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Research Article

Environmental Awareness and Pro-Environmental Behaviour Among Youth in Gujarat: An Analytical Study of An Awareness–Action Gap

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Abstract

Environmental sustainability has emerged as a critical global concern, highlighting the importance of understanding factors that promote environmentally responsible behaviour among younger generations. The present study examines the relationship between environmental awareness and pro-environmental behaviour among youth in Gujarat, India. A quantitative research design was adopted using a structured questionnaire administered through an online survey. A total of 114 valid responses were collected and analysed using descriptive statistics, Pearson correlation, simple linear regression, independent sample t-tests, and one-way ANOVA. The findings reveal that respondents generally possess high levels of environmental awareness and demonstrate moderate to high levels of pro-environmental behaviour. Correlation analysis indicates a statistically significant positive relationship between environmental awareness and pro-environmental behaviour ($r = 0.286$, $p = 0.002$). Regression analysis further confirms that environmental awareness significantly predicts pro-environmental behaviour; however, its explanatory power remains limited ($R^2 = 0.082$), suggesting that additional factors influence behavioural outcomes. Demographic analyses indicate no significant differences across gender and educational groups, while age demonstrates a limited influence on behavioural practices. The study highlights the persistence of an awareness–action gap, wherein environmental knowledge does not necessarily translate into consistent environmental action. The findings suggest that environmental education and sustainability initiatives should move beyond awareness creation and focus on behavioural facilitation, experiential learning, and supportive institutional mechanisms. The study contributes to the growing literature on environmental behaviour by providing empirical evidence from Gujarat and offers practical insights for policymakers, educators, and environmental organisations seeking to promote sustainable lifestyles among youth.

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1. INTRODUCTION

Environmental challenges such as climate change, biodiversity loss, resource depletion, pollution, and unsustainable consumption patterns have emerged as some of the most pressing concerns of the twenty-first century. These issues pose significant threats to ecological integrity, human well-being, and sustainable development worldwide. While technological innovations, regulatory frameworks, and institutional interventions are essential for addressing environmental degradation, growing attention has been directed towards the role of individual behaviour in achieving environmental sustainability. The transition towards more sustainable societies requires citizens to adopt environmentally responsible practices in their daily lives, including conserving resources, reducing waste, adopting sustainable consumption patterns, and participating in environmental initiatives (Steg & Vlek, 2009).

Environmental awareness has long been considered a critical antecedent of pro-environmental behaviour. Environmental awareness refers to an individual's understanding of environmental issues, recognition of the consequences of human activities on the natural environment, and acknowledgement of the need for environmental protection. Theoretical perspectives suggest that awareness can shape attitudes, strengthen moral obligations, and influence behavioural intentions towards environmentally significant actions. For instance, the Theory of Planned Behavior proposes that individuals' intentions and behaviours are influenced by their attitudes, perceived social norms, and perceived behavioural control (Ajzen, 1991). Similarly, the Value–Belief–Norm Theory argues that environmental values and beliefs activate personal norms that encourage environmentally responsible behaviour (Stern, 2000). Consequently, enhancing environmental awareness has frequently been advocated as an important strategy for promoting sustainable behaviour.

Despite the widely held assumption that awareness leads to action, empirical evidence indicates that environmentally aware individuals do not always translate their knowledge and concern into consistent behavioural practices. This discrepancy between what people know and what they actually do has been conceptualized as the "awareness–action gap" or "knowledge–action gap" in environmental behaviour research. Kollmuss and Agyeman (2002) argued that although environmental knowledge is an important component of behavioural change, numerous internal and external factors—including social norms, economic constraints, habits, convenience, and situational contexts—may prevent individuals from acting in environmentally responsible ways. More recent scholarship has reaffirmed that awareness alone is insufficient to generate meaningful behavioural transformation and that pro-environmental behaviour is shaped by a complex interaction of cognitive, social, emotional, and contextual influences (Colombo et al., 2023; Hochachka, 2024).

Within the Indian context, environmental concerns have intensified due to rapid urbanisation, population growth, changing consumption patterns, and increasing pressure on natural resources. Although environmental education and

awareness campaigns have expanded considerably over recent decades, evidence regarding the extent to which environmental awareness translates into actual behavioural practices remains limited. Existing studies in India have often focused either on awareness levels or behavioural intentions among specific population groups, with relatively fewer investigations examining the predictive relationship between awareness and behaviour (Uddin & Khan, 2016; Janakiraman et al., 2021). Furthermore, empirical studies exploring this relationship within the state of Gujarat remain scarce despite the state's rapid socio-economic development and increasing emphasis on sustainability initiatives.

