

RESEARCH ARTICLE

Role Of Education and Awareness Programmes in Promoting Environmental Behavioural Change in Nigerian Cities

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ABSTRACT

The role of education and awareness programmes as a tool for promoting environmental behavioural change in urban cities cannot be overemphasized. It has been assumed that urban societies are more exposed to these education and awareness programmes. Despite the availability of these facilities, most of the urban cities in Nigeria are grappling with different forms of environmental degradation occasioned mainly by human activities. These environmental problems in the cities range from flooding, erosion, and waste management, among others. Hence, the study reviewed the roles of education and awareness programmes as a tool for promoting environmental behavioural change in urban cities. The paper looked at the importance of education and awareness programmes with some empirical evidence. It also investigated the major constraints to promoting environmental behavioural change through education and awareness programmes. The review outlined some gaps in the literature, such as overemphasis on knowledge and attitudinal outcomes rather than actual behaviour. In conclusion, it acknowledged the importance of education and awareness as tools in promoting environmental behavioural change in society. The study recommends, among others, the need for aligning education and awareness programmes with institutional policies and societal norms to reinforce sustainable behavioural change.

Keywords: *Role; Education; Awareness programme; Environment; Behavioural Change*

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1. INTRODUCTION

Going by the rate of environmental degradation, especially in many cities of Nigeria, it appears there are insufficient education and awareness programmes among most of the urban residents on the need for promoting positive environmental

behaviours. For instance, in cities like Umuahia, Owerri, Port Harcourt, among others, the issues of waste management and flooding have been a recurring decimal, most of which are attributed to anthropogenic factors.

Environmental problems such as deforestation, inadequate waste management, pollution, climate change, and biodiversity loss pose serious threats to ecosystems and the well-being of humans. These challenges are largely driven by human activities, unsustainable consumption patterns, and poor or inadequate environmental awareness. As a result, promoting environmental sustainability requires a fundamental shift in individual and collective behaviour; hence, addressing these challenges requires not only technological innovation and policy interventions but also substantial changes in human behaviour.

Education and awareness programmes play a critical role in shaping people's understanding of environmental issues and encouraging responsible environmental actions. Alcala et al. (2019) stated that an essential step to empowering coastal communities in the Philippines has been to devolve decision-making power down so that a local citizenry will have adequate participation in the management of environmental resources. The role of education and awareness programmes in promoting environmental behavioural change requires the public to be adequately/sufficiently sensitized about the multiple dimensions of environment and development. Indeed, awareness and understanding of environmental issues provide the basis and rationale for commitment and meaningful action towards environmentally sound and sustainable development. Recent studies emphasized that environmental education is not merely about information dissemination but about fostering values, attitudes, and behavioural intentions that support sustainability (Chen et al., 2025; Yildirim et al., 2025).

However, while education equips individuals with the knowledge and skills needed to make informed decisions, awareness programmes motivate behavioural change at the societal level. Despite the existence of educational institutions at various levels and structures for creating awareness in the urban community, the problems of environmental degradation have remained persistent. Therefore, there is a need to review the roles of education and awareness in promoting positive environmental behaviour among residents of urban cities in Nigeria.

2. LITERATURE REVIEW

The role of education in promoting positive environmental behavioural change cannot be overemphasized. This is due to the fact that education inculcates skills, knowledge, values, and attitudes to act positively towards the environment. Education can bring awareness into action (Christopher, 2018). In simple and direct terms, environmental education refers to organized efforts to teach how the natural environment functions, and particularly how human beings can manage behaviour and ecosystems to live sustainably (Ogbuji, 2025).

Environmental education equips people with the knowledge, skills, and attitudes necessary for understanding environmental problems and their solutions. Education is not only about information transfer. It also helps attitudes, values, and long-term behaviours (Ogbuji & Njoku, 2025).

Environmental Education: Meaning and Scope

Environmental education refers to organized learning processes that enhance awareness, knowledge, skills, and values necessary for environmental protection and sustainable development.

This occurs through formal education (schools and universities), non-formal education (training programs, community initiatives, workshops, etc.), and informal education (through social networks, media, and daily experiences).

According to Hajj-Hassan et al. (2024), environmental education promotes ecological literacy, critical thinking, and active participation in sustainability initiatives. The scope of environmental education has indeed expanded with the integration of

digital tools, experimental learning, and participatory approaches, which have proven effective in influencing environmental behaviours and attitudes.

