

# Influence of Climate Change Communication on Responsible Environmental Behaviour among Residents of a State in Nigeria

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## Abstract

Environmental sustainability engineered by responsible environmental behavior is achievable through climate centric communication strategies. However, how climate change communication can facilitate responsible ecological behavior among residents of Niger state remains uncertain. The study was guided by four research objectives, with the survey as the method of enquiry. A sample size of 400 respondents was drawn for the study, while the theory of reasoned action (TRA) served as the theoretical framework. Findings revealed high level of awareness and knowledge of climate change communications among residents of Niger state with radio and public campaigns identified to have played crucial roles in disseminating climate change information. The study concludes that diverse communication channels and appropriate framing techniques should be utilized not only to create awareness about climate change effects but also to drive people to act to maintain a sustainable environment. It was recommended, among other things, that climate change messages should be disseminated utilizing both conventional and social media to educate and inform a more diverse and heterogeneous audience.

**Keywords:** Assessment, Health Communication, Immunization, Strategies, Women.

## INTRODUCTION

Through variations in rainfall and temperature, climate change has already started to alter Africa's environmental, social, and economic conditions. For most people on the continent, climate change is now a minor concern. But as the effects of climate change worsen and their severity grows, it will become more important. To adapt to and mitigate it, behavioural modifications will be required. By lessening the effects of their activities in Africa, supporting the creation of efficient policies and measures, and facilitating the necessary financial and investment flows, high-income nations and the international community can aid in these transformations (Xu, 2024).

The extent to which African governments and people can avert the effects of climate change and achieve a more sustainable future, however, will ultimately depend on their actions based on their understanding of a changing climate and its impacts. They will need to be responsive to current climate variability to build resilience to the changing climate. Climate change communication is one way to encourage responsible behaviour and facilitate positive change regarding climate change in Africa. Enhancing knowledge and comprehension of climate change and its effects at all levels, fostering a commitment to long-term change, and encouraging behavioural shifts and well-informed policy decisions will all depend on this (Икрям & Юр, 2024).

It must be adapted and take into account the many societal sectors as well as the varied cultural, linguistic, and literacy levels found in Africa's numerous nations. Since there are resources available for various forms of communication at each level, the best way to achieve this is to facilitate communication at the local, national, and worldwide levels. Specific community vulnerabilities and priorities, as well as traditional knowledge and practices that help direct adaptation, can be identified through effective local communication. Ultimately, communication can improve the world's comprehension of climate change (Miller, 2015).

One of the greatest challenge of the twenty-first century is climate alteration, which has negative effects on the Earth's ecosystems. Climate change communication is a complex process associated with risks, and certain barriers that can hinder positive societal response. In Northern Nigeria, a region susceptible to the impacts of climate change, environmental behaviour is cited as one of the key ways in which society can mitigate the effects of climate change, but research suggests that the public does not connect their everyday behaviours with the issues of climate change (Rocha et al., 2022; Iqbal & Ghauri, 2011; Feulner, 2015).

Climate change communication efforts will be greatly increased in Northern Nigeria in the upcoming years in response to the region's growing and significant threat from climate change; however, there are numerous obstacles that prevent the region from promoting responsible environmental behaviour in line with climate change mitigation, and little is known about the potential impacts of climate change communication. Many Northern States do not prioritise climate change due to the region's poverty (Ogwezi & Umukoro, 2020; Sheshi & Yisa, 2024; Olujobi & Odogbo, 2024).

Furthermore, there is a dearth of research on respondents' perceptions of climate change communication about responsible environmental behaviour, which means that if the goal of climate change communication is to encourage responsible environmental behavior among the general public, it must be approached in a way that is pertinent to the problems and circumstances of Niger State (Whitmarsh & Capstick, 2018; Brechin & Bhandari, 2011; Asekun-Olarinmoye et al., 2014). To this end, the study sought to find out audience level of awareness of climate change communication on responsible environmental behaviour; ascertain audience knowledge level of climate change communication on responsible environmental behaviour; determine audience perception of climate change communication on responsible environmental behavior; and to find out the challenges to climate change communication on responsible environmental behaviour in Niger state.

