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Environmental Education Exposure and Behavioural Change Towards Plastic Use Reduction in Port Harcourt Metropolis, Rivers State, Nigeria

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Abstract- ***This study investigated environmental education exposure and behavioural change towards plastic use reduction in Port Harcourt metropolis, Rivers State, Nigeria. It was guided by three objectives, each with corresponding research questions and null hypotheses. The research employed a correlation survey design, targeting a population of 10,000 residents, including school-age youth, traders, households, and community members. A sample of 1,000 respondents, representing 10% of the population, was selected through simple random sampling. Data was collected using two questionnaires: the Environmental Education Exposure Assessment Scale (EEEAS) and the Behavioural Change Towards Plastic Use Reduction Assessment Scale (BCTPURAS). Both instruments were validated, and their reliability was confirmed with Cronbach's alpha coefficients of 0.84 and 0.87. Data analysis involved simple linear regression to answer the research questions, while t-tests associated with regression were used to test the hypotheses at a 0.05 significance level. The findings of the study revealed that community sensitisation and school programme predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State by to a very low extent by 15% and 5%, respectively, while media engagement predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State by to a low extent by 28%. Based on these findings, the study concludes that environmental education exposure through community sensitisation, school programmes, and media engagement predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State, though only to low and very low extents, with media engagement exerting the greatest influence. Hence, it was recommended among others that community leaders and NGOs should strengthen grassroots sensitisation through continuous awareness campaigns and locally driven initiatives to boost behavioural change.***

Keywords: Environmental Education, Behavioural Change, Plastic Use Reduction

I. INTRODUCTION

Plastic pollution has become one of Nigeria's most visible environmental challenges, affecting both land and water ecosystems, blocking drainage channels, worsening urban flooding, and harming public health and livelihoods. Nigeria is among Africa's top producers of plastic waste; recent estimates suggest annual volumes in the millions of tonnes, with coastal leakage particularly severe along the Gulf of Guinea. In 2018, for example, the World Bank estimated that West Africa's coastal countries generated 6.9 million tonnes of plastic waste, of which Nigeria accounted for around 4.7 million tonnes, much of which ended up in waterways and the ocean due to inadequate collection and disposal. Momentum for policy change has grown; in June 2024, the Federal Government announced a phased ban on single-use plastics starting with government offices, alongside plans for a broader nationwide ban. Lagos State, Nigeria's largest urban area and a plastics hotspot, went further by banning single-use plastics like Styrofoam food packs, cutlery, plates, and straws, effective 1 July 2025, although early enforcement has been uneven. These developments highlight the central problem this study addresses; how exposure to environmental education can drive lasting behavioral change among Nigerians to reduce plastic use.

The scale and texture of Nigeria's plastic problem are shaped by rapid urbanisation, growth of low-cost sachet packaging, weak collection infrastructure, and the predominance of an informal waste economy. Lagos alone produces roughly 13,000 tonnes of solid waste daily and contributed an estimated 870,000 tonnes of plastic waste in 2024; while Port Harcourt Metropolis, the capital of Rivers State and a dense coastal urban centre, is representative of these dynamics, without robust collection and affordable

alternatives, a significant share ends up in drains and lagoons, contributing to recurrent floods and coastal pollution (Associated Press, 2025; African Leadership Magazine, 2024). Multiple local studies and reviews report high levels of visible plastic debris, irregular collection services, and community-level knowledge gaps that aggravate improper disposal and associated health risks (Port Harcourt Research, 2024; Anabaraonye et al., 2022). Nationally, only a small fraction of plastics is recovered and recycled, with most ending up in landfills or the environment (Dennison, 2025). These system constraints mean that regulatory bans, while important, are unlikely to succeed in isolation. Lasting reductions in plastic consumption depend on shifts in everyday practices (refusing disposable items, carrying reusables, bulk purchasing), which in turn hinge on awareness, attitudes, capabilities, and social norms.