Against this backdrop, the present study seeks to examine the relationship between environmental awareness and pro-environmental behaviour among respondents in Gujarat. Specifically, the study investigates whether environmental awareness significantly predicts pro-environmental behaviour and explores whether demographic characteristics are associated with differences in awareness and behavioural practices. By identifying the extent to which awareness contributes to environmentally responsible actions, the study provides insights into the persistence of the awareness–action gap within the local context. The findings are expected to contribute to the growing literature on environmental behaviour and offer practical implications for educators, policymakers, and practitioners seeking to design interventions that move beyond awareness creation towards fostering meaningful and sustained behavioural change.

2. LITERATURE REVIEW

2.1 Dimensions of Environmental Awareness

Environmental awareness encompasses an individual's knowledge, values, beliefs, attitudes, and concerns regarding environmental issues and environmental protection. It reflects an understanding of the interdependence between human activities and ecological systems and influences individuals' willingness to adopt sustainable practices. Environmental knowledge and awareness are often regarded as the foundation for developing environmentally responsible attitudes and behaviours (Stern, 2000). Similarly, Steg and Vlek (2009) argued that awareness of environmental problems enhances individuals' motivation to engage in actions that minimise adverse environmental impacts.

In the Indian context, Chavada and Charan (2020) reported moderate levels of environmental awareness among college students and emphasised the importance of strengthening environmental education to foster greater environmental responsibility. Contemporary research also suggests that increased environmental consciousness contributes to stronger personal environmental norms and behavioural intentions (Perera et al., 2022). Nevertheless, awareness levels may vary across populations and do not necessarily translate into active participation in environmental protection initiatives.

2.2 Environmental Awareness and Pro-Environmental Behaviour

Pro-environmental behaviour refers to actions undertaken by individuals that contribute to environmental preservation and sustainability, including energy conservation, waste reduction, recycling, sustainable consumption, and responsible resource use. A substantial body of literature indicates a positive association between environmental awareness and pro-environmental behaviour. Steg and Vlek (2009) noted that individuals who possess greater awareness of environmental issues are more likely to adopt environmentally responsible practices. Similarly, Yang et al. (2021), using data from multiple countries, found that environmental awareness significantly influences pro-environmental behavioural intentions.

Empirical evidence from developing contexts also supports this relationship. Kousar et al. (2022) demonstrated that environmental awareness positively influences climate-friendly behaviour and contributes to improved environmental quality. In India, Uddin and Khan (2016) observed that environmental consciousness significantly affects green purchasing behaviour among young consumers. Likewise, Janakiraman et al. (2021) found that enhanced environmental understanding among students was associated with more favourable environmental attitudes and behavioural tendencies. These findings collectively suggest that environmental awareness serves as an important predictor of environmentally responsible actions.

2.3 Role of Environmental Education

Environmental education has emerged as a crucial mechanism for enhancing environmental awareness and promoting sustainable lifestyles. By integrating environmental concepts into formal and informal educational settings, environmental education seeks to equip individuals with the knowledge, attitudes, skills, and values necessary for addressing environmental challenges. Stern (2000) argued that environmental values and beliefs cultivated through educational experiences can activate personal norms that encourage environmentally significant behaviour.

Educational interventions have been shown to improve environmental literacy and foster positive attitudes towards environmental protection. Janakiraman et al. (2021) highlighted the role of innovative educational approaches in strengthening students' environmental perspectives and engagement. More recently, Srivastava (2024) reported that higher levels of climate literacy among students were associated with stronger pro-environmental behavioural tendencies. These findings underscore the importance of educational initiatives in shaping environmentally conscious citizens capable of contributing to sustainability efforts.

2.4 Gap between Awareness and Behaviour

Although environmental awareness is frequently assumed to promote behavioural change, several studies have questioned the extent to which awareness translates into actual practice. Kollmuss and Agyeman (2002) introduced the concept of the

"awareness–action gap," arguing that environmental knowledge alone rarely results in consistent pro-environmental behaviour. They identified numerous barriers, including social norms, economic constraints, habits, convenience, and institutional factors, which may prevent environmentally aware individuals from acting accordingly.

Subsequent studies have reinforced this perspective. Csutora (2012) described the "behaviour–impact gap," highlighting that environmentally conscious individuals do not always generate meaningful environmental outcomes through their actions. Colombo et al. (2023) further argued that behavioural change is influenced by a complex interplay of cognitive, emotional, social, and contextual factors, rather than awareness alone. Similarly, Hochachka (2024) emphasised that concern about environmental issues does not automatically translate into sustainable practices. These findings suggest that while environmental awareness is a necessary condition for behavioural change, it is not sufficient in itself to ensure environmentally responsible action.

