appropriate for this research because it gives further insights into the relationship between knowledge, attitude, behavioural intention, and actual behaviour as they impact waste management methods. information is not a separate component of the paradigm; rather, "attitudes are an outcome of belief (Alcock et al., 2020), where beliefs relate to information about a given behaviour.

Primitive theory

Primitive theory is a conventional human nature on environmental responsibility behaviour based on several presumptions extrapolated from earlier research (Hungerford & Volk, 2013). These models were created with the presumption that changing public awareness of diverse ecological and environmental challenges will change people's behaviour. This line of thinking was closely linked to the theory that more knowledge would make people more conscious of matters about the environment and, as a result, encourage them to act in a way that is sustainable and ecologically responsible (Hargreaves, 2011)(Journal & Management, 2020)(Campbell et al., 2021).

Environmental Behavioural Model

The behavioural model serves as a foundation for considering the potential interaction between environmental-based knowledge, environmental consciousness, and human culture in determining action or inactivity (Ekong, 2017). Adequate awareness of environmental factors does not always indicate responsible and sustainable environmental behaviour (Le Gouill et al., 2019). Nonetheless, a lack of environmental knowledge or awareness, as well as cultural factors, may impact environmental activity (Ridho et al., 2023). Other intervening elements, such as the locus of control, desire to act, and personal accountability, must be examined(Maqbool & Jowett, 2023). When analysing how environmental knowledge, environmental awareness, and human culture may interact to influence actions or inaction, the behavioural model provides a solid basis (Kukkonen et al., 2018). Being sufficiently informed of environmental concerns is not necessarily a guarantee of sustainable and ethical environmental conduct (Abbas & Dogan, 2022). However, cultural dynamics and a lack of environmental consciousness or understanding may affect environmental activities (Foster et al., 2022).

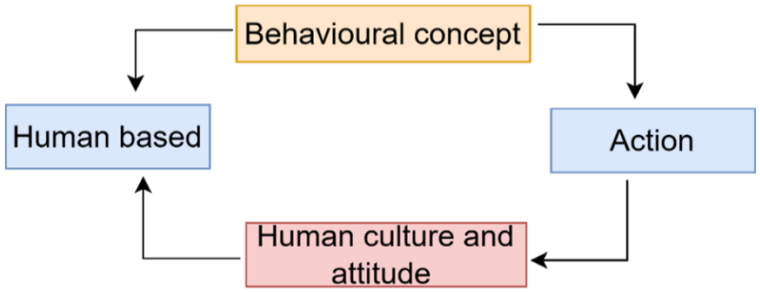

Figure 1. Environmental Behavioural Model.

Source: Adopted from (Hungerford & Volk, 2013)(Ekong, 2017)

Environmental Responsibility Behaviour Model

The model provides a pattern of possible relationships, the reality is much responsible. The model takes into account the connection line that provide a concise explanation of the variables that interact to determine human behaviour in environmental preservation. The idea focuses on existing interconnections among factors that affect human conduct rather than the singular effect of a mini-variable. Waste management procedures do not rely just on one element to drive behaviour change (Su et al., 2021).

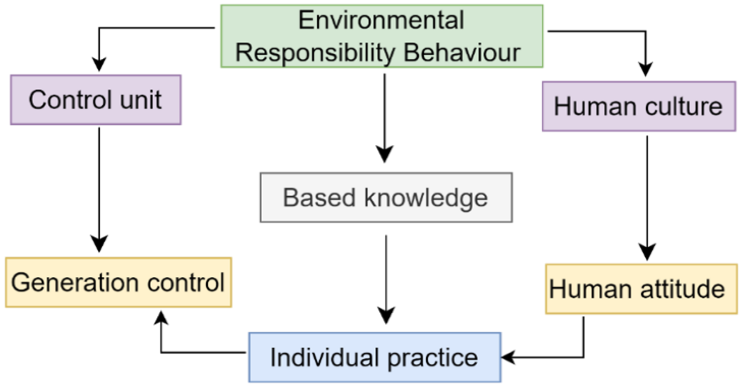

Figure 2. Environmental Responsibility Behaviour Model

Source: Adopted from (Su et al., 2021).

Responsibility Action Theory

The idea states that the desire to behave has a direct impact on action and may be anticipated by culture and attitudes (Foster et al., 2022). However, various cultures and attitudes can be influence by subjective norms and beliefs, as well as influences the relative significance of various elements.