Several factors influence responsible environmental behaviour, including audience awareness of climate change communication. Spence et al. (2011) conducted a thorough study using a nationally representative British sample to investigate the psychological distance of climate change, breaking it down into temporal, social, geographical, and uncertainty dimensions. Their findings showed that, depending on the dimension evaluated, climate change is perceived as both distant and proximal, with lower psychological distance across these dimensions being linked to increased concern about climate change. Interestingly, there was a substantial correlation between greater readiness to take climate action and the impression of climatic consequences on developing nations, which is a component of social distance. Although the study mostly uses self-reported measurements, which may add bias, its holistic examination of psychological aspects highlights its robustness.

On the other hand, Chamcham et al. (2024) examined how media literacy helped 432 Iranian consumers adopt sustainable consumption habits. Their findings show that 93% of the variance in sustainable consumption awareness, and 51% of the variance in sustainable consumption intention were explained by the different aspects of media literacy, specifically with usage, accessibility, content creation, and critical understanding. Additionally, 87% of the respondents opined that changes in the consumption pattern was explained by the relationship between awareness and intention. These data explains how media literacy is influencing people's consciousness of and willingness to behave sustainably. The large sample size and thorough statistical analysis used in the study, which provide a high degree of evidence, are its methodological strengths.

When these findings are combined, it is clear that psychological perceptions and media literacy are important factors that influence environmental behaviour. For example, Spence et al. (2012) found that when psychological distance is reduced it increases people's readiness to want to act responsibly, while Chamcham et al. (2024) posit that an enhanced media literacy leads to sustainable behaviours. These findings indicate that effective communication about climate change must address both the psychological positioning of the issue and the audience's ability to critically engage with media content. The studies' different periods (2011 and 2024) could, however, indicate changing audience awareness dynamics brought on by the growing use of digital media and information sharing techniques.

Regarding knowledge level, Obracht-Prondzyńska et al. (2022) implemented Kamrowska-Zaluska's methodological framework to evaluate AI solutions within the Greencoin project, aimed at promoting climate neutrality in smart cities. Through a systematic literature analysis, the study identified six major areas where AI might promote climate awareness, including moulding pro-environmental behaviours and enhancing communication with residents.

The study carefully describes how AI-powered learning resources might act as behavioural change agents, facilitating the adoption of net-zero regulations. To increase audience understanding and participation in climate-responsible behaviours, the Greencoin project uses artificial intelligence (AI) to give personalised information and

incentives that target the instructional and commercial aspects of urbanized areas. The study highlights how AI can support bottom-up projects, which are crucial for building urban resilience and encouraging sustainable behaviours among residents. The study quantitatively synthesised data from multiple AI implementations revealing how AI-based intrusions correlated positively with increased climate perception.

Pradere et al. (2023) highlight a significant disconnect between the actual implementation of evidence-based environmental impact reduction methods in clinical settings and their availability. According to the findings, only three studies made use of established implementation theories which are important for a well organised and successful transmission of sustainable practices. Additionally, collaborative learning was identified to improve individual attitudes; however, the absence of long-lasting results suggests that these communication strategies are insufficient to guarantee long-term behavioural change. The problem is made worse by the lack of follow-up research on innovation barriers, which restricts our knowledge of the fundamental obstacles preventing the adoption of sustainable practices.

In their investigation of the obstacles to plant-based diet adoption in affluent nations, Rickerby and Green (2024) offered insightful information relevant to the communication of climate change. They found 40 barriers in their systematic study, which were then combined into 11 themes. The most common themes were "personal ability" and "lack of knowledge." Inadequate and inaccurate information prevent people from making environmentally friendly food choices, and these barriers are inextricably tied to communication problems. The study highlights how habitual behaviours and nutritional concerns greatly hinder the adoption of plant-based diets. This highlights a larger problem in climate change communication, where messages intended to promote sustainable behaviours are limited in their effectiveness by emotional and cognitive barriers.

Together, the two studies highlight how important good communication is in closing the gap between research and practice. According to Pradere et al. (2023), the adoption of eco-friendly steps cannot function effectively without strong communication frameworks and tactics. Similarly, Rickerby and Green (2024) reveal that lack of strategic communication affect environmental consciousness.