Environmental education is more than a transmission of facts; it is a transformative process that moulds attitudes, values and behaviours towards acceptable norms in environmental issues. As such, educated persons are expected to act not as passive receivers of information but as proactive, conscious agents capable of making informed and ethical environmental decisions (Osuji & Nwuke, 2024). They concluded that the promotion of environmental literacy is more than an educational initiative; it is indeed a catalyst for positive change. It empowers individuals to make informed decisions, nurtures a commitment to sustainable practices, and inspires collective efforts towards global environmental stewardship.

A UNESCO report (2020) emphasized that Education for Sustainable Development (ESD) helps learners develop knowledge, skills, values, and attitudes required for a sustainable future.

It highlights the significance of participatory methods and interdisciplinary learning, which enable individuals to critically evaluate environmental issues and propose sustainable actions.

Olsson (2021) buttressed that young adults who received environmental education during their formative years are more likely to engage in sustainable environmental practices, such as energy conservation and ethical consumerism. (i.e., the practice of buying products and services that are made responsibly without harming people, animals, or the consumers' moral values). These findings point to a long-term impact of education on environmental consciousness and actions.

Furthermore, Sterling (2023) argued that transformative learning approaches that focus on ecological citizenship are essential for addressing climate change and biodiversity loss. They seek an education system that goes beyond rote learning (learning something by repeating it over and over without really understanding) to foster critical reflection, systems thinking, and environmental empathy (the ability to understand, care about, and feel concerned for the wellbeing of the natural environment and all living things within it)

Interestingly, the integration of sustainability principles into teachers' training programmes has equally proven effective. A recent study by Osuji and Nwuke (2024) has established stronger links between education and pro-environmental behaviour, understanding the role of cognitive engagement and moral development.

Education and Pro-Environmental Behaviour

The role of the educated person in environmental sustainability cannot be overemphasized. According to Agbor et al. (2018), education is widely regarded as a fundamental instrument that goes beyond simply delivering knowledge. It shapes values, perceptions, and awareness essential for tackling the current days' environmental issues. Environmental education plays a key role in shaping modern society, aiming to realize a balance between human progress and the natural environment.

This awareness is essential for nurturing a generation of environmentally responsible individuals who are dedicated to sustainable lifestyles and active environmental advocacy. Moreover, education provides a strong foundation for innovation and problem-solving. Environmental education and awareness programmes can facilitate an understanding of inappropriate behaviours that are harmful to the environment, knowing too well that knowledge and understanding give rise to attitudinal and behavioural changes (Ogbuji, 2021)

Role of Formal Education in Environmental Behavioural Changes

Formal education institutions play a foundational role in promoting environmental awareness and behavioural change. The integration of environmental education into school curricula helps learners develop environmental knowledge and values from an early age. Empirical evidence clearly shows that students exposed to structured environmental education demonstrate higher levels of environmental concern, sustainable attitudes, and pro-environmental behaviour (Chen et al,

2025; Bamberg & Moser, 2017). At the tertiary level, higher institutions contribute to environmental behavioural change through coursework, campus sustainability initiatives, and research-based learning, among others.

Recent studies reveal that institutional practices and supportive policies significantly strengthen the relationship between environmental education and students' green behaviour (Chen et al., 2025; Bamberg & Moser, 2017). This invariably means that formal education serves as a long-term investment in sustainable behavioural change in environmental issues.

Awareness Programmes and Informal Learning

Awareness programmes actually complement formal education by targeting wider segments of society, including adults and community groups. These programs include workshops, media-based education, public awareness campaigns, and community outreach initiatives. Awareness programmes aim to inform individuals about environmental challenges and encourage behavioural changes such as energy conservation, recycling, and responsible consumption. Informal learning environments are particularly effective because they are participatory, context-specific, and flexible. Community-based environmental education initiatives have been shown to increase environmental literacy when local knowledge and participation are emphasized (Yildirim et al., 2025).

Evidence on Education and Behavioural Change

A growing body of empirical research has demonstrated a strong link between education, awareness, and environmental behavioural change. Studies across different cultural contexts show that environmental education positively influences recycling behaviour, energy-saving practices, and environmental stewardship (Bamberg & Moser, 2017; Yildirim et al., 2025). A recent systematic review shows that digital tools, gamification (applying game-like elements to boost engagement, motivation, and participation), and interactive learning approaches enhance environmental awareness and behavioural intentions. (Haji-Hassan et al., 2024).