Environmental education is widely regarded as a strategic lever for cultivating these underlying drivers of pro-environmental behaviour. Recently, environmental education is not merely the transmission of facts about pollution; rather, it is a multi-modal process, formal (curriculum and teacher practice), non-formal (community trainings, NGO programmes), and informal (media campaigns, religious/community messaging) that builds knowledge, risk perception, skills, perceived behavioural control, and social expectations. Evidence syntheses continue to show that educational and nature-engagement experiences can nudge pro-environmental choices, especially when they include active, experiential components and clear action pathways (Flecke & Langenbach, 2024; Teixeira et al., 2022; Zhao et al., 2024). In educational settings, for instance, eco-education has been shown to boost interest and responsible actions; programmes that connect knowledge with practice (e.g., school "no-plastic" days, refill stations, and peer-led campaigns) tend to achieve stronger behavioural outcomes than information-only approaches (Zhao et al., 2024).

Behaviour-change theory helps explain why environmental education may be decisive for plastic reduction in Nigeria. The Theory of Planned Behaviour posits that behaviour is driven by attitudes, subjective norms, and perceived behavioural control; well-designed environmental education directly targets all three by reshaping beliefs about plastic harms, signalling community expectations (e.g., "we bring our bottles to church/mosque/market"), and building confidence in practical alternatives (carrying a reusable container, finding refill points). Likewise, value-belief-norm accounts suggest that connecting plastic use to moral/personal norms (stewardship, care for neighbours vulnerable to flooding) can activate commitments that persist beyond one-off campaigns. Where bans exist but alternatives are scarce or costly, environmental education can still enable "least-cost" substitutions (refusing extra bags, sharing information on refill kiosks) and mobilise social pressure that improves compliance at points of sale. Early reporting from Port Harcourt highlights that enforcement gaps and limited affordable substitutes have constrained the single-use ban's effects, precisely the context in which environmental education and norm-shaping are needed to convert policy into practice (Associated Press, 2025).

Nigeria's regulatory architecture is also evolving toward producer responsibility. The National Environmental Standards and Regulations Enforcement Agency (NESREA) is promoting Extended Producer Responsibility (EPR) in the plastics and packaging sector, requiring producers to join Producer Responsibility Organisations and shoulder end-of-life obligations (NESREA, 2025a; NESREA, 2025b). EPR can create enabling conditions for behaviour change by increasing the availability of take-back schemes, drop-off points, and recycled-content products. Yet the social uptake of these systems depends on citizens recognising and using them; here again, environmental education exposure through community sensitisation, school programmes, and targeted media engagement serves as the interface between system design and household practices.

Community sensitisation on environmental issues refers to organised, context-sensitive efforts to inform, engage and motivate residents about environmental problems (their causes, consequences and practical responses), using channels such as public meetings, door-to-door outreach, school programmes, media campaigns and community trainers so that people's knowledge, attitudes, perceived norms and capacity to act are strengthened (Ardoin et al., 2020; Ballard et al., 2024). Empirical research shows community

sensitisation often predicts positive shifts in plastic-reduction behaviour by increasing knowledge, changing attitudes, and normalising low-plastic choices, especially when sensitisation is experiential, repeated, and coupled with enabling measures (e.g., access to reusable alternatives or recycling collection) (Allison et al., 2022; Nuojua et al., 2024; Willis, 2018).

Several systematic reviews and field studies report medium to large effects on littering and visible waste reduction following well-designed awareness campaigns and community mobilisation (Willis, 2018; Ardoin et al., 2020). At the same time, scholars emphasise important limits and potential negative or null relationships: sensitisation that raises awareness but fails to address convenience, cost, or infrastructure often produces only short-term intention changes without sustained behaviour (the value–action gap), and can generate frustration or backlash where people perceive responsibility is being shifted to households instead of systems (Allison et al., 2022; Kibria et al., 2023). Other documented problems include message fatigue, weak targeting (so vulnerable groups are missed), social-desirability biases in self-reports (inflating measured effects), and situations where sensitisation increases demand for alternatives that are unavailable locally, thereby inadvertently amplifying inequities (Oludoye et al., 2024). Consequently, scholarly consensus is that community sensitisation is a necessary but not sufficient predictor of lasting plastic-use reduction; its positive influence is strongest when integrated with structural enablers (collection, markets for recyclables, affordable reusables), clear behaviourally specific messaging, and continuous community participation and feedback.