2.5 Youth Engagement and Community Participation

Young people play a pivotal role in advancing environmental sustainability due to their capacity to influence future consumption patterns, social norms, and community practices. Educational institutions provide an important platform for fostering environmental stewardship among youth by encouraging participation in environmental campaigns, sustainability initiatives, and community-based activities. Such engagement not only strengthens environmental awareness but also creates opportunities for translating awareness into meaningful action.

In the Indian context, Janakiraman et al. (2021) highlighted the importance of participatory learning experiences in cultivating positive environmental attitudes among students. Furthermore, recent evidence indicates that climate literacy and environmental engagement among youth can contribute to stronger pro-environmental behavioural intentions (Srivastava, 2024). Encouraging youth leadership, experiential learning, and community participation may therefore serve as effective strategies for narrowing the awareness–action gap and promoting long-term sustainable behaviour.

3. RESEARCH GAP AND OBJECTIVES OF THE STUDY

3.1 Research Gap

Although previous studies have established a positive association between environmental awareness and pro-environmental attitudes and behavioural intentions, evidence regarding the extent to which environmental awareness predicts actual environmental behaviour remains inconclusive. Existing research has primarily focused on assessing awareness levels, environmental education outcomes, or behavioural intentions among specific populations. Comparatively fewer studies have empirically examined the predictive relationship between environmental awareness and pro-environmental behaviour using inferential statistical approaches. Furthermore, studies conducted within the Indian context remain limited, and

empirical investigations focusing specifically on Gujarat are scarce despite the state's rapid socio-economic development and increasing emphasis on sustainability initiatives. The persistence of the awareness–action gap, whereby individuals possessing environmental awareness do not consistently translate such awareness into environmentally responsible practices, has received limited attention in regional studies.

Therefore, the present study seeks to address these gaps by examining the predictive influence of environmental awareness on pro-environmental behaviour among respondents in Gujarat and exploring whether demographic characteristics are associated with differences in awareness and behavioural practices. In doing so, the study contributes context-specific evidence to the growing discourse on the awareness–action gap and offers insights for developing interventions that move beyond awareness creation towards facilitating meaningful behavioural change.

3.2 OBJECTIVES OF THE STUDY

The present study was undertaken with the following objectives:

1. To assess the level of environmental awareness among respondents in Gujarat.
2. To examine pro-environmental behavioural practices among respondents.
3. To investigate the relationship between environmental awareness and pro-environmental behaviour.
4. To determine the predictive influence of environmental awareness on pro-environmental behaviour.
5. To examine demographic differences in environmental awareness and pro-environmental behaviour.

4. Theoretical and Conceptual Framework

4.1 Theoretical Framework

The present study is grounded in the Knowledge-Attitude-Behaviour (KAB) framework, which posits that knowledge and awareness serve as important antecedents of behavioural change. According to the KAB framework, individuals first acquire knowledge about a particular issue, which subsequently influences their attitudes and perceptions, ultimately shaping their behaviour. In the context of environmental sustainability,

the framework suggests that individuals who possess greater environmental awareness are more likely to develop favourable environmental attitudes and engage in environmentally responsible actions.

Environmental awareness encompasses knowledge and understanding of environmental issues, including climate change, pollution, resource depletion, biodiversity conservation, and sustainable development. Pro-environmental behaviour, on the other hand, refers to actions undertaken by individuals that contribute to environmental protection and sustainability, such as conserving energy and water, reducing waste, recycling, minimizing plastic use, and participating in environmental initiatives.

The KAB framework provides an appropriate theoretical foundation for the present study because it explains how environmental knowledge may influence behavioural outcomes among youth. However, contemporary environmental behaviour research also recognizes that awareness alone may not always translate into action, giving rise to what has been termed the awareness–action gap. The present study therefore examines the extent to which environmental awareness influences pro-environmental behaviour among youth in Gujarat.

4.2 Conceptual Framework

The conceptual framework of the study assumes that environmental awareness positively influences pro-environmental behaviour. Environmental awareness is treated as the independent variable, while pro-environmental behaviour is considered the dependent variable.

Environmental awareness in the study includes awareness regarding climate change, environmental degradation, pollution, sustainability, environmental responsibility, and environmental protection. Pro-environmental behaviour includes actions related to energy conservation, water conservation, waste reduction, recycling practices, reduction of plastic consumption, sustainable consumption, and participation in environmental activities.

The conceptual framework guiding the study is presented in Figure 1.