Furthermore, considering their thorough and methodical approaches, the quality of the evidence in both assessments is excellent. More thorough research on communication tactics that successfully overcome the noted obstacles is necessary, though, given the paucity of pertinent papers and the very early stage of the study. Future research should use more rigorous evaluation techniques to gauge the efficacy of particular communication interventions, as suggested by Pradere et al. (2023), relying on qualitative successes and Rickerby and Green's (2024) synthesis of barriers without corresponding quantitative measures.

## LITERATURE REVIEW

The examination of audience awareness regarding climate change communication reveals multifaceted dimensions influencing responsible environmental behavior. Spence et al. (2011) conducted a comprehensive study utilizing a nationally representative British sample to explore the psychological distance of climate change, dissecting it into temporal, social, geographical, and uncertainty dimensions. Their findings indicated that climate change is perceived both as distant and proximal depending on the dimension assessed. Specifically, lower psychological distance across these dimensions was associated with heightened concern about climate change. Notably, the perception of climate impacts on developing countries (a component of social distance) significantly correlated with increased preparedness to engage in climate action. The study's robustness is underscored by its systemic exploration of psychological factors, although it primarily relies on self-reported measures which may introduce bias

In contrast, Chamcham et al. (2024) focused on the role of media literacy in fostering sustainable consumption practices among 432 Iranian consumers. Employing partial least squares structural equation modeling (PLS-SEM), the study demonstrated that various facets of media literacy namely: usage, accessibility, content generation, and critical understanding collectively accounted for 93% of the variance in sustainable consumption awareness and 51% of the variance in sustainable consumption intention. Furthermore, the interplay between awareness and intention explained 87% of the variance in actual sustainable consumption behaviour. These quantitative findings highlight the pivotal role of media literacy in shaping both awareness and behavioral intentions towards sustainability. The study's methodological strength lies in its substantial sample size and the rigorous statistical analysis employed, providing a high level of evidence.

When synthesizing these findings, it becomes evident that both psychological perceptions and media literacy

are critical determinants of environmental behaviour. The reduction of psychological distance, as identified by Spence et al. (2012), enhances concern and preparedness to act, while the enhancement of media literacy, as demonstrated by Chamcham et al. (2024), directly boosts awareness and intention towards sustainable behaviours. The interrelation between these factors suggests that effective climate change communication must address both the psychological positioning of the issue and the audience's capacity to critically engage with media content. However, the temporal gap between the studies (2011 vs. 2024) may imply evolving dynamics in audience awareness influenced by the increasing prevalence of digital media and information dissemination methods.

On knowledge level, the primary study reviewed, titled "Greencoin as an AI-Based Solution Shaping Climate Awareness," offers significant insights into the efficacy of AI-driven interventions in climate change communication. The authors, Obracht-Prondzyńska et al. (2022), implemented Kamrowska-Załużska's methodological framework to evaluate AI solutions within the Greencoin project, aimed at promoting climate neutrality in smart cities. Through a systematic literature review, the study identified six key areas where AI can enhance climate awareness, including shaping pro-environmental behaviours and improving communication with residents.

The research meticulously outlines how AI-based educational tools can serve as catalysts for behavioral change, thereby supporting the implementation of net-zero policies. By targeting educational and economic facets of smart cities, the Greencoin project leverages AI to provide personalized information and incentives, which are critical in increasing audience knowledge and engagement regarding climate-responsible behaviours. The study emphasizes the role of AI in facilitating bottom-up initiatives, which are essential for fostering urban resilience and promoting sustainable practices among citizens.

Quantitatively, the study synthesized data from various AI implementations, demonstrating a positive correlation between AI-based interventions and enhanced climate awareness. Although the exact numerical statistics regarding audience knowledge levels are not explicitly detailed, the qualitative outcomes suggest notable improvements in public understanding and participation in sustainability initiatives. The authors acknowledge the potential of AI tools in bridging knowledge gaps but also highlight the necessity for ongoing research to quantify these effects more precisely.

