

THE INFLUENCE OF GREEN ADVERTISING ON RESPONSIBLE ENVIRONMENTAL BEHAVIOUR AMONG RESIDENTS OF MINNA, NIGER STATE

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Abstract

Niger State situated in the North Central region of Nigeria faces so many natural and artificial environmental challenges which have resulted into flooding, soil erosion, improper waste management, desert encroachment, and so on. Against this background, this study examines the influence of green advertising on responsible environmental behaviour among residents of Minna, Niger state. The study is anchored on behavioural change and social learning theories. It adopts a survey method to gather necessary data for the three research questions raised. The findings revealed that Minna residents are adequately aware of green advertising and have helped create environmental awareness and adoption of responsible environmental behaviours, influencing behavioural changes towards a clean environment. It recommends the sustenance of the green messages and more effective environmental awareness on green advertising through multiple channels that will engender adoption of positive environmental behaviour among the residents of Niger state, as well as bring about the desired clean and green environment in the state.

Keywords: Green Advertising, Responsible Environmental Behaviour, Niger State

Introduction

Over the years, several environmental experts and scholars (Anderson, 2019; Akpanfun, Ndinwa & Chukwumah, 2020; Benny, 2009; Fasolya, 2016; Lauwrens, 2021; Olajire, 2020; Orisakwe, 2019; Tanee & Ochekwu, 2010; Faroog & Meraj, 2017; UNDP, 2016) from their studies on, ecosystem, biological, sociological and environmental challenges concluded that environmental challenges are global phenomenon. A complex interplay of human activities and natural factors; leading to issues like climate change, deforestation, erosion, pollution, and desertification. These challenges are aggravated by population growth, unsustainable resource management, inadequate environmental policies and poor environmental regulations (Anderson, 2019). These hazards emerged from advancement in technology, the emergence of free-market economies, as well as a poor attitude of people towards the environment (Santra, 2011).

To address the environmental threat and the vulnerability, there is a need for global focus on environmental control and sustainable efforts from national and international agencies, government and nongovernment organisations, foreign agencies, business owners and corporate organisations to adopt more eco-friendly practices and communication strategies for engendering a habitable environment for humans, animals and non-living creatures. Mitigating the environmental fallbacks, green advertising, a subset of environmental marketing, emerged as a powerful tool to influence consumer behaviour and promote responsible environmental practices (Dangelico & Vocalelli, 2017). As a part of the green campaign of consumers for environmental protection, advertising is one of the methods marketers use to position their products as green products in the minds of consumers (Dangelico & Vocalelli, 2017). Green advertising affects individual attitudes towards advertising and their intention to be friendly to the environment (Kim, Malek & Roberts, 2019).

Green advertising or marketing about consumer behaviour theory holds that consumers often have a better understanding of information related to themselves and consistent with their personal beliefs and values (Teng, Ye, Yu & Wu, 2014). This shift in advertising approach is particularly relevant in developing countries like Nigeria, where rapid urbanization has led to significant environmental challenges. Niger State, located in the North Central region of Nigeria, with a population of 27,917,831 people (2025 estimated) and a Land Area of 1,266,700 square kilometres, is not exempt from these environmental concerns. The state faces issues such as deforestation, soil erosion, floods, water pollution and improper waste management,

which have been aggravated by population growth and socio-economic development (AbduI-Kadir, Abdullahi, Christie, Moharnned, Liman & Hassan 2015).

As awareness of these environmental problems grows, there is an increasing need for effective communication strategies to promote sustainable practices among the populace. Hence, green advertising has been adjudged by many scholars in their different studies to be one of the potential means of communicating sustainable environmental habits because of its impact on purchase intentions, brand perceptions, and environmental consciousness (Grimmer & Woolley, 2014). Researchers generally agree that green advertising plays a role in marketing; nevertheless, regarding the effectiveness of green requirements in advertising, the communication strategies remain unclear, and there is no comprehensive theory of green requirements (Kong & Zhang, 2014). Consequently, green advertising in marketing could be combined with other marketing strategies to seek cooperation to achieve social goals (Wiener & Doescher, 1991), cited in Kao & Du (2019).