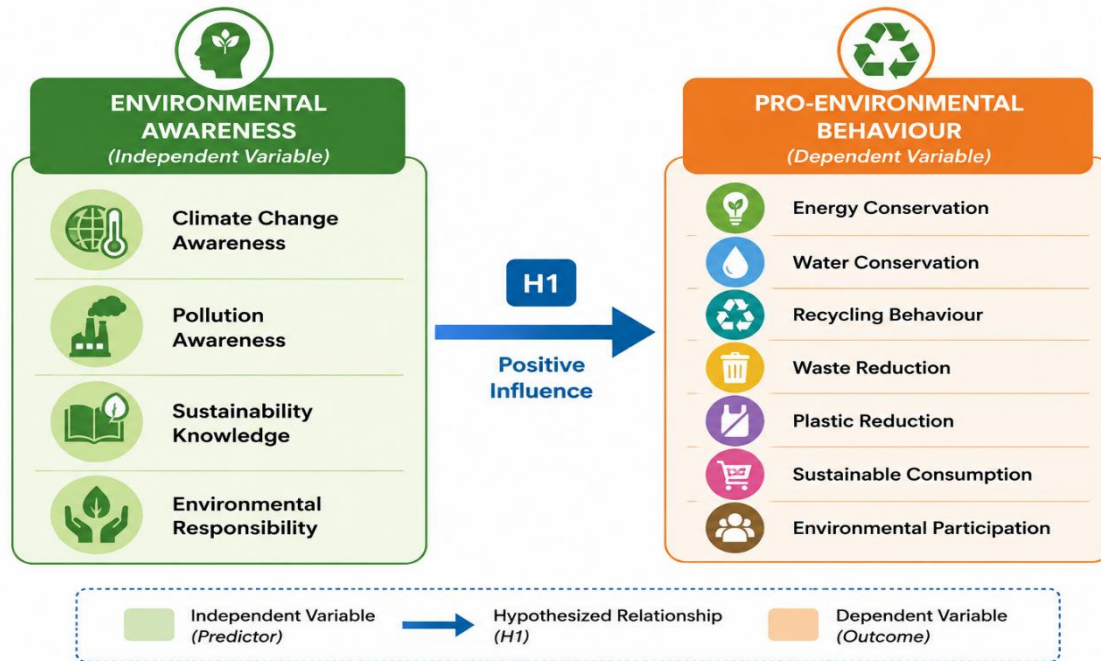


Figure 1. Conceptual Framework of the Study

5. RESEARCH METHODOLOGY

5.1 Research Design

The present study adopted a quantitative research design to examine the relationship between environmental awareness and pro-environmental behaviour among youth in Gujarat. A cross-sectional survey approach was employed to collect primary data from respondents at a single point in time. Quantitative methods were considered appropriate because they facilitate objective measurement of environmental awareness levels, behavioural practices, and the statistical relationship between the two constructs.

The study primarily focused on understanding whether higher levels of environmental awareness among youth translate into environmentally responsible behaviour. In addition, demographic differences in awareness and behaviour were also examined based on age, gender, and educational level.

5.2 Population and Sample

The target population comprised youth residing in Gujarat. For the purpose of this study, respondents from different educational backgrounds and age groups were invited to participate in the survey.

A total of 114 valid responses were collected and analysed. The sample included respondents from Ahmedabad, Gandhinagar, Bhuj, Rajkot, Bharuch, Surat, Porbandar, Patan, and other locations within Gujarat. The majority of respondents belonged to the age group of 19–25 years, representing young adults and college-going youth.

5.3 Sampling Technique

The study employed a non-probability convenience sampling technique. Respondents were selected based on accessibility

and willingness to participate in the survey. The questionnaire was distributed through online platforms and social networks, enabling the researchers to reach youth from different regions of Gujarat within a limited time frame.

Although convenience sampling restricts the generalization of findings, it is widely used in exploratory and behavioural studies where obtaining a comprehensive sampling frame is difficult.

5.4 Instrument for Data Collection

Primary data were collected using a structured questionnaire developed after an extensive review of literature on environmental awareness, climate change perception, and pro-environmental behaviour.

The questionnaire consisted of three sections:

Section A: Demographic Information

The demographic section of the questionnaire collected information on respondents' age, gender, educational qualification, and place of residence. These variables were included to understand the socio-demographic profile of the participants and to examine whether environmental awareness and pro-environmental behaviour varied across different demographic groups. The collected demographic information also facilitated comparative analyses based on age, gender, educational attainment, and residential location.

Section B: Environmental Awareness

This section measured respondents' awareness regarding climate change, pollution, environmental protection, tree plantation, electric vehicles, and individual responsibility towards environmental sustainability.