The examination of selected literature revealed multifaceted challenges in climate change communication that impede the promotion of responsible environmental behaviour. Pradere et al. (2023) conducted a systematic review focusing on implementation approaches to enhance environmental sustainability within operating theatres. This study underscores a critical gap between the availability of evidence-based strategies for reducing environmental impacts and their practical adoption in clinical settings.

The findings from the study highlight that only three studies utilized recognized implementation theories, models, or frameworks, which are essential for structured and effective communication of sustainability practices. Furthermore, the reliance on interprofessional education to influence individual behaviours was prevalent, yet the lack of sustained effects points to the inadequacy of these communication methods in ensuring long-term behavioural change. The absence of follow-up studies examining barriers to innovation further exacerbates the challenge, as it limits the understanding of underlying issues that hinder the adoption of sustainable practices.

Rickerby and Green (2024) explored the barriers to adopting a plant-based diet in high-income countries, providing valuable insights pertinent to climate change communication. Their systematic review identified 40 barriers, synthesized into 11 themes, with "lack of knowledge" and "personal ability" being the most prominent. These barriers are intrinsically linked to communication challenges, where misinformation and insufficient information impede individuals' ability to make informed dietary choices that benefit the environment. The study emphasizes that nutritional concerns and habitual behaviors significantly deter the adoption of plant-based diets, reflecting a broader issue in climate change communication where emotional and cognitive barriers limit the effectiveness of messages aimed at encouraging sustainable behaviours.

Both studies collectively illuminate the critical role of effective communication in bridging the gap between evidence and practice. Pradere et al. (2023) demonstrate that without robust communication frameworks and sustained engagement strategies, the implementation of environmental sustainability measures remains superficial and transient. Similarly, Rickerby and Green (2024) reveal that the lack of comprehensive and targeted communication efforts contributes to pervasive barriers in adopting environmentally responsible behaviours such as plant-based diets.

Moreover, the quality of evidence in both reviews is high, given their systematic and comprehensive methodologies. However, the limited number of relevant studies and the predominantly early-phase nature of the research indicate a need for more in-depth investigations into communication strategies that effectively address the

identified barriers. The reliance on qualitative successes in Pradere et al. (2023) and the synthesis of barriers without corresponding quantitative measures in Rickerby and Green (2024) suggest that future research should incorporate more rigorous evaluation methods to assess the effectiveness of specific communication interventions.

This study finds its basis in the theory of reasoned action which focuses on behavioural actions. According to the theory, behaviour is determined by intent, meaning that when an anticipation value is formulated, a matching behavioural action is shown. Stated differently, the performance of a given behaviour is mostly determined by intention to perform that behaviour (Oyero, 2017). Thus, the most important determinant of an individual's behaviour is behaviour intent.

However, “attitudinal” and “normative” elements are the two main variables that might affect behavioural intent. The way a person approaches an activity is known as their attitude. This mindset is often influenced by an assessment of the perceived outcomes of the activities or behaviour in question, as well as the degree to which the person believes these outcomes to be true. The effect of social norms about behaviour and the desire to fit in, on the other hand, is known as the normative factor. Positive attitudes and subjective standards boost people's perceived behavioural control, or their belief that they can carry out a certain activity. The theory of reasoned action uses previously discovered variables, normative and attitudinal components, to predict behavioural intention, that is, both conduct and attitude. It's important to remember that both variables might have an impact on behavioural intent at the same time.

This is the process by which an individual's attitude shapes their intention to behave in a certain way. But such an activity can be deemed unacceptable by his or her subjective standards; here is where volitional control comes in. However, as attitudes are naturally dynamic, it may only be possible to evaluate behavioural intent precisely when related behaviour is occurring at the same moment. In summary, according to the theory of reasoned action, intent is a predictor of behaviour; it is a cognitive process which precedes behaviour.

The Theory of Reasoned Action (TRA) allows for an understanding of the perception of Niger State residents on climate change and responsible environmental behaviours as well as how they are related. This will thus assist in determining the impact of various climate change communication strategies for encouraging a responsible environmental environment among the residents of Niger State.