School programmes as another dimension of environmental education exposure, are structured educational interventions, delivered through curricula, extracurricular clubs, campaigns, and experiential learning activities, designed to increase students' awareness, knowledge, and skills to address pressing ecological challenges such as waste, climate change, and plastic pollution (Monroe et al., 2019; Chawla & Cushing, 2021). Such programmes are widely documented to positively predict behavioural change toward plastic-use reduction by fostering pro-environmental attitudes at an early age, shaping norms among peer groups, and creating intergenerational spillover effects as children influence household practices (Collado et al., 2019; UNESCO, 2020). Studies in Africa and Asia reveal that school-based waste education campaigns significantly reduce littering, increase recycling participation, and encourage the uptake of reusable bottles and bags among students (Aminrad et al., 2013; Oyinlola et al., 2022).

However, scholars also caution about the limitations and possible negative outcomes: some interventions achieve only short-term changes without reinforcing infrastructure (e.g., availability of recycling bins), while others risk creating a disconnect between knowledge and practice if students lack supportive environments at home or in their communities (Chawla & Cushing, 2021; Okot-Okumu, 2020). Moreover, programmes that rely heavily on theoretical content without experiential or participatory components often struggle to translate environmental literacy into tangible plastic-use reduction behaviours (Levy & Zint, 2013; Liarakou et al., 2022). Thus, while school programmes serve as powerful predictors of pro-environmental behaviours, including reduced plastic use, their effectiveness is maximised when they combine classroom instruction with practical engagement, peer-led initiatives, and supportive community linkages.

In addition, media engagement on pro-environmental practices refers to the use of traditional (radio, television, newspapers) and digital platforms (social media, online campaigns, blogs, podcasts) to communicate, frame, and promote environmentally responsible behaviours such as reducing plastic consumption, proper waste disposal, and recycling (Anderson, 2021; Schäfer & Painter, 2021). Scholars highlight that media engagement can positively predict behavioural change toward plastic use reduction by shaping environmental knowledge, raising risk perception, building collective efficacy, and normalising sustainable lifestyles (Ogunbode et al., 2020; Nabi et al., 2020). For instance, studies show that targeted radio campaigns in African cities increased household waste separation and reduced littering, while social media movements such as #BeatPlasticPollution have mobilised youth to adopt

reusable alternatives (Akinbobola & Ogunjinmi, 2021; Anderson, 2021).

Similarly, agenda-setting through television documentaries and viral campaigns has been found to significantly influence public attitudes and purchasing decisions regarding single-use plastics (Miller & Saunders, 2022; Sidiropoulos, 2018). However, researchers also caution about negative or limited effects: overexposure to sensationalist media can induce "eco-fatigue" or climate anxiety, which sometimes discourages sustained behavioural change (Clayton & Karazsia, 2020; Nabi et al., 2020). Furthermore, misinformation and greenwashing in media messages may lead to confusion or tokenistic actions, while digital divides in places like Nigeria limit access and engagement among vulnerable groups (Akinbobola & Ogunjinmi, 2021; Schäfer & Painter, 2021). Thus, while media engagement is a powerful predictor of pro-environmental behaviour, including plastic-use reduction, it is most effective when messages are credible, consistent, culturally relevant, and supported by structural opportunities for action.

Consequently, despite the favourable trends, several gaps persist. First, much existing outreach remains information-heavy and action-light; programmes may raise awareness of plastic harms without offering convenient, culturally resonant alternatives, thereby limiting behavioural uptake. Second, affordability constraints are binding for low-income households and street-food vendors; without low-cost reusables and packaging substitutes, knowledge alone seldom changes choices. Third, the evidence base in Nigeria is fragmented, with limited rigorous evaluation of which environmental education modalities (e.g., faith-based messaging, market-day demonstrations, school-led community drives) produce the largest and most durable reductions in single-use plastics. World Bank behavioural diagnostics in some Nigerian cities like Port Harcourt and Lagos emphasise the need to pair infrastructure with targeted behavioural insights, default options, prompts, feedback, and social proof to reduce marine plastics leakage (World Bank, 2024). This aligns with international findings that combine education with "nudge" architectures (visible bottle-filling stations, default "no bag" prompts at checkout) to convert intention into routine.