According to Pataranutaporn et al. (2025), innovative educational technologies such as AI and virtual reality have promising results in fostering sustainable attitudes and behavioural intentions. Nevertheless, on theoretical and Empirical support for Behavioural Change Mechanisms, academic literature broadly supports that behavioural change does not result automatically from knowledge alone. Awareness must be linked with motivation, engagement, and supportive environments. Mechanisms by which education fosters change are: Cognitive engagement (e.g., how improper waste disposal harms ecosystems); Psychological Commitment (awareness helps internalise values that motivate ongoing pro-environmental behaviour); and social norms and participation (when awareness programs involve community participation, individuals perceive sustainability as a shared social expectation, which further encourages behaviour change). (Ogbuji & Njoku, 2025).

Case Studies of Successful Education and Awareness Programmes in Promoting Environmental Behavioural Change

Several local and global initiatives demonstrate the effectiveness of education and awareness programmes in promoting environmental behavioural change. Programmes such as Eco-Schools and Project Learning Tree integrate environmental education into school systems and also encourage active student participation in initiatives that are sustainable. The case studies show that programmes combining experiential learning, community engagement, and institutional support are more successful in promoting long-term behavioural change (Mohd-Pauzi et al., 2025). These programmes help participants to put environmental knowledge into real-life contexts, thereby strengthening behavioural outcomes.

In another development, Geist and Lambin (2003), in a meta-analysis of 152 case studies of tropical deforestation, suggest that although most cases of deforestation are driven at least partially by population growth, some of the environmental challenges are inevitable. Still, environmental education plays a crucial role in promoting behaviours that ensure the sustainability of natural resources, reduce environmental harm, and support ecological integrity (Wals, 2010).

Eilam and Trop (2022) emphasized that Project-Based Learning (PBL) approaches enhance critical thinking and problem-solving environmental skills, which help to address complex environmental issues; hence, the role of education and awareness programmes in promoting environmental behavioural change among people cannot be overemphasized.

Theoretical Framework

Several theories have evolved on the role of environmental education and awareness in promoting behavioural change among people. Among such theories beneficial to this study are;

The Knowledge-Attitude-Behaviour (KAB) model, which suggests that increased environmental knowledge leads to positive attitudes and eventually responsible behaviours. Environmental education serves as the foundation of this process by raising awareness and understanding of environmental issues.

Second is the Theory of Planned Behaviour (TPB) proposed by Ajzen (1991). The theory explains that behaviour is determined by behavioural intentions, which are influenced by attitudes, subjective norms, and perceived behavioural control, and actual behaviour of the individual when participatory decisions in an action are voluntary and under an individual's control. Education and awareness programs influence these components by shaping environmental attitudes, reinforcing social norms supportive of sustainability, and increasing individual confidence in their ability to act environmentally responsibly. These are the two major theories that significantly influence this study.

3. RESULTS AND DISCUSSION

A substantial body of empirical research over the past decade has examined the impact of environmental education and awareness programmes on promoting pro-environmental behavioural change among diverse populations. Early empirical studies laid the groundwork by identifying that environmental knowledge and attitudes can be enhanced through structured education programmes, yet often with variable effects on behaviour (Begum et al., 2021). For instance, Begum et al (2021) found that environmental education significantly increased ecologically friendly behaviour among university students in Pakistan, with environmental responsibility and cultural values serving as important predictors of behavioural change, demonstrating the role of internally driven motivational factors in environmental behaviour. Within the higher education context, multiple studies have quantified how educational interventions influence environmental practices. Research investigating ecological education among Chinese University students showed that participation in environmental courses, practical activities, and experiments was associated with significantly higher likelihoods of engaging in sustainable behaviours, with statistically significant positive effects indicating that experimental components are critical in translating education into action (Albuquerque et al, 2023).

Additionally, a 2022 study in Indonesia found that while environmental knowledge and attitudes did not always translate uniformly into real-life behaviour, the students who actively practiced environmental knowledge in formal and non-formal settings were more likely to exhibit pro-environmental behaviours, underscoring the complex relationship between learning and practice (Erwinsyah, 2022).

Studies focusing on specific programme interventions provided further evidence of behavioural change. A mixed-methods study of pre-school children participating in the ECO-School Programme found significant improvements in environmental awareness and responsible behaviours after a 12-week intervention, suggesting that early childhood environmental education can meaningfully influence both cognitive and behavioural outcomes at a formative stage (Ocak et al., 2025).