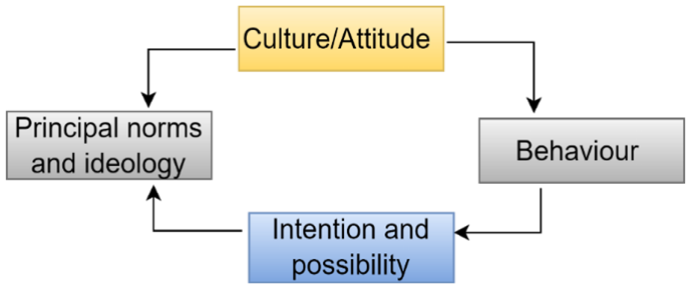

Figure 3. Responsibility Action Theory

Source: Adapted from (Foster et al., 2022).

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The desire form individual action towards environmental responsibility has a direct impact on action as well anticipate by culture and attitudes (Mohd Baroldin & Mohd Din, 2018). According to Foster et al., (2022) action theory assumed that human behaviour is based on rational thinking, and that attitudes mirror behaviour correspond to desirability end state of environmental well-being (Foster et al., 2022). Various cultures and attitudes are influenced by subjective norms and beliefs, as well as influences the relative significance of various environmental elements (Jabbar et al., 2022).

Human environmental safety and well-being

Growing concern about the nature and extent of socio-spatial inequities in urban environmental quality and human well-being has refocused worldwide study on the problems of living in a modern city (Foster et al., 2022). The identification of quantifiable landscape aspects that impact health is viewed as a vital step in planning future landscape designs that promote human health. Sustainable development, among other things, requires that growth initiatives do not deplete natural resources utilised for outdoor recreation. The external environment's impact on our health and well-being is being increasingly recognised. Keeping a bright future for the earth and the generations to come is the main objective of environmentally conscious repercussions to other PEBs sustainability, which is accomplished by increasing global knowledge of the concept (Foster et al., 2022).

Environmental consciousness positively affects PEB among active sports club members in Germany (Thormann & Wicker, 2021). According to (Zientara & Zamojska, 2016) a positive correlation between environmental awareness and PEB however, those having pro-environmental attitudes had greater levels of awareness of the environment. Other perspectives on the environment and the perceived value of environmental consequences can enhance the perception of environmental knowledge (Thormann & Wicker, 2021).

Green Area Suitability and Environmental Suitability

According to (Binder & Blankenberg, 2017) observed that those who practise environmentally beneficial behaviours, such as recycling and saving water, had higher self-esteem. In general, self-efficacy belief is low if a person feels they are competent in just a few specific circumstances and actions. (Corso, 2022), despite a lack of awareness of this phenomenon. (Mouazen & Hernández-Lara, 2020) and utilising eco-friendly shopping bags. Despite a lack of awareness of this phenomenon, those who have higher levels of self-efficacy would be motivated by PEBs to exert greater effort in maintaining the behaviours (Corso, 2022).

Factors Associated with Human Nature for Sustainable Development

Water quality.

Water quality refers to the physical, chemical, and biological qualities of water, typically in relation to its fitness for a specific activity, such as drinking, recreation, or aquatic life preservation. Poor water quality, aggravated by direct discharges from factories, wastewater treatment facilities, or runoff water, restricts the consumption of water for food production, drinking, and enjoyment.

Green Space Availability.

Green spaces are places with plants in cities, such as parks, gardens, and nature preserves. Improve air quality by filtering pollutants, provide possibilities for inhabitants, and encourage both mental and physical wellness. Integrating green spaces into built environments helps to mitigate the impact of urban heat islands, regulate runoff, and boost biodiversity. Green places that are easily accessible increase community involvement and encourage environmentally conscious living habits.

Waste management.

Waste management refers to the collection, transportation, processing, reuse, recycling, and dumping of waste materials. Proper handling of trash is crucial for maintaining environmental quality. Solid waste consists of household garbage, hazardous waste such as chemical substances and batteries, organic waste from kitchen leftovers, park debris, and recyclable items such as plastics, paper, and metals. There are insufficient landfilling ideas, reusing, composting, incineration, and the concept of waste to conversion. Inadequate waste management led to soil and water degradation, air pollution, and safety risks. However, sound waste-management practices, such as recycling and reuse, can assist to reduce environmental damage and save resources.