Therefore, the concept of Responsible Environmental Behaviour (REB) is central to understanding the potential impact of green advertising. Responsible Environmental Behaviour refers to actions taken by individuals or groups that contribute to environmental conservation and sustainability (Kollmuss & Agyeman, 2002; Kim, Malek & Roberts, 2019). These behaviours can range from simple actions like recycling and energy conservation to more complex decisions such as choosing eco-friendly products or advocating for environmental policies. In the context of Niger State, promoting responsible environmental behaviour is crucial for addressing the region's environmental challenges. Nevertheless, the efficiency of green advertising in a definite setting or a given environment remains understudied, this is as a result of cultural, economic, and social factors and other peculiar values attached to the region, which may influence how consumers perceive and respond to environmental messages (Amoako, Dzogbenku, & Doe, 2020).

Although, some researchers asserts that the relationship between Green Advertising and Responsible Environmental Behaviour (REB) is not always straightforward, but some studies have shown a positive correlation between exposure to green advertisements and pro-environmental behaviour s (Hartmann & Apaolaza-Ibáñez, 2012). Others highlighted potential barriers such as scepticism towards green claims and the attitude-behaviour gap (Moser, 2015). This gap, therefore, depicts the inconsistency between consumers reported environmental concerns and their actual behaviour s, suggesting that additional factors may mediate the influence of green advertising on responsible environmental behaviour. One of the assumed factors is environmental knowledge, which has been identified as a key determinant of pro-environmental behaviour (Kao & Du, 2019). This simply means that green advertising can serve as a source of environmental information, potentially increasing consumers' awareness and understanding of environmental issues, but the major concern is that the effectiveness of the knowledge transfer depends on various factors, including the credibility of the message source and the complexity of the information presented (Kao & Du, 2019).

Although misleading or false messages and claims on green environmental behaviour may lead to increased consumer skepticism towards green advertising (Nyilasy, Gangadharbatla, & Paladino, 2014). This skepticism can potentially undermine the effectiveness of legitimate green advertising efforts, highlighting the need for transparency and authenticity in environmental communication. The digital age has also transformed the landscape of green advertising, with social media and online platforms offering new opportunities for environmental messaging. These channels allow for more targeted and interactive communication, potentially increasing the reach and impact of green advertising (Ou & Verhoef, 2017). However, they also present challenges in terms of message control and the spread of misinformation about environmental issues. As the urgency of addressing environmental challenges continues to grow, the potential of green advertising to promote responsible environmental behaviour becomes increasingly significant. In Niger State, where environmental issues intersect with religion, culture, traditions and socio-economic growth, examining the influence of green advertising on responsible environmental behaviour in Minna, the state capital, is crucial.

Statement of the Problem

Environmental challenges are global issues that have garnered significant attention from the world's state actors and non-state actors such as the African Union AU, United Nations UN, African and foreign countries' environmental Agencies, Non-governmental Organisations (NGOs), and so on (United Nations Development Programme, 2016). It has also become a topic of discussion among environmental experts and academic researchers all over the world, especially, Africa; developing countries which many environmental experts believe to host many slums and prone to environment challenges such as climate change, deserts encroachment, earthquake, deforestation, erosion, land slide, wild fire, pollution, flood, poor drainage system, and environmental mismanagement, among others (Olajire, 2020). Niger State situated in the North Central region of Nigeria faces so many natural and artificial environmental challenges which had resulted into flooding, soil erosion, desert encroachment, improper waste management, insecurity, internal displacement, clashes between farmers and herdsmen, incessant malaria and typhoid fever, cholera and water pollution, among others.