Similarly, experimental investigations have explored innovative methods such as immersive technologies to enhance behavioural change. For instance, an immersive virtual reality intervention designed to stimulate sustainable food choice scenarios significantly improved knowledge, confidence, and intention to adopt sustainable behaviours, indicating that experiential, technology-enhanced programmes can bridge gaps between abstract learning and behavioural intentions. (Chong Xiao Xuan et al., 2025).

While many studies affirm positive educational impacts, some empirical findings also highlight complex dynamics. Research on low-carbon behaviours among Chinese University students found that system-level environmental knowledge in some cases failed to translate into strong behavioural intention due to information overload and cognitive dissonance (lack of agreement or harmony between people or things), showing that higher cognitive awareness alone does not automatically ensure behavioural change (Hargreaves, 2013).

Collectively, empirical evidence suggests that environmental education and awareness programmes contribute to environmental behavioural change, though the strength and direction of these effects depend on programme design, demographic context, participant engagement, and the integration of an experiential component (Wals, 2010; Christopher, 2018; Begum et al, 2021). These bodies of work highlight that while knowledge and attitude improvements are necessary, bridging the “knowledge-action gap” requires pedagogical (teaching) strategies that actively engage learners, contextualize learning, and reinforce behavioural intentions with supportive cultural and institutional structures.

Importance of Education and Awareness Programmes in Promoting Environmental Behavioural Change

Education and awareness programmes play a pivotal role in promoting environmental behavioural change by equipping individuals and communities with the knowledge, attitudes, skills and motivation needed to act sustainably. Scholars emphasize that these programmes are not just about raising awareness, but they are necessary for knowledge translation into concrete behavioural outcomes. The importance may include, but is not limited to, the following:

- i) Enhancing environmental knowledge: The improvement of environmental knowledge is of fundamental importance in environmental education and awareness programmes. Such programmes provide information on ecological processes, environmental challenges, and sustainable practices, which enable individuals to make informed choices. (Kollmus & Agyeman, 2010; Ardoin et al., 2020). Research shows that a higher level of environmental literacy is strongly associated with pro-environmental behaviours such as water and energy conservation, recycling and responsible consumption (Vicente-Molina et al., 2018; Yildirim et al., 2025).
- ii) Shaping positive attitudes and values: Education and awareness programmes are indeed critical in shaping positive environmental attitudes, values and concerns. Students often indicate that individuals exposed to environmental education are equipped with a stronger sense of responsibility, ecological concern, and moral obligation towards the environment (Steg & Vlek, 2009; Stem, 2000).

Programmes that integrate participatory and experimental approaches are particularly effective in internalizing values, which in turn reinforce sustainable behaviour (Begum et al., 2021; Ardoin et al., 2020). Attitudinal change is crucial because it mediates the translation of knowledge into actual behavioural outcomes.

iii) Bridging the awareness-action gap: One of the main challenges in environmental behaviour is the awareness-action gap, where individuals know about environmental issues but fail to act accordingly. Education and awareness programmes are instrumental in bridging the gap by incorporating practical exercises, skill building, and participatory learning, which allow individuals to practice and internalize sustainable behaviours (Kollmus & Agyeman, 2010; Monroa et al., 2019).

iv) Encouraging community engagement and environmental stewardship: Beyond individual behaviour, education and awareness programmes promote collective action and environmental stewardship. Community-focused initiatives encourage participation in local environmental projects, volunteerism, and advocacy, reinforcing social norms that support sustainable practices (Stevenson et al., 2013; Ardoin et al., 2020). This collective aspect amplifies behavioural change at the societal level.

v) Strengthening behavioural intentions and promoting actions: Education and awareness programmes play an important role in enhancing behavioural intentions, which are important predictors of actual behaviour according to the Theory of Planned Behaviour (Ajzen, 1991). Research has shown that individuals who participate in environmental education programs are more likely to express intentions to reduce waste, conserve energy, and engage in other pro-environmental actions (Vicente-Molina et al., 2018; Yuriev et al., 2020). By reinforcing attitudes, perceived behavioural control, and social norms, these programmes increase readiness to act sustainably.

vi) Promoting long-term and sustained behaviour: Education and awareness programmes contribute to long-term behavioural change. Studies demonstrate that repeated exposure, early childhood education, and lifelong learning initiatives foster sustained pro-environmental attitudes and habits (Chawla & Cushing, 2007; Ardoin et al., 2020). By embedding sustainability in daily routine, these programmes assist in creating behavioural transformation that is long-lasting.