METHODOLOGY

This study starts by examined the relevant theories, concepts, and models of environmental quality associated with human behavioural nature as a predetermined factor for sustainable development. Human nature and other behavioural factors attributed to change in human environment.

Environmental quality and human nature are commonly understood to incorporate clean water, green environment (spaces), and safe living environment by reducing the amount of waste. Since humans and the environment are inherently linked in one ecological system, a multitude of complex interdependencies between each dimension exists. For this reason, it is necessary to address all three variables when discussing about human nature in sustaining urban landscape for sustainable development in Nigeria.

This study used the Theory of Planned Behaviour (TPB) to investigate the structural linkages and intensities of various human nature interaction attributes. The theory has widespread use in fields such as planning for towns and cities, geography of people, environmental management, and sustainability development and design. The previous studies aligned with planned behaviour theory is that human nature, positively influence the state of the environmental quality on urban landscape.

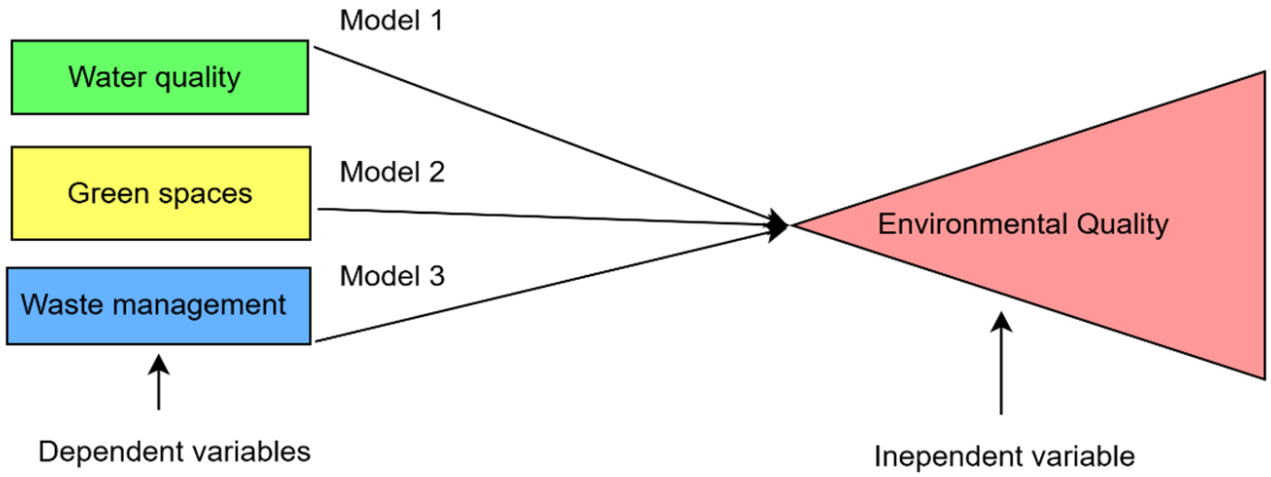

Figure 4. Hypothesis Tests.

Research Hypothesis

H_0. Does environmental quality have no influence on water quality?

H_0. Does environmental quality have no influence on greenspaces?

H_0. Does environmental quality have no influence on waste management?

RESULTS AND DISCUSSION

This section contains the data analysis, findings, and results interpretation. Numerous challenges were identified and discussed including water quality, greenspaces, and waste management under human nature while, public awareness, sociocultural practice, economic activities, and government policy were characterised as policy framework.

Reliability Test

Scale Variables

Table 1 Data Validation

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
WQLTY	30	100.0%	0	0.0%	30	100.0%
GRNS	30	100.0%	0	0.0%	30	100.0%
WMGT	30	100.0%	0	0.0%	30	100.0%

Table 2 Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.904	3

Table 3 Variable Item Statistics

Item Statistics

	Mean	Std. Deviation	N
WQLTY	3.4200	.23104	30
GRNS	3.4200	.25380	30
WMGT	3.4533	.23450	30