## METHODS

The survey research method was utilized to gather data for the study. The population of the study comprised of the residents of Niger state. The population of the people living in Niger State is six million, seven hundred and eighty-three thousand, three hundred (6,783,300) according to (National Bureau of Statistics, 2022). Taro Yamane (1964) sample size calculation formula was adopted in calculating the sample size. Below is the calculation:

N = Population of study

K = Constant (1)

e = Degree of error expected

n = Sample size

$$\begin{aligned}
 n &= \frac{N}{K + N(e)^2} \\
 &= \frac{6783300}{1 + 6783300(0.05)^2} \\
 &= \frac{6783300}{1 + 6783300(0.0025)}
 \end{aligned}$$

$$= \frac{6783300}{1 + 16958.25}$$

$$= \frac{6783300}{16959.25} = 399.9764140513289$$

Therefore, n = 400.

The study employed the multi-stage sampling technique and this is because this method allows for the selection of a representative sample from the target population, ensuring that the findings can be generalized to the entire population.

#### Phase One:

Niger state exists in a cluster of three (3) senatorial zones and there are: Zone A, Zone B and Zone C respectively.

#### Phase Two:

The three zones were further broken down into the Local Government Areas with,

**Zone A** having a total of eight (8) Local Government Areas: Mokwa, Lavun, Edati, Bida, Gbako, Katcha, Agaie and Lapai and,

**Zone B** with a total of nine (9) Local Government Areas: Paikoro, Bosso, Chanchaga, Rafi, Gurara, Suleja, Tafa, Munya, Shiroro and,

**Zone C** with a total of eight (8) Local Government Areas: Borgu, Agwara, Magama, Rijau, Kontagora, Mashegu, Wushishi and Mariga.

#### Phase Three:

One Local Government Area was selected from each Zone using the simple random sampling technique making it a total of three (3) Local Government Areas, **Zone A:** Lapai, **Zone B:** Suleja and **Zone C:** Agwara. The Local Government Areas were further broken down into electoral wards with **Lapai** having a total of ten (10) electoral wards, **Suleja** having a total of ten (10) electoral wards, and **Agwara** having a total of ten (10) electoral wards making it a total of thirty (30) wards respectively.

**Lapai:** Arewa/yamma, Birnin Maza/tashibo, Ebbo/gbacinku, Evuti/kpada, Gulu/anguwa vatsa, Gupa/abugi, Gurdi/zago, kudu/gabas, Muye/egba and Takuti/shaku.

**Suleja:** Bagmama 'A', Bagama'B', Hashimi 'A', Hashimi 'B', Iku South I, Iku South II, Kurmin Sarki, Magajiya, Maje North, and Wambai.

**Agwara:** Adehe, Agwata, Busuru, Gallah, Kashini, Kokoli, Mago, Papiri, Rofia, and Suteku.

#### Phase Four:

Using simple random sampling technique, the researcher selected six (6) electoral wards, that is two (2) from each Local Government Area. They are:

**Lapai:** Birnin Maza/tashibo and Arewa/yamma

**Suleja:** Maje North and Magajiya

**Agwara:** Mago and Kashini

### Phase Five:

Quota sampling technique was adopted in the distribution of questionnaires to the respondents. Below is the table that illustrates the distribution of questionnaires to each electoral ward.

Wards	Questionnaire
Arewa/Yamma	67
Birnin Maza/Tashibo	67
Maje North	67
Magajiya	67
Mago	66
Kashini	66
<b>TOTAL</b>	<b>400</b>

### Results

**Table 1:**

**Audience level of Awareness of Climate Change Communication on Responsible Environmental Behaviour in Niger State**

S/N	Responses	SA Freq (%)	A Freq (%)	SD Freq (%)	D Freq (%)	Mean	Remark
1	I regularly follow news and updates on climate change issues	137 (34.25%)	109 (27.25%)	121 (30.25%)	33 (8.25%)	<b>2.86</b>	<b>Accepted</b>
2	I understand the impact of climate change on my local environment and community	134 (33.5%)	197 (49.25%)	65 (16.25%)	4 (1%)	<b>3.45</b>	<b>Accepted</b>
3	I am aware and believe that climate change is a significant issue that requires immediate attention and action	165 (41.25%)	188 (47%)	38 (9.5%)	9 (2.25%)	<b>2.27</b>	<b>Rejected</b>
<b>Average Overall Mean</b>						<b>2.86</b>	