These environmental challenges in Niger State, Nigeria, underscore the urgent need for the promotion of Responsible Environmental Behaviour REB among its residents. To achieve this, the state government initiated "New Niger Agenda" which spanned through the promotion of Responsible Environmental Behaviour (REB), restoration of monthly environmental sanitation practice, tree planting and a caveat on tree cutting to preserve the environment. The extent to which green advertising can influence environmental behaviour among residents of Minna with limited environmental awareness, skepticism towards green claims, and the attitude of the residents towards the application of the messages and campaigns on Responsible Environmental Behaviour remains unstudied. Therefore, there is a need to examine the influence of green advertising on responsible environmental behaviour among residents of Minna, Niger state. Although many studies (Amoako, Dzogbenku & Doe, 2020; Kim, Malek, & Roberts, 2019; Mustapha & Sani, 2023; Tsai-Feng & Yi-Zhan, 2020; Yin, Yu, & Wang, 2022) have explored the impact of green advertising on consumer behaviour, the unique cultural, economic, and environmental landscape of Niger state necessitates a more focused investigation on its influence among the residents in the state.

Objectives of the Study

1. To examine the level of awareness of green advertising among residents of Minna, Niger state.
2. To identify the relationship between exposure to green advertising and the adoption of responsible environmental behaviours among residents of Minna, Niger state.
3. To evaluate the effect of green advertising on responsible environmental behaviour among residents of Minna, Niger state.

Literature Review

Green advertising has emerged as a crucial tool in the broader field of environmental marketing, playing a pivotal role in promoting sustainable products, services, and behaviours. As defined by Kumar (2017, p.13), green advertising encompasses "any advertisement that meets one or more of the following criteria: explicitly or implicitly addresses the relationship between a product/service and the biophysical environment, promotes a green lifestyle, or presents a corporate image of environmental responsibility." This definition underscores the multifaceted nature of green advertising; Responsible Environmental Behaviour (REB) is a critical concept in the field of environmental psychology and sustainability studies. It encompasses actions taken by individuals or groups that contribute to environmental conservation and sustainability. Kollmuss and Agyeman (2002), define REB as "behaviour that consciously seeks to minimize the negative impact of one's actions on the natural and built world." This definition highlights the intentional nature of REB, emphasizing that it involves conscious decision-making and action. Responsible Environmental Behaviour may include a wide range of actions tailored to address local environmental challenges. Some examples of REB in this setting might include: Engaging in responsible waste management practices, such as separating recyclables, composting organic waste, and avoiding littering.

The relationship between green advertising and responsible environmental behaviour (REB) has been the subject of numerous empirical studies worldwide. These studies provide valuable insights that can inform strategies for promoting sustainable practices. A meta-analysis conducted by Matthes and Wonneberger (2014), examining 34 studies, found a positive correlation between exposure to green advertisements and pro-environmental attitudes. However, they noted that the effect size varied depending on the type of green appeal used and the product category, highlighting the complexity of consumer responses to environmental messaging. Further exploring the nuances of green advertising effectiveness,

Hartmann and Apaolaza-Ibáñez (2012), conducted a study of 351 consumers, revealing that emotional appeals in green advertising were more effective in influencing purchase intentions for eco-friendly products compared to functional appeals. This finding suggests that tapping into consumers' emotions may be a potent strategy for promoting REB through advertising. The importance of clear, concrete messaging in green advertising campaigns was underscored by

Schmuck, Matthes & Naderer (2018), in their experimental study with 487 participants, found that specific environmental claims were more persuasive than vague ones, and that nature-based imagery enhanced the effectiveness of green advertisements. In India, Jaiswal and Kant (2018), surveyed 351 consumers and found that perceived consumer effectiveness (similar to perceived behavioural control) was a crucial factor in determining green purchase intentions.

Kao and Du (2019), carried out a study on the influence of green advertising design and environmental emotion on advertising effect. It is adopted a total of 4 experimental situations, to manipulate the variables and measure the advertising effect. The results find that the advertising design with self-reference and strong argument has the best advertising effect; positive moral emotion and social emotion have a better advertising effect; and under the action of emotion, the subjects' preference for advertising design will also change.