Section C: Pro-Environmental Behaviour

This section measured respondents' pro-environmental behavioural practices in their daily lives. Specifically, it assessed behaviours related to energy conservation (e.g., switching off lights and electrical appliances when not in use), water conservation, recycling and waste segregation practices, reduction in single-use plastic consumption, sustainable consumption habits such as purchasing eco-friendly products, transportation choices including the use of public transport and carpooling, participation in environmental programmes and activities, and waste reduction practices such as reusing, repairing, and responsibly managing leftover resources. These indicators were included to evaluate the extent to which environmental awareness translates into actual environmentally responsible behaviour among youth in Gujarat.

Most awareness-related items were measured using a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5), while behavioural items used frequency-based responses ranging from Never (1) to Always (5).

5.5 Data Collection Procedure

Data were collected through an online survey administered using Google Forms. Participation was voluntary, and respondents were informed that the information would be used solely for academic and research purposes. The questionnaire link was circulated through educational networks, social media platforms, and personal contacts.

To ensure confidentiality, respondents were not required to disclose sensitive personal information. Only completed questionnaires were included in the final analysis.

5.6 Variable Measurement

The study examined two principal constructs:

Environmental Awareness Score (Independent Variable)

The awareness score was computed using responses related to climate change awareness, environmental responsibility, pollution impacts, environmental solutions, and perceptions regarding sustainability.

Pro-Environmental Behaviour Score (Dependent Variable)

The behaviour score was calculated using responses related to energy-saving habits, water conservation practices, recycling behaviour, use of reusable products, transportation choices, eco-friendly purchasing behaviour, and participation in environmental activities.

Higher scores indicated higher levels of environmental awareness and stronger pro-environmental behaviour respectively.

5.7 Data Analysis Techniques

The collected data were coded and analysed using Statistical Package for Social Sciences (SPSS).

The following statistical techniques were employed:

Descriptive Statistics

Frequency distributions and percentages were used to summarize demographic characteristics and respondents' environmental awareness and behavioural practices.

Pearson Correlation Analysis

Pearson's correlation coefficient was applied to examine the strength and direction of the relationship between environmental awareness and pro-environmental behaviour.

Kendall's Tau-b Correlation

As an additional non-parametric measure, Kendall's Tau-b was computed to verify the association between awareness and behaviour.

Simple Linear Regression

Regression analysis was conducted to determine whether environmental awareness significantly predicts pro-environmental behaviour among youth.

Independent Sample t-Test

Independent sample t-tests were used to investigate differences in awareness and behaviour scores between male and female respondents and between educational categories.

One-Way Analysis of Variance (ANOVA)

ANOVA was employed to examine whether awareness and behaviour differed significantly across age groups.

5.8 Ethical Considerations

The study adhered to standard ethical principles of social science research. Participation was voluntary, informed consent was obtained prior to participation, and respondents were assured of confidentiality and anonymity. The collected data were used exclusively for academic research purposes and were analysed in aggregate form without identifying individual respondents.

5.9 HYPOTHESIS

Based on the objectives and theoretical framework of the study, the following hypothesis was formulated:

H1: Environmental awareness positively influences pro-environmental behaviour among youth.

H2: Environmental awareness differs significantly across demographic groups.

H3: Pro-environmental behaviour differs significantly across demographic groups.

H4: Age, gender, and education influence pro-environmental behaviour among youth.

6 Findings

6.1 Demographic Profile of Respondents

Table: 1:

Variable	Category	Frequency (n)	Percentage (%)
Age Group	15–18 years	5	4.4
	19–25 years	64	56.1
	26–30 years	17	14.9
Gender	Above 30 years	28	24.6
	Male	48	42.1
	Female	66	57.9
Educational Level	Higher Secondary	4	3.5
	Undergraduate	53	46.5
	Graduate and Equivalent	3	2.6
	Postgraduate	45	39.5
	Doctoral/PhD and Equivalent	5	4.4
	Other Qualifications	4	3.5
Total		114	100.0

A total of 114 valid responses were collected from youth residing in different regions of Gujarat. The demographic profile of respondents was analysed to understand the composition of the sample and provide context for subsequent analyses.

The majority of respondents (56.1%) belonged to the 19–25 years age group, followed by respondents aged 30 years and above (24.6%) and those aged 26–30 years (14.9%). The remaining respondents were between 15 and 18 years of age. This distribution indicates that the study predominantly captured the perspectives of young adults, who constitute an important stakeholder group in environmental sustainability initiatives.

Female respondents accounted for 57.9% of the sample, while male respondents represented 42.1%. With regard to educational qualifications, undergraduate respondents formed the largest category (46.5%), followed by postgraduate respondents (39.5%). The remaining respondents belonged to secondary, higher secondary, doctoral, and other educational categories.