Table 4 Scale Statistics

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
10.2933	.435	.65964	3

Table 5 Test of Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
WQLTY	.201	30	.003	.905	30	.011
GRNS	.202	30	.003	.901	30	.009
WMGT	.190	30	.007	.904	30	.011

a. Lilliefors Significance Correction

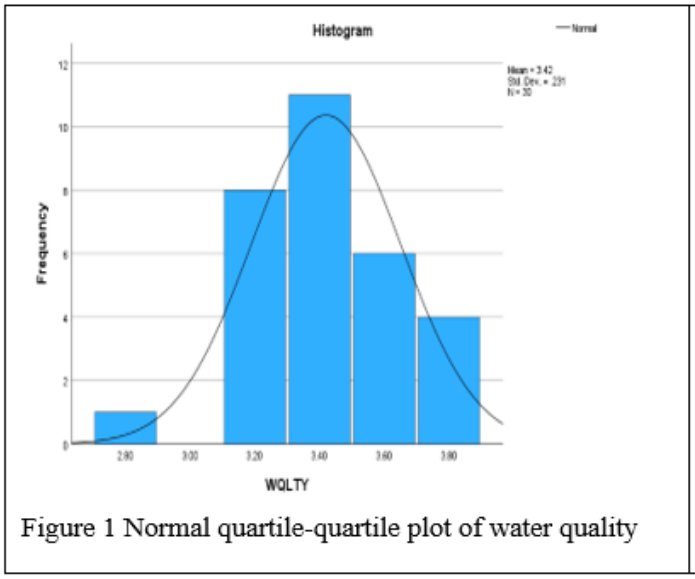

Figure 1 Normal quartile-quartile plot of water quality

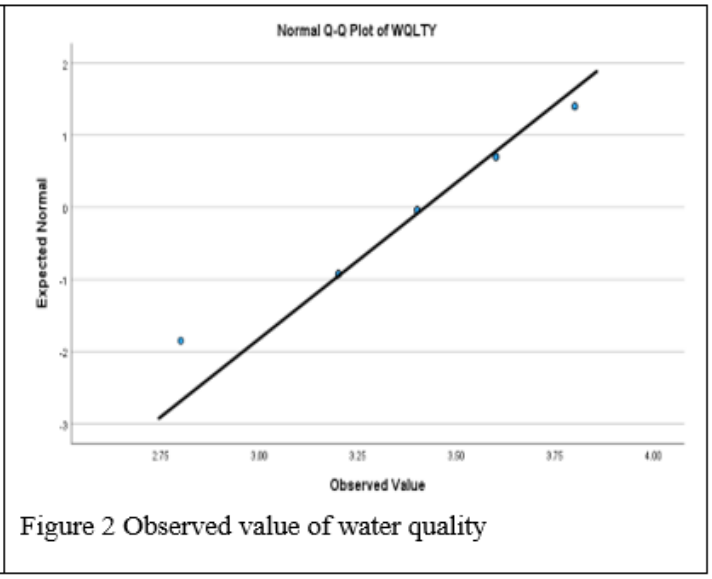

Figure 2 Observed value of water quality

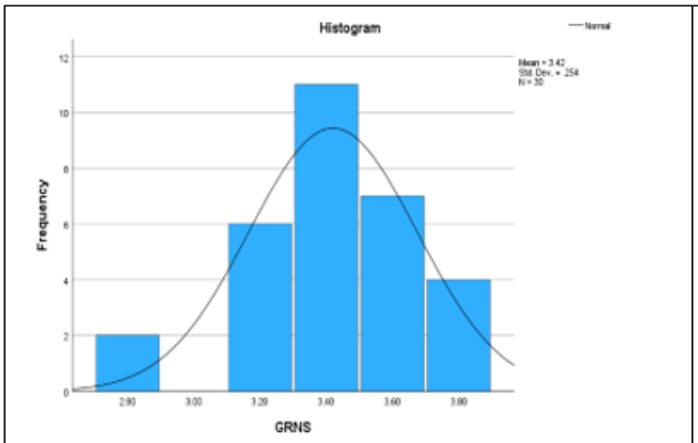

Figure 4