Constraints and Limitations

Despite their effectiveness, education and awareness programmes face several challenges. One major limitation is the gap between environmental awareness and actual behaviour. Another challenge is economic constraints. Lack of infrastructure is also a limitation. Weak policy enforcement stands as another impediment. The tendency to resist changes following cultural values, norms, and customs often hinders sustainable behaviour. Additionally, measuring behavioural change remains challenging due to the long-term nature of behavioural transformation and the influence of external factors. Recent studies emphasize that education must be supported by enabling environments and policy frameworks to achieve sustained behavioural change (Chen et al., 2025).

Discussions of Findings

Empirical evidence consistently shows that education and awareness programmes play a crucial role in improving environmental knowledge and awareness among individuals and communities. Studies across formal, non-formal, and informal education settings indicate that environmental education enhances understanding of ecological issues such as waste management, climate change, energy conservation, and biodiversity protection (Kollmus & Agyeman, 2010; Stevenson et al., 2013). Research studies confirm that structured educational interventions significantly improve environmental literacy, which is a foundational element of pro-environmental behaviours (Yildirim et al., 2025; Ardoin et al., 2020). However, several scholars argue that increased knowledge alone does not guarantee behavioural change. Empirical findings reveal that although awareness levels may be high following educational interventions, corresponding behavioural change is often moderate, highlighting the limitations of knowledge-based approaches when implemented in isolation (Kollmus & Agyeman, 2010; Vicente-Molina et al., 2018).

A recurring empirical finding is that education and awareness programmes have a stronger effect on behavioural intentions than on actual environmental behaviour. A study applying the Theory of Planned Behaviour (TPB) shows that environmental

education positively influences attitudes, subjective norms, and perceived behavioural control, thereby enhancing behavioural intentions (Ajzen, 1991; Yuriev et al., 2020).

However, several studies report a distinctive gap between intention and action. Vicente-Molina et al. (2018) and Yuriev et al. (2020) found that when individuals express strong intentions to behave sustainably, contextual barriers like convenience, cost, and social norms often prevent actual behavioural change. This phenomenon, widely described as the awareness-action gap, remains a central challenge in environmental behaviour research. (Kollmus & Agyeman, 2010; Steg et al., 2014).

A major finding across the literature is that education and awareness programmes positively influence environmental attitudes, values, and concern. Empirical studies demonstrate that individuals exposed to sustained environmental education develop stronger environmental responsibility, moral obligation, and ecological concern. (Steg and Vlek, 2009; Begum et al., 2021). These attitudinal shifts are critical predictors of pro-environmental behaviour, which support the Value-Belief-Norm (VBN) theory (Steg et al., 1999; Steg, 2000).

Research has further shown that attitudes act as mediating variables between environmental knowledge and behavioural intentions. For instance, Ardoin et al. (2020) found that environmental education programmes emphasizing emotional engagement and value internalization were more effective in fostering long-term pro-environmental behaviour than purely cognitive approaches.

The literature shows that experiential and participatory learning steps are more effective in promoting environmental behavioural change than traditional lecture-based or information-heavy methods. Studies indicate that hands-on activities, community projects, simulations, outdoor education, and service learning significantly enhance behavioural engagement and self-efficacy (Monroe et al., 2019; Ardoin et al., 2020). Also, several studies have indicated that technology-enhanced experiential approaches, including virtual reality, gamification, etc strengthen behavioural intentions and perceived behavioural control (Pataranutaporn et al., 2025; Chong Xiao Xuan et al., 2025). This incidentally supports TPB assumptions that perceived control and Practice-Based learning are critical drivers of actual behaviour.

Recent studies equally highlight the growing role of digital media, social networking platforms, and artificial intelligence in environmental awareness and behavioural change. Studies from 2020 suggest that interactive and personalized digital campaigns are more effective than traditional mass communication in influencing environmental attitudes and intentions (Ardoin et al., 2020; Pataranutaporn et al., 2025). Nonetheless, scholars caution that digital awareness alone may lead to superficial engagement or information overload if not strategically designed, reinforcing the need for meaningful participation and credible messaging (Steg et al., 2014).

Gaps in the Literature

Despite the growing level of research on the role of education and awareness programmes in promoting behavioural change among people, some gaps still remain within the existing literature. These gaps therefore justify the need for continued research and refinement of environmental education strategies. These gaps, among other include:

A major gap identified in the literature is the disproportionate attention on environmental knowledge and attitudes, with comparatively limited attention given to measuring actual behavioural change.