Geographically, the majority of respondents were from Ahmedabad, accounting for approximately 60.5% of the sample. Respondents were also drawn from several other locations across Gujarat, including Gandhinagar, Bharuch, Porbandar, Sanand, Ankleshwar, Adipur, and other urban and semi-urban areas. Overall, the sample represents an educated youth population with exposure to environmental information and sustainability-related issues

6.2 Environmental Awareness among Youth in Gujarat

Table: 2

Environmental Awareness Item	Most Frequent Response	Frequency (n)	Percentage (%)
Climate change is a serious global issue.	Yes	108	94.7
Human activities are a major cause of climate change.	Yes	107	93.9
Government alone should fix pollution, not individuals.	Agree	30	26.3
Planting trees helps reduce environmental problems.	Strongly Agree	67	58.8
Electric vehicles can help reduce pollution.	Agree	58	50.9
Pollution affects human health.	Strongly Agree	72	63.2

Source: Primary data collected through questionnaire survey.

Table 2 presents the level of environmental awareness among the respondents with respect to selected environmental issues and responsibilities. The findings reveal a high degree of environmental awareness among the participants. An overwhelming majority of respondents recognized climate change as a serious global issue (94.7%) and acknowledged that human activities significantly contribute to climate change (93.9%). Similarly, most respondents strongly agreed that pollution adversely affects human health (63.2%) and that planting trees can help mitigate environmental problems (58.8%). More than half of the participants also agreed that the adoption of electric vehicles could contribute to reducing pollution (50.9%). An interesting finding emerged regarding

perceptions of responsibility for environmental protection. Only 26.3% of respondents agreed that pollution control is solely the responsibility of the government, indicating that a substantial proportion of participants either disagreed with this view or remained neutral. This suggests that many respondents recognize the importance of individual involvement alongside governmental efforts in addressing environmental challenges. Such findings reflect an encouraging sense of shared environmental responsibility among the respondents and indicate that environmental awareness extends beyond mere recognition of environmental problems to an understanding of the collective role required to address them.

Overall, the results demonstrate that the respondents possess a relatively high level of environmental awareness, which

provides a favourable foundation for the development of pro-environmental attitudes and behaviours.

6.3 Pro-Environmental Behaviour among Youth in Gujarat

Table: 3

Pro-Environmental Behaviour Item	Most Frequent Response	Frequency (n)	Percentage (%)
Turn off lights/fans when leaving the room	Always	77	67.5
Use fans instead of AC when comfortable	Always	37	32.5
Turn off phone chargers when not in use	Always	64	56.1
Prefer repairing items instead of replacing them to reduce waste	Often	37	32.5
Separate plastic and paper for recycling	Sometimes	34	29.8
Buy single-use plastic water bottles	Sometimes	44	38.6
Carry reusable bags, bottles, or containers	Always	37	32.5
Purchase eco-friendly products despite higher cost	Sometimes	58	50.9
Consciously avoid wasting water in daily activities	Always	53	46.5

Table 3 presents the pro-environmental behavioural practices of the respondents. The findings indicate that environmentally responsible behaviours were adopted to varying degrees. A majority of respondents reported that they always switched off lights and fans when leaving a room (67.5%) and turned off phone chargers when not in use (56.1%), reflecting strong engagement in energy conservation practices. Similarly, nearly half of the participants stated that they always made conscious efforts to avoid wasting water in their daily activities (46.5%), demonstrating awareness of resource conservation.

Moderate levels of sustainable behaviour were observed in other domains. About one-third of the respondents reported that they always used fans instead of air conditioners when comfortable (32.5%), carried reusable bags, bottles, or containers (32.5%), and often preferred repairing items rather than replacing them (32.5%). However, behaviours related to waste management and sustainable consumption appeared less consistent. The most common response for separating plastic

and paper for recycling was "Sometimes" (29.8%), while 50.9% of respondents reported only sometimes purchasing eco-friendly products despite their higher cost. Notably, 38.6% indicated that they sometimes bought single-use plastic water bottles, suggesting that convenience and habitual consumption may still influence environmentally relevant choices.

Overall, the findings suggest that although respondents demonstrate positive environmental practices in everyday resource conservation activities, their engagement in more demanding behaviours such as recycling, reducing single-use plastics, and purchasing eco-friendly products remains inconsistent. These results provide early evidence of an awareness–action gap, indicating that high levels of environmental awareness do not necessarily translate into uniform pro-environmental behaviour across all domains.

6.4 Relationship between Environmental Awareness and Pro-Environmental Behaviour

Table 4

Variables	Environmental Awareness	Pro-Environmental Behaviour
Environmental Awareness	1	0.286**
Pro-Environmental Behaviour	0.286**	1

Source: Primary data analysed using SPSS.