Accordingly, in a country where flooding, public health, and coastal livelihoods are tightly coupled to waste practices, strengthening the environmental education to behaviour pathway is not ancillary; it is central to achieving credible and equitable reductions in plastic pollution. Hence, this paper investigates the extent environmental education exposure (such as community sensitisation, school programmes, and media engagement) predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State, Nigeria.

II. STATEMENT OF THE PROBLEM

Plastic pollution has become a major environmental challenge for Port Harcourt Metropolis in Rivers State. The growing population, urbanisation, and increased use of single-use plastics are leading to excessive waste, which has severe ecological and public health consequences. Despite national and state-level policies on waste management and plastic use, the problem persists. Policy alone is not enough to solve the issue. Changing behaviours at the community and individual levels is crucial to reducing plastic use, but how environmental education affects behaviour in Port Harcourt is not well understood. Community awareness programs have been used in several Nigerian cities to raise awareness about the dangers of plastics, but there is evidence that knowledge gains do not always lead to lasting action, especially where infrastructure and supportive norms are lacking. School programs that integrate environmental topics into curricula or extracurricular activities aim to foster pro-environmental attitudes among students, but many remain theoretical and fail to engage learners in practical experiences. Targeted media engagement, such as radio, television, and digital platforms, also offers a powerful way to mobilize public action against plastic pollution, but its effectiveness is uneven, with risks of short-lived attention, eco-fatigue, misinformation, or limited reach due to digital divides. As a result, there is a research gap in understanding how these three educational exposures, community awareness, school programs, and media engagement, individually predict behavioural change towards plastic use reduction in the socio-economic and cultural context of Port Harcourt. Filling this gap is essential to inform the design of context-specific interventions that can go beyond awareness creation to

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trigger lasting changes in household and community practices, thereby reducing the environmental burden of plastics in the metropolis.

III. AIM AND OBJECTIVES OF THE STUDY

The aim of the study was to examine the extent environmental education exposure predicts behavioural change towards plastic use reduction in Port Harcourt Metropolis, Rivers State. The objectives of study sought to:

1. determine the extent community sensitisation predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.
2. ascertain the extent school programme predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.
3. find out the extent media engagement predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

Research Questions

The following research questions guided the study

1. To what extent does community sensitisation predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State?
2. To what extent does school programme predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State?
3. To what extent does media engagement predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State?

Hypotheses

The following hypotheses were tested in the study at 0.05 alpha level:

1. Community sensitisation does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.
2. School programme does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.
3. Media engagement does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

IV. METHODOLOGY

This study employed a correlational design to determine whether the independent variable predicts the dependent variable. The population comprised 10,000 residents in Port Harcourt Metropolis; comprising school-aged youths, traders, households, and general community members. A sample of 1,000 respondents, representing 10% of the population as recommended by Kpee (2015), was drawn using a simple random sampling technique. Data were collected using two questionnaires: the Environmental Education Exposure Assessment Scale (EEEAS) and Behavioural Change Towards Plastic Use Reduction Assessment Scale (BCTPURAS). Section A captured demographic data, Section B contained items on EEEAS across three dimensions (community sensitisation, school programme, and media engagement), while Section C measured BCTPURAS. Both instruments were structured on a 4-point Likert scale (VHE = 4, HE = 3, LE = 2, VLE = 1). Reliability was confirmed using Cronbach's alpha, yielding coefficients of 0.87 and 0.84 for EEEAS and BCTPURAS, respectively, with subscale reliabilities of 0.82 (community sensitisation), 0.89 (school programme), and 0.85 (media engagement). Data were analysed using simple linear regression for research questions, while corresponding hypotheses were tested with t-tests associated with simple linear regression. A total of 1,000 e-copies of the questionnaire were administered, and 867 were responded to, resulting in an 87% retrieval rate.

V. RESULTS AND ANALYSIS

Research Question 1: To what extent does community sensitisation predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State?