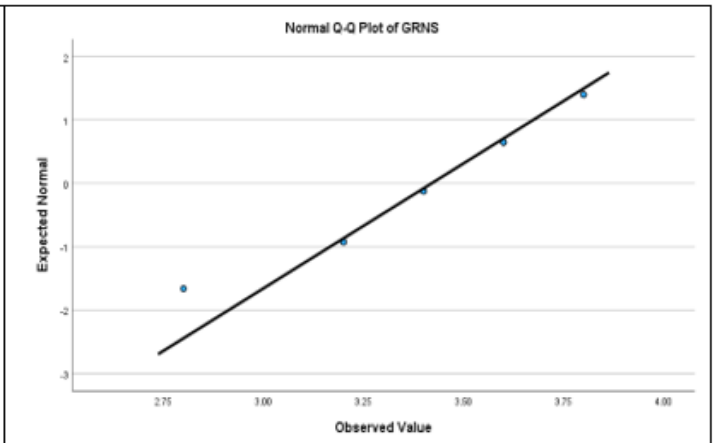

Figure 5

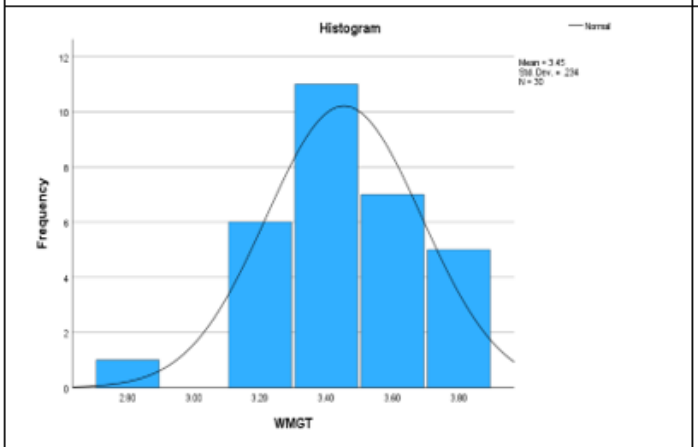

Figure 7

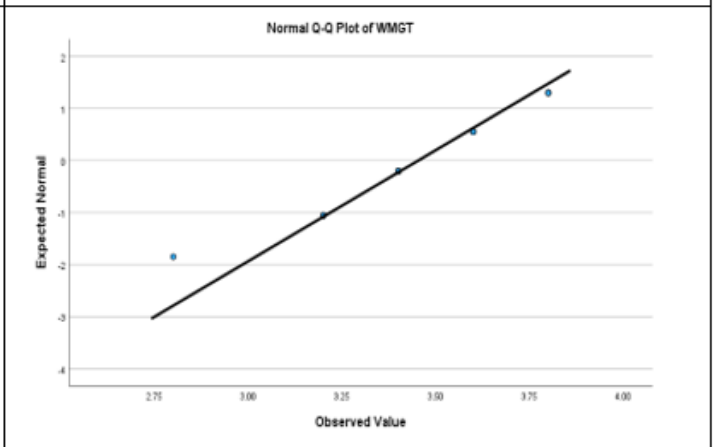

Figure 8

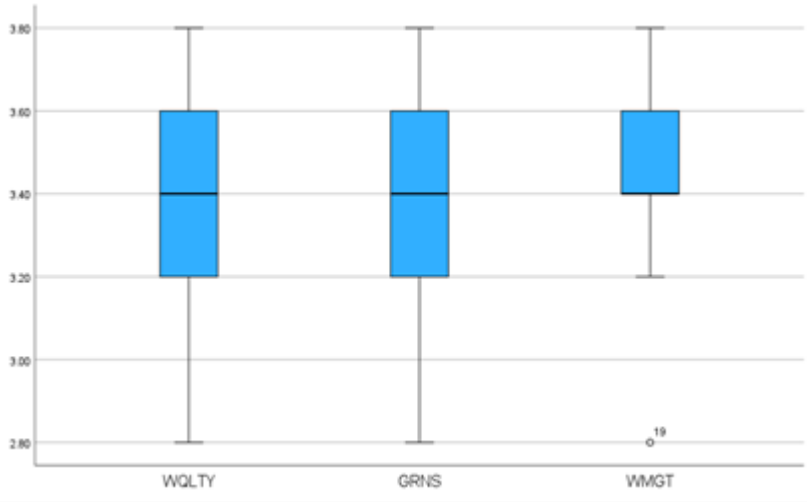

Figure 9

Table 6 Spearman's Correlations

Correlations

			WQLTY	GRNS	WMGT
Spearman's rho	WQLTY	Correlation Coefficient	1.000	.777**	.851**
		Sig. (2-tailed)	.	<.001	<.001
		N	30	30	30
	GRNS	Correlation Coefficient	.777**	1.000	.634**
		Sig. (2-tailed)	<.001	.	<.001
		N	30	30	30
	WMGT	Correlation Coefficient	.851**	.634**	1.000
		Sig. (2-tailed)	<.001	<.001	.
		N	30	30	30