Correlation coefficient (r) = 0.286

p-value = 0.002

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

Interpretation

To examine the relationship between environmental awareness and pro-environmental behaviour, Pearson correlation analysis was conducted.

The results revealed a positive and statistically significant relationship between environmental awareness and pro-environmental behaviour ($r = 0.286$, $p = 0.002$). This indicates that respondents with higher levels of environmental awareness tend to exhibit higher levels of environmentally responsible behaviour.

Although statistically significant, the strength of the relationship was relatively modest. The findings therefore suggest that while environmental awareness contributes positively to pro-environmental behaviour, awareness alone may not fully explain behavioural outcomes among youth.

The correlation results provide preliminary evidence supporting the proposition that environmentally informed individuals are more likely to engage in sustainable practices. However, additional factors may also influence behavioural decisions and environmental actions.

While the correlation analysis establishes the existence of a significant relationship between environmental awareness and pro-environmental behaviour, it does not indicate the extent to which environmental awareness predicts behavioural outcomes. Therefore, a simple linear regression analysis was conducted to

assess the predictive influence of environmental awareness on pro-environmental behaviour, as presented in the later section.

6.5 Predictive Influence of Environmental Awareness on Pro-Environmental Behaviour: Regression Analysis

Predictor Variable	B	SE	β	t	p-value
Constant	23.417	6.931	–	3.379	0.001
Environmental Awareness	1.277	0.404	0.286	3.164	0.002**

Table 5: Simple Linear Regression Analysis Predicting Pro-Environmental Behaviour from Environmental Awareness (N = 114) Model Summary

R	R ²	Adjusted R ²	F	p-value	Std. Error of Estimate
0.286	0.082	0.074	10.014	0.002**	5.509

Source: Primary data analysed using SPSS.

Dependent Variable: Pro-Environmental Behaviour Score

Predictor: Environmental Awareness Score

Note: $p < 0.01$

To examine the predictive influence of environmental awareness on pro-environmental behaviour among respondents, a simple linear regression analysis was conducted. The results indicated that the regression model was statistically significant ($F = 10.014$, $p = 0.002$), suggesting that environmental awareness significantly predicts pro-environmental behaviour among the respondents.

The model yielded an R value of 0.286 and an R² value of 0.082, indicating that environmental awareness explained approximately 8.2% of the variance in pro-environmental behaviour. The adjusted R² value of 0.074 further confirmed the relatively modest explanatory power of the model. Although environmental awareness emerged as a statistically significant predictor, a substantial proportion of behavioural variation remained unexplained by awareness alone.

Furthermore, the regression coefficient for environmental awareness was found to be positive and statistically significant ($B = 1.277$, $SE = 0.404$, $\beta = 0.286$, $t = 3.164$, $p = 0.002$). This finding implies that a one-unit increase in the environmental awareness score was associated with an increase of approximately 1.28 units in the pro-environmental behaviour score. In other words, respondents with higher levels of environmental awareness were more likely to engage in environmentally responsible practices.

However, the relatively low R² value suggests that environmental awareness, although important, is not sufficient on its own to produce substantial behavioural change. Factors such as social norms, convenience, economic considerations, infrastructural support, personal values, and habitual practices may also play an important role in shaping pro-environmental behaviour. Therefore, environmental behaviour should be understood as a multidimensional phenomenon influenced by a combination of cognitive, social, and contextual factors.

The findings of the present study thus support the proposition that environmental awareness positively influences pro-environmental behaviour among respondents in Gujarat. Nevertheless, the limited predictive strength of environmental awareness highlights the persistence of an awareness–action gap, wherein individuals who possess relatively high levels of environmental awareness do not necessarily translate such

awareness into consistent environmental action. This finding represents an important contribution of the study, emphasizing that efforts aimed solely at increasing awareness may not be sufficient to foster meaningful and sustained behavioural transformation.

Overall, the regression analysis demonstrates that environmental awareness is a significant yet limited predictor of pro-environmental behaviour, thereby underscoring the need for interventions that move beyond awareness creation and address the broader social, behavioural, and structural determinants of environmental action.

6.6 Demographic Differences in Environmental Awareness and Pro-Environmental Behaviour

To examine whether environmental awareness and pro-environmental behaviour varied across different demographic groups, independent sample t-tests and one-way analysis of variance (ANOVA) were conducted using gender, educational level, and age as grouping variables.

The independent sample t-test results indicated that there were no statistically significant differences between male and female respondents with respect to environmental awareness ($t = -0.015$, $p = 0.988$) and pro-environmental behaviour ($t = 0.194$, $p = 0.846$). Similarly, educational attainment did not significantly influence either environmental awareness ($t = -0.090$, $p = 0.929$) or pro-environmental behaviour ($t = -1.518$, $p = 0.132$). These findings suggest that environmental awareness and behavioural practices are relatively consistent across gender and educational categories.