Table 1: Simple Regression on the Extent Community Sensitisation Predicts Behavioural Change Toward Plastic Use Reduction in Port Harcourt Metropolis, Rivers State

Model	R	R Square	Adjusted R Square	Extent of prediction	Decision
1	.474[a]	.153	.151	15.1%	Very Low Extent

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Decision Rule: 100%- 75% (Very High Extent), 74% - 50% (High Extent), 49%-25% (Low Extent) and 0% - 24% (Very Low Extent)

Table 1 revealed that the regression (r) and regression square (r^2) coefficients are .474 and .153, respectively, while the adjusted r square is .151. The extent of prediction (i.e., coefficient of determinism) is 15.1% (.151×100). By implication, the result shows that community sensitisation predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State by to a very low extent by 15%.

Research Question 2: To what extent does school programme predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State?

Table 2: Simple Regression on the Extent School Programme Predicts Behavioural Change Toward Plastic Use Reduction in Port Harcourt Metropolis, Rivers State

Model	R	R Square	Adjusted R Square	Extent of Prediction	Decision
1	.311[a]	.053	.051	5.1%	Very Low Extent

Decision Rule: 100%- 75% (Very High Extent), 74% - 50% (High Extent), 49%-25% (Low Extent) and 0% - 24% (Very Low Extent)

Table 2 revealed that the regression (r) and regression square (r^2) coefficients are .311 and .053, respectively, while the adjusted r square is .051. The extent of prediction (i.e., coefficient of determinism) is 5.1% (.051×100). By implication, the result indicates that school programme predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State to a very low extent by 5%.

Research Question 3: To what extent does media engagement predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State?,

Table 3: Simple Regression on the Extent Media Engagement Predicts Behavioural Change Toward Plastic Use Reduction in Port Harcourt Metropolis, Rivers State

Model	R	R Square	Adjusted R Square	Extent of Prediction
1	.594[a]	.284	.282	28.2%

Decision Rule: 100%- 75% (Very High Extent), 74% - 50% (High Extent), 49%-25% (Low Extent) and 0% - 24% (Very Low Extent)

Table 3 revealed that the regression (r) and regression square (r^2) coefficients are .594 and .284, respectively, while the adjusted r square is .282. The extent of prediction (i.e., coefficient of determinism) is 28.2% (.282×100). By implication, the result shows that media engagement predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State, to a low extent by 28%.

Test of Hypotheses

Hypothesis 1: Community sensitisation does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

Table 4: t-test Associated with Simple Regression on the Extent Community Sensitisation Significantly Predict Behavioural Change Toward Plastic Use Reduction in Port Harcourt Metropolis, Rivers State

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	p-value	Alpha level	Decision
(Constant)	2.325	.133		15.182	.000	0.05	
lCommunity Sesitisation	.147	.041	.371	4.651	.191		Ho_1 Accepted

a. Dependent Variable: Behavioural Change Toward Plastic Use Reduction

Table 4 revealed that standard beta value and t-test are .371 and 4.651. The p-value of 0.191 is higher than the

level of significance of 0.05. Therefore, the null hypothesis is accepted. By implication, community sensitisation does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

Hypothesis 2: School programme does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

Table 5: t-test Associated with Simple Regression on the Extent School Programme Significantly Predict Behavioural Change Toward Plastic Use Reduction in Port Harcourt Metropolis, Rivers State

Model	Unstandardized Coefficients		Standardized Coefficients	T	p-value	Alpha level	Decision
	B	Std. Error	Beta				
(Constant)	1.736	.117		14.761	.000		
1 School Programme	-.072	.033	-.021	-.425	.173	0.05	Ho_2 Accepted

a. Dependent Variable: Behavioural Change Toward Plastic Use Reduction

Table 5 revealed that standard beta value and t-test are -.021 and -.425. The p-value of .173 is higher than the level of significance of 0.05. Therefore, the null hypothesis is accepted. By implication, school programme does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

Hypothesis 3: Media engagement does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

Table 6: t-test Associated with Simple Regression on the Extent Media Engagement Significantly Predict Behavioural Change Toward Plastic Use Reduction in Port Harcourt Metropolis, Rivers State

Model	Unstandardized Coefficients		Standardized Coefficients	t	p-value	Alpha level	Decision
	B	Std. Error	Beta				
(Constant)	.787	.162		9.871	.000		
1 Remuneration	.137	.118	.126	2.518	.061	0.05	Ho_3 Accepted

a. Dependent Variable: Teachers' Productivity

Table 6 revealed that standard beta value and t-test are .126 and 2.518. The p-value of .061 is higher than the level of significance of 0.05. Therefore, the null hypothesis is accepted. By implication, media engagement does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State.