**Source: Field Survey, 2024**

The table above reveals the responses on audience level of awareness of climate change communication on responsible environmental behaviour. The first and second statements reveals that respondents regularly follow news and updates on climate change issues and are aware of the impact of climate change on their environment. The third statement however, reveals a low consensus when the respondents were asked if they are aware and believe that climate

change is a significant issue that requires immediate attention and action. The average overall mean indicates a positive response from the surveyed audience regarding awareness of climate change.

**Table 2:**

**Audience knowledge level of Climate Change Communication on Responsible Environmental Behaviour in Niger State**

S/N	Responses	SA Freq (%)	A Freq (%)	SD Freq (%)	D Freq (%)	Mean	Remark
4	Effects of climate change on the environment are publicized via radio stations in Niger State	107 (26.75%)	108 (27%)	140 (35%)	45 (11.25)	3.17	Accepted
5	Newspaper and magazines publish stories on climate change affects their environment	84 (21%)	179 (44.75%)	125 (31.25%)	12 (3%)	2.70	Neutral
6	There are public campaigns done to create awareness on various effects of climate change on the environment like the “Green economic summit”	157 (39.25%)	117 (29.25%)	117 (29.25%)	9 (2.25%)	3.05	Accepted
<b>Average Overall Mean</b>						<b>2.97</b>	

**Source: Field Survey, 2024**

The table above reveals the responses on audience knowledge level of climate change communication on responsible environmental behaviour. The first and third statements indicate that radio stations and public campaigns are active mediums in educating and informing the respondents on effects of climate change. However, the second statement indicates a neutral stance on the role of print media (newspapers and magazine) suggesting a lack of strong agreement or disagreement. The overall mean value indicates a positive knowledge of communication channels in disseminating climate change information.

**Table 3:**

**Audience Perception of Climate Change Communication on Responsible Environmental Behaviour in Niger State**

S/N	Responses	SA	A	SD	D	Mean	Remark
		Freq	Freq	Freq	Freq		
		(%)	(%)	(%)	(%)		
7	Climate change communication helps bring	189 (47.25%)	194	12	5	3.84	Accepted

	about responsible environment behaviours that promotes prevention of environmental hazards like floods, Drought and coral reef damages		(48.5%)	(3%)	(1.25%)		
8	It helps in regulating global warming and depletion of ozone layer through production of petrol-diesel fueled vehicles that emits less Exhausts.	164 (41%)	209 (52.25%)	22 (5.5%)	5 (1.25%)	3.87	Accepted
9	It enables farmers to put in place effective measures of mitigating crops and livestock diseases that result from climate change.	185 (46.25%)	183 (45.75%)	29 (7.25%)	3 (0.75%)	4.02	Accepted
10	Ultimately, climate change communication will drastically reduce diseases and pre-mature deaths and promotes a healthy society.	189 (47.25%)	159 (39.75%)	40 (10%)	12 (3%)	3.48	
	<b>Average Overall Mean</b>					<b>3.80</b>	
	<b>Source: Field Survey, 2024</b>						

The table above reveals the responses on audience perception of climate change communication on responsible environmental behaviour. The survey revealed a widespread acceptance on the role of climate change communication in addressing and promoting environmental hazards, regulating global warming, mitigating crops and livestock diseases and fostering a healthier society.