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

Table 7 Confidence Intervals

Confidence Intervals of Spearman's rho

	Spearman's rho	Significance(2-tailed)	95% Confidence Intervals (2-tailed)[a,b]	
			Lower	Upper
WQLTY - GRNS	.777	<.001	.571	.891
WQLTY - WMGT	.851	<.001	.703	.929
GRNS - WMGT	.634	<.001	.345	.813

a. Estimation is based on Fisher's r-to-z transformation.

b. Estimation of standard error is based on the formula proposed by Fieller, Hartley, and Pearson.

DISCUSSION OF RESULTS

The Spearman's correlation coefficient, which describes the degree and direction of correlations between the research variables. We tested the variable measurements, and the data were 100% valid. We also tested the device to ensure reliability, and the results were accurate. All variables were input correctly, with no items

missing or excluded. Every variable was entered accurately. The Cronbach's alpha of 0.861 and Cronbach's alpha based on standardised items of 0.904 suggest 100% validity and 90% reliability, respectively. The model fitting data yielded 0.901** at the 0.009 significance level from Shapiro-Wilk. The results demonstrate that the model was appropriate for the investigation.

We utilised descriptive statistics to calculate the mean, lowest, and highest values, as well as the standard deviation, skewness, and kurtosis. As the number drops, the lowest and maximum values rise. The environmental quality result is biassed to the right, indicating that is a primary motivator for water quality for sustainable development. We performed nonparametric tests to test our research hypothesis. The dependent variables include water quality, green spaces, and waste management. According to the test report, the two-tailed Spearman's correlation test yielded results of 0.001 for all variables. However, this led us to reject the null hypothesis.

Water quality, green space, and waste management indicate a significant positive relationship with environmental quality value < 1.000). The coefficients 0.0.851**, 0.777**, and 0.634 are statistically significant at 0.001 respectively. WQLTY (0.851**, p< 0.001) is significantly positively correlated with GRNS (0.777**, p< 0.001) and WMGT (0.634**). The WQLTY correlation coefficients of 0.982**, 0.571**, and 0.547 at 0.002** and 0.001** significant levels indicate that the model is fit. The independent variable explains 90% of the total variation in dependent variables.

The Spearman's correlation score for environmental quality is 1.000, indicating that WQLTY, GRNS, and WMGT together account for 90% of the change. This also shows that the model is a good fit. The ordinal regression statistic indicates that the autocorrelation relationship between the three variables is substantial, however Shapiro-Wilk demonstrated that environmental quality is statistically significant at the 0.05 level of determination. As a result, the fitted Spearman line demonstrated positive autocorrelations, as indicated by the Shapiro Wilts test.

FINDINGS

Sustainable development is still a long way off, both in this research area and in the nation with the greatest wealth as well as most mineral-rich country, Nigeria. However, it is unindustrialised and has been linked to climate change. Nigeria's production, consumption, and waste levels were undernourished. Millions of people lack basic drinking water supply, have limited access to suitable green places, and practise open defecation. This contradiction between environmental quality and human nature.

Despite a bleak view, concepts about altering human nature for social change. Nonetheless, in light of ecological damage and climate change, achieving sustainability has become critical, and an effective method of protecting the human environment is urgently required. The complicated interlinkages between sociocultural, green spaces, and garbage management produce trade-offs that can impede Nigeria's sustainable development. The transformative method focusses on positive interlinkages that produce synergies and seeks to improve the socio-ecological system as a whole rather than economic values, particularly in places where mining activities are destroying biodiversity.

CONCLUSION

Academic experts, governments, and individuals worldwide are deeply concerned about the overall state of metropolitan places as a living environment. Growing concern about the nature and extent of socio-spatial inequities in urban environmental quality and human well-being has refocused international study on the problems of living in a modern metropolis. The identification of measurable landscape aspects that influence health is viewed as a vital step in planning future landscape designs that promote human health. Sustainable development, among other things, requires that growth initiatives do not deplete natural resources used for outdoor recreation. The understanding of how the external world affects our health and well-being has increased significantly.

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DISCLOSURE STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work under this study.

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Not applicable

DATA AVAILABILITY STATEMENT

The data that support the funding of this research shall be available online for future researchers.

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