Research in developing countries also provided insights that may be particularly relevant to Niger State, Nigeria. A study by Mostafa check in Egypt found that environmental knowledge and concern were significant predictors of green purchase behaviour, underscoring the importance of educational components in green advertising campaigns.

Examining the agricultural sector, which is significant in Niger State, Rezai et al. (2013), studied factors influencing the uptake of sustainable agricultural practices among farmers in Malaysia? They found that access to information, perceived benefits, and social influence were key determinants of adoption.

In Nigeria, Oyewole, Webb & Ojeaga (2018), survey 400 consumers in Lagos State, finding show a positive relationship between exposure to green marketing and intentions to purchase eco-friendly products. However, they also identified barriers such as higher prices of green products and a lack of availability.

Nwanji and Howell (2022), conduct a qualitative study exploring the perspectives of Nigerian marketing professionals on green advertising. They found that while there was growing interest in green marketing, challenges included limited consumer awareness, regulatory issues, and the need for more localized green advertising strategies.

AbdulKadir, Abdullahi, Christie, Mohammed, Liman and Hassan (2015), conducted a study on Climate Change and Vulnerability of the Riverine Communities in Niger State, Nigeria. The study concluded that the community vulnerability indicates the fact that interventions should be community-based rather than general and broad-based decisions that characterise disaster risk management in the country.

A study by Aliyu, Musa & Jibrin (2015), carried out a study in Northern Nigeria, which shares some similarities with Niger State, examined factors influencing the adoption of renewable energy technologies. They found that environmental awareness, perceived benefits, and government policies were significant predictors of adoption intentions. These findings suggest that green advertising in Niger State should address multiple factors, including raising awareness, highlighting benefits, and aligning with policy initiatives. Despite these valuable insights, there remains a significant gap in empirical research specifically

addressing the effectiveness of green advertising in promoting REB in Niger State. The unique cultural, economic, and environmental context of the region calls for targeted studies that can inform localized strategies.

Theoretical Framework

This study is anchored on two key theories: the Theory of Planned Behaviour and Social Learning Theory. The Theory of Planned Behaviour (TPB), proposed by Icek Ajzen in 1991, stands as a cornerstone in the field of behavioural prediction. The Theory of Planned Behaviour evolved from the earlier Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein in the 1970s. This theoretical progression reflects a growing understanding of the factors influencing human behaviour, particularly in contexts requiring deliberate decision-making.

Theory of Planned Behaviour posits that behavioural intentions and the immediate precursors to action are shaped by three key components: attitudes towards the behaviour, subjective norms, and perceived behavioural control. Attitudes towards the behaviour refer to an individual's overall evaluation of the behaviour in question. In the context of Responsible Environmental Behaviour REB, it encompasses beliefs about the outcomes of environmental actions and the value placed on these outcomes. Subjective norms represent the perceived social pressure to perform or not perform the behaviour. This component is particularly relevant in collectivist societies like Nigeria, where community opinions and expectations can significantly influence individual actions. Perceived behavioural control reflects an individual's perception of their ability to perform the behaviour. It includes both internal factors (skills, knowledge) and external factors (resources, opportunities).

From the perspective of green advertising and Responsible Environmental Behaviour, the theory of planned behaviour suggests that effective environmental messages should aim to positively influence all three components, such as "attitudes, subjective norms, and perceived behavioural control". The theory of Planned Behaviour framework is particularly relevant to the study of green advertising in Niger State, as it allows for the consideration of local cultural values, social pressures, and perceived barriers to environmental action. By addressing these factors, green advertising campaigns can be tailored to more effectively promote REB in the specific context of Niger State.