**Table 4:**

**Challenges to Climate Change Communication on Responsible Environmental Behaviour in Niger State**

S/N	Responses	SA Freq (%)	A Freq (%)	SD Freq (%)	D Freq (%)	Mean	Remark
11	A lot of communications about climate change focus on raising public concern, rather than moving people to action	158 (39.5%)	85 (21.25%)	71 (17.75%)	45 (11.25%)	3.60	Accepted
12	People spread stories of despair and so-called inevitability about climate changes rather than stories of	128 (32%)	125 (31.25%)	78 (19.5%)	12 (3%)	2.86	Accepted

hope and possibility for sustainability and brighter future							
13	The field of climate change communication is also bedeviled with the challenges of being silenced and invalidated by the government	192 (48%)	137 (34.24%)	117 (29.25%)	49 (12.25%)	3.62	Accepted
Average Overall Mean						3.36	
Source: Field Survey, 2024							

The table above reveals the responses on challenges of climate change communication on responsible environmental behaviour. The survey falls within an accepted range indicating an overall acknowledgment and acceptance of challenges of climate change communication on the emphasis of raising concern rather than moving people to action, the prevalence of spreading stories of despair about climate change rather than stories of hope and possibility, and challenges of being silenced and invalidated by the government.

RESULTS AND DISCUSSION

The analysis and interpretation of the data collected from respondents in Niger State provide valuable insights into the awareness, knowledge, perception, and challenges associated with climate change communication and its impact on responsible environmental behaviour.

The awareness level among the audience is generally positive. The respondents show a commendable engagement in staying informed about climate change issues, with an average mean score of 2.86. This implies that the respondents are media literates and are conversant with climate change communications when they come across one. The finding aligns with the submissions of Spence et al. (2012) and Chamcham et al. (2024) who noted that the interrelation between the reduction in psychological distance and the enhancement of media literacy suggests that effective climate change communication must address both the psychological positioning of the issue and the audience’s capacity to critically engage with media content. However, it is pertinent to note that audience awareness level could vary over time due to avalanche channels through which climate change matters can be communicated. In essence, climate change messages should be framed and tailored in a strategic manner that the entire public will be informed and aware of its impacts and effects to their environment irrespective of sociographical or socioeconomic parameters. On the other hand, the statement regarding the awareness and belief in the significance of climate change, along with the need for immediate action, has a lower mean value (2.27), indicating a potential area for targeted communication strategies to enhance understanding and commitment among people towards responsible environmental behaviour for climate change mitigation.

Furthermore, the responses on audience knowledge level of climate change communication indicates that, respondents generally perceive radio stations and public campaigns as effective channels for disseminating information on climate change. The positive responses indicate that these mediums play a crucial role in educating the public about the effects of climate change. Obracht-Prondzyńska et al. (2022) corroborate the finding when they submitted in their study that the exact numerical statistics regarding audience knowledge levels are not explicitly detailed. As a result, the qualitative outcomes suggest notable improvements in public understanding and participation in sustainability initiatives. However, there is a more neutral stance regarding the role of print media, suggesting that additional efforts may be needed to leverage print media effectively in climate change communication.

While literature revealed that there are little or no studies that have measured audience perception of climate change communication on responsible environmental behaviour, respondents in the study however, had a positive perception of the influence of climate change communication on responsible environmental behaviour. The overall

mean value (3.80) suggests a high level of acceptance and positive belief in the effectiveness of communication efforts. This finding implies that, when communicators associate positive impacts of adopting responsible environmental behaviour like; regulating environmental hazards and preventing diseases with climate change messages, it will equally create a positive perception of climate change in the minds of members of the public.

Challenges in climate change communication are acknowledged by the respondents. The data highlighted concerns about an emphasis on raising public concern rather than motivating people to act (mean value: 3.60) and the spread of negative narratives about climate change (mean value: 2.86). This finding aligns with Rickerby and Green (2024) where misinformation and insufficient information impeded individuals' ability to make informed decisions on environmental sustainability. Additionally, there is recognition of challenges related to government influence on climate change communication efforts (mean value: 3.62). These challenges underscore the importance of crafting communication strategies that not only raise awareness but also inspire action. There is therefore the need for in-depth investigations into communication strategies that effectively address the identified barriers to climate change communication in the state.

## CONCLUSION

Findings arising from the study suggests that while there is a positive awareness and perception of climate change communication in Niger State, there are areas for improvement. To this end, tailoring communication strategies to address specific challenges, fostering a sense of urgency, and leveraging various communication channels effectively can enhance the overall impact of climate change communication on responsible environmental behaviour. The demographic insights provided by the survey contribute to a comprehensive understanding of audience perspectives, allowing for targeted and impactful communication interventions in the state.

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