Many studies have assessed outcomes such as awareness, attitudes, and intentions, often relying on self-reported measures which may not accurately reflect real-life behaviour (Kollmus & Agyeman, 2010; Vicente-Molina et al., 2018). Though knowledge and attitude improvements are well documented, fewer studies provide long-term evidence of sustained pro-environmental behaviour.

Scholars like Steg et al. (2014) argue that this emphasis limits understanding of how education translates into consistent environmental practices, thereby reinforcing the persistence of the awareness-action gap. This indicates a need for research designs that prioritize observable and measurable behavioural outcomes.

Another significant gap is the scarcity of longitudinal studies examining the long-term effects of education and awareness programmes on environmental behaviour. Most existing studies employ cross-sectional or short-term pre-and post-intervention designs, which capture immediate outcomes but fail to assess whether behaviour changes are sustained over time (Ardoin et al., 2020; Monroe et al., 2019). The lack of long-term evidence makes it difficult to know whether environmental education leads to enduring lifestyle changes or merely temporary behavioural adjustments. This gap suggests the need for longitudinal and follow-up studies that track behavioural outcomes over extended periods.

While behavioural theories like the Theory of Planned Behaviour and the Value-Belief-Norm theory are widely used, many studies inadequately account for contextual and structural factors that influence environmental behaviour. Economic constraints, institutional support, availability of infrastructure, and environmental policies are often mentioned but not examined systematically (Kollmus and Agyeman, 2010; Yuriev et al., 2020). As a result, existing literature tends to overemphasize individual responsibility while under-exploring how systemic barriers limit the effectiveness of education and awareness programmes. This gap highlights the need for studies that integrate educational interventions with wider socio-economic and policy contexts.

The literature on environmental education and behavioural change is heavily concentrated in developed countries, particularly Europe, North America and parts of East Asia. There is comparatively limited empirical evidence from developing regions, including sub-Saharan Africa, parts of Asia, and Latin America (Begum et al., 2021; Ardoin et al., 2020). This geographic imbalance limits the generalization of existing findings as cultural values, social norms, and economic realities differ significantly across regions.

Consequently, there is a clear gap in context-specific studies that examine how education and awareness programmes function within diverse cultural and socio-economic settings. Although recent studies acknowledge the growing influence of informal education, digital media and technology-based awareness programmes, empirical evaluation of their long-term behavioural impact remains limited. Many studies focused on engagement metrics or short-term intention rather than sustained behaviour. (Steg et al., 2014; Pataranutaporn et al., 2025). Given the increasing use of mobile applications, social media, and artificial intelligence in environmental communication, there is a need for more rigorous empirical research assessing how these platforms influence real behavioural outcomes across different population groups. Methodologically, much of the existing literature relies on self-administered questionnaires and surveys to measure environmental behaviour. While these tools are useful, they are prone to social desirability bias and may overestimate actual pro-environmental behaviour. (Vicente-Molina et al., 2018, Kollmus and Agyeman, 2010). Indeed, new studies apply mixed-method approaches, experimental designs, or objective behavioural indicators such as energy consumption records or waste audits. This methodology gap reduces the robustness of the conclusions drawn about the impact. The limited exploration of new education and awareness programmes interacting with environmental policies and institutional framework is another notable gap. While education is often promoted as a key solution, studies rarely examine how supportive policies, incentives and enforcement mechanisms enhance or constrain behaviour change (Steg et al., 2020). This gap suggests the need for integrative research that considers education as part of a wider system of behavioural change interventions.

4. CONCLUSION

Education and awareness programmes are indeed a vital catalyst for promoting positive environmental behavioural change among people. By enhancing knowledge, shaping attitudes, and fostering environmental values. These programmes encourage individuals to adopt positive/friendly environmental practices. Evidence from recent studies confirms that despite the constraints and limitations, when education and awareness initiatives are supported by effective policies and enabling environments, they can contribute significantly to long-term environmental sustainability.

To further enhance the effectiveness of education and awareness programmes in promoting environmental behavioural change among urban cities, the study made the following recommendations: integrating experiential and active learning methods, and encouraging and promoting community participation. There is also the need for policymakers to instil environmental education into national curricula and support lifelong learning initiatives. Finally, but not least, there is equally the need for aligning education programmes with institutional policies and societal norms and awareness programmes so as to reinforce sustainable behaviour.

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6. COMPETING INTEREST

None to declare.

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