VI. DISCUSSION OF FINDINGS

The first finding of the study shows that community sensitisation predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State by to a very low extent by 15%. Also, a corresponding hypothesis tested revealed that community sensitisation does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State. These findings align with Allison et al. (2022), Kibria et al. (2023), and Oludoye et al. (2024), whose empirical studies showed that community sensitisation fails to address behavioural change toward plastic use reduction. However, the findings contradict Willis (2018), Allison et al. (2022), and Nuojua et al. (2024), who in their studies found that community sensitisation often predicts positive shifts in plastic-reduction behaviour. Nevertheless, a possible explanation for these findings suggests that community sensitisation creates some awareness, but its impact on behavioural change towards plastic use reduction in Port Harcourt Metropolis is minimal, indicating that sensitisation efforts alone are insufficient to drive significant

change without stronger complementary interventions. This implies that community sensitisation efforts in the Port Harcourt Metropolis need to be strengthened, restructured, and complemented with more practical and sustained interventions to achieve meaningful behavioural change towards reducing plastic use.

The second finding of the study revealed that school programme predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State, to a very low extent by 5%. Also, a corresponding hypothesis tested establishes that school programme does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State. These findings align with those of Levy and Zint (2013), Okot-Okumu (2020), Chawla and Cushing (2021), and Liarakou et al. (2022), whose studies reported that school programs do not predict a significant reduction in plastic use. On the other hand, the findings agree with Aminrad et al. (2013), Collado et al. (2019), UNESCO (2020), and Oyinlola et al. (2022), whose studies revealed that school programme to a high extent predicts behavioural change toward plastic use reduction. An explanation of these findings suggests that although school programmes provide some level of environmental awareness, their low predictive value indicates that they may be insufficiently structured, practical, or reinforced to significantly influence behavioural change toward plastic use reduction in Port Harcourt Metropolis. This implies that existing school programmes on environmental education in Port Harcourt Metropolis require stronger integration, practical engagement, and consistent reinforcement to effectively drive behavioural change toward plastic use reduction.

Lastly, the third finding of the study revealed that media engagement predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State, to a low extent by 28%. Also, a corresponding hypothesis tested establishes that media engagement does not significantly predict behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State. These findings corroborate Clayton and Karazsia (2020), Nabi et al. (2020), Akinbobola and Ogunjinmi (2021), and Schäfer and Painter (2021). These scholars, in their empirical works, found a low predictive influence of media engagement on behavioural change toward plastic use reduction. However, the works of Ogunbode et al. (2020), Nabi et al. (2020), and Anderson (2021) found that media engagement to a high extent predicts behavioural change toward plastic use reduction. A possible explanation for these findings suggests that although media engagement raises awareness on plastic use reduction, its low predictive strength indicates that messages may not be sufficiently persuasive, consistent, or action-oriented to translate into significant behavioural change in plastic use reduction in Port Harcourt Metropolis. This implies that media engagement in Port Harcourt Metropolis should be made more strategic, persuasive, and participatory to move beyond awareness creation and effectively drive behavioural change toward plastic use reduction.

CONCLUSION

Based on the findings, the study concludes that environmental education exposure through community sensitisation, school programmes, and media engagement predicts behavioural change toward plastic use reduction in Port Harcourt Metropolis, Rivers State, though only to low and very low extents, with media engagement exerting the greatest influence.

RECOMMENDATIONS

Given the findings and conclusions of this study, the following were recommended:

1. Community leaders and NGOs should strengthen grassroots sensitisation through continuous awareness campaigns and locally driven initiatives to boost behavioural change.
2. Educational authorities and teachers should integrate practical environmental education into school curricula and extracurricular activities to deepen students' commitment to plastic use reduction.
3. Media practitioners and policymakers should develop sustained, engaging, and policy-backed environmental campaigns across multiple platforms to enhance their influence on behavioural change.

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