Complementing the theory of Planned Behaviour is Bandura's Social Learning Theory, introduced in 1977. This theory emphasizes the role of observational learning and modelling in shaping behaviour. Social Learning Theory posits that individuals learn not only through direct experience but also by observing and imitating others. Key concepts of Social Learning Theory include observational learning, modelling, and vicarious reinforcement. Observational learning refers to the process by which individuals acquire new behaviours by watching others perform them. Modelling is the process by which observed behaviours are internalised and reproduced. Explicitly, reinforcement occurs when learning takes place by observing the consequences of others' actions. In the area of green advertising, Social Learning Theory suggests that individuals may adopt environmentally responsible behaviours by observing and imitating others, including those portrayed in advertisements. This perspective is particularly relevant in understanding the potential impact of green advertising on social norms and collective environmental behaviour in Niger State. Green advertising campaigns based on Social Learning Theory principles might feature relatable individuals or local role models engaging in pro-environmental behaviours. The application of Social Learning Theory to green advertising in Niger State offers valuable insights into how sustainable behaviours can be promoted and disseminated through social networks and community structures.

Methodology

The study adopted a survey research design to investigate the influence of green advertising on responsible environmental behaviour among residents in Niger State. This design was selected because of its ability to collect data from a large population efficiently and cost-effectively. The survey approach allowed for the gathering of quantitative data on residents' exposure to green advertising, their environmental knowledge, attitudes, and their adoption of responsible environmental behaviours. The

population for this study consisted of all residents of Minna, Niger State, Nigeria. According to the 2025 population projections, Minna had an estimated population of 532,497 residents (National Population Commission, 2025 estimated population growth rate). This diverse population included individuals from various socioeconomic backgrounds, age groups, and educational levels across different demographic segments within the Bosso and Chanchaga Local Government Areas in Minna. To determine an appropriate sample size for the study, Taro Yamane's formula was employed. Based on this calculation, the sample size was rounded up to 400 respondents to ensure adequate representation of the population of Minna. Initially, Minna was stratified according to its existing administrative wards to guarantee geographical representation across the city. This preliminary stratification was essential in ensuring that the study captured the diverse socio-economic characteristics present across different areas of Minna, thereby enhancing the external validity of the research findings. The study employed a simple random sampling technique to select respondents from the Bosso and Chanchaga Local Government Areas in Minna, this probability sampling method was chosen for its fundamental characteristic of providing each resident an equal and independent chance of being selected for the study. The approach was particularly valuable in minimizing selection bias and enhancing the representativeness of the sample, which was crucial for drawing valid conclusions about the influence of green advertising on responsible environmental behaviour among the residents of the state. The implementation of the sampling procedure followed a systematic and well-structured approach to ensure comprehensive coverage of the study area.

Findings and discussion

Four hundred (400) copies of the questionnaire were administered by the researcher to elicit data for the study, out of which 381 were retrieved and found useful.

Table 1: Level of Awareness of Green Advertising among Residents of Minna

Response	Frequency	Percentage (%)
I am aware	381	100%
I am not aware	-	-
Total	381	100%

Source: Field Survey 2025

Table 1 indicate that all the respondents, 381 (100%), are aware of green advertising. This indicates a high level of awareness about green advertising among residents in Minna, Niger State.

Table 2: Relationship between Exposure to Green Advertising and the Adoption of Responsible Environmental Behaviours among Residents of Minna.

Response	Frequency	Percentage (%)
I agreed	367	96.3%
I disagreed	14	3.7%
Total	381	100%

Source: Field Survey 2025

Table 2indicates that majority of the respondents 367 (96.3%) respondents agreed while 14 (3.7%)disagreed. This implies that exposure to green advertising messages and campaigns can influence the adoption of responsible environmental behaviours.

Table 3: Effect of Green Advertising on Responsible Environmental Behaviour among Residents of Minna.

Response	Frequency	Percentage (%)
Green Advertising is effective	358	94%
Green Advertising is not effective	23	6%

Response	Frequency	Percentage (%)
Total	381	100%

Source: Field Survey 2024

Table 3 reveals that 358 (94%) respondents confirmed that green advertising has strong effect on responsible environmental behaviour of the residents of Minna, while 23 (6%) respondents feel otherwise. This indicates that green advertising possesses communicative potential to instil responsible environmental behaviour in many residents of Minna and anywhere it is adopted.

Discussion of Findings

The first objective of the study, which sought to examine the level of awareness of green advertising among residents of Minna, Niger state, reveals that all the respondents are aware and expose to green advertising through various media channels. This simply means that green advertising can serve as a source of environmental information, potentially increasing consumers' awareness and understanding of environmental issues, but the major concern is that the effectiveness of the knowledge transfer depends on various factors, including the credibility of the message source and the complexity of the information presented (Kao & Du, 2019).

The findings also revealed that there is a relationship between exposure to green advertising and the adoption of responsible environmental behaviours among residents of Minna. This connote that exposure to green advertising has a definite relationship with the adoption of responsible environmental behaviours. These respondents' submission further confirms the relationship between green advertising messages and environmental cleanliness and healthier environmental attitudes. These findings are in line with a study conducted by Harrison and Powell (2023), who found similar positive correlations between green advertising exposure and environmental awareness. However, Chen, Wang, Zhang and Li (2022), presented contrasting findings, suggesting that awareness doesn't always translate into behavioural change. A meta-analysis conducted by Matthes and Wonneberger (2014), examining 34 studies, also found a positive correlation between exposure to green advertisements and pro-environmental attitudes.

This simply means that residents of Minna have better exposure to green advertising messages capable of engendering responsible environmental behaviour which may results in environmental cleanliness.

This is evident in a series of tree planting activities, clearing of drainage and water ways, minimising air pollution, agriculture and green environment cultivations, reconstruction of major inland waterway and roads, as well as maintaining safe environment initiatives under the "New Niger Agenda" policy of the present administration, under leadership of Governor Muhammad Umar Bago. This finding aligns with a study carried out by Thompson, Gabel & Johnson (2023), which documented similar behavioural impacts of environmental messaging. This experience was also noted by Wright and Abdullah (2022), in their study of environmental communication effectiveness, which collectively suggests that recording a success does not call for inconsistency; constant build-up on the early achievements guarantees the sustainability of the success recorded. The two theories: planned behaviour theory (Ajzen & Fishbein, 1970) and social learning theory (Bandura, 1977). The findings are in correlation with the planned behaviour theory that emphasised the role of observational learning and modelling in shaping behaviour. This is because the residents of Minna in Niger State learn not only through direct experience but also by observing and imitating others. Their exposure and imitation, observatory learning and shaping behaviour as a result of exposure to the content of the media or green advertising, explains the attitudinal change and the adoption of responsible environmental behaviour. The second theory proposition also explains the reason for the strong effect of green advertising messages on the residents of Minna because it placed a premium on progression, reflecting a growing understanding of the factors influencing human behaviour, particularly in contexts requiring deliberate decision-making.

Conclusion

Based on the findings in this study, it can be concluded that green advertising plays a crucial role in shaping environmental consciousness and promoting responsible environmental behaviour among Niger State residents. The high level of awareness and understanding of green advertising concepts demonstrates the effectiveness of current environmental communication strategies in reaching the target audience. The strong correlation between green advertising exposure and positive environmental attitudes, coupled with high self-reported behavioural changes, indicates that green advertising is an effective tool for promoting environmental consciousness. Relating the findings to the Human theory of planned behaviour which suggests that effective environmental messages should aim to positively influence three components, such as, "attitudes, subjective norms and perceived behavioural control and social learning theory which also link influence of media content to the ability of modelling one's experience to what they watched or listened to, which underscores the importance of green advertising to address specific environmental challenges faced by Niger State residents.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Media organizations and environmental agencies should sustain the level of awareness on green advertising in Minna, Niger state.
2. Media organizations should vary the messages they disseminate on green advertising on different media channels for the continuous adoption of responsible environmental behaviour among residents of Minna.
3. Government and Environmental agencies should extend the green advertising campaign to other parts of the state to engender more responsible environmental behaviour in the state.

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