One-way ANOVA was further employed to investigate differences across age groups. The results revealed that the overall differences in environmental awareness among the age groups were not statistically significant ($F = 2.327$, $p = 0.102$). Likewise, no significant differences were observed in pro-environmental behaviour across age categories at the 5% level of significance ($F = 2.708$, $p = 0.071$). These findings indicate that age, in general, does not exert a strong influence on respondents' environmental awareness and behavioural practices.

However, post hoc LSD comparisons provided additional insights into specific group variations. Respondents aged 30 years and above exhibited significantly higher environmental awareness than those aged 15–25 years ($p = 0.042$). Similarly, respondents in the 26–30 years age group reported significantly higher pro-environmental behaviour compared with those aged 15–25 years ($p = 0.040$). These results suggest that although demographic characteristics do not produce substantial differences at the aggregate level, certain age cohorts may demonstrate relatively greater environmental awareness and engagement in environmentally responsible practices.

Overall, the findings indicate that demographic variables explain only a limited proportion of the variation in environmental awareness and pro-environmental behaviour. The absence of pronounced demographic differences reinforces the central finding of this study that the awareness–action gap transcends demographic boundaries. In other words, the challenge of translating environmental awareness into consistent pro-environmental behaviour appears to be common across different sections of the study population. Consequently, interventions aimed at promoting sustainable behaviour should not be restricted to specific demographic groups but should focus on addressing the broader social, behavioural, and contextual factors that facilitate or hinder environmental action. However, the limited demographic differences observed in this study suggest that environmental awareness and pro-environmental behaviour are broadly distributed across the respondent population. While certain age groups demonstrated relatively higher awareness and behavioural engagement, the findings indicate that demographic characteristics alone are insufficient to explain behavioural outcomes, thereby further substantiating the existence of an awareness–action gap among respondents in Gujarat.

7. DISCUSSION

7.1 The Awareness–Action Gap among Gujarat Youth

The central finding of the present study is that environmental awareness among Gujarat's youth is relatively high, yet its translation into pro-environmental behaviour remains limited. Although environmental awareness was found to be positively associated with pro-environmental behaviour, the relationship was weak, and awareness explained only a modest proportion of behavioural variation ($R^2 = 0.082$). This finding suggests that environmental awareness, while necessary, is insufficient to produce substantial behavioural change.

The result challenges the assumption that increasing environmental knowledge automatically leads to environmentally responsible action. Traditional environmental education initiatives often operate under a knowledge-deficit model, which assumes that individuals engage in unsustainable practices primarily because they lack information. However, the findings of the present study indicate that awareness alone cannot adequately explain behavioural outcomes among youth. Despite possessing knowledge regarding climate change, pollution, and environmental sustainability, many respondents

did not consistently translate this awareness into everyday environmental practices.

These findings support the growing body of international literature on the awareness–action gap. Previous studies have repeatedly demonstrated that environmentally informed individuals frequently fail to engage in behaviour that aligns with their environmental beliefs and values. The persistence of this gap suggests that behavioural change is influenced by multiple interacting factors beyond awareness, including convenience, social norms, perceived effectiveness, economic considerations, and institutional support.

7.2 Beyond Environmental Knowledge: Understanding Behavioural Constraints

The relatively low explanatory power of environmental awareness observed in this study highlights the complexity of environmental behaviour. Environmental actions are embedded within broader social and structural contexts that may either facilitate or constrain sustainable choices.

For example, an individual may be fully aware of the environmental benefits of public transportation yet continue using private vehicles due to inadequate transport infrastructure. Similarly, awareness regarding waste segregation may not translate into action if local recycling facilities are unavailable or inaccessible. Such examples illustrate that environmental behaviour is often shaped by contextual realities rather than knowledge alone.

The findings therefore suggest that future environmental interventions targeting youth should move beyond awareness campaigns and focus on behavioural facilitation. Programmes designed to encourage sustainable lifestyles must address practical barriers, provide opportunities for participation, and create enabling environments that support environmentally responsible choices.

From a theoretical perspective, the findings lend greater support to behavioural frameworks such as the Theory of Planned Behaviour than to purely knowledge-based models. The Theory of Planned Behaviour emphasizes that behavioural intentions and actions are influenced not only by knowledge but also by social norms and perceived behavioural control. The present findings indicate that such broader determinants may play a more substantial role in shaping environmental behaviour among Gujarat's youth.

7.3 Demographic Insights and Behavioural Maturity

An interesting finding emerging from the study is that environmental behaviour varied significantly across age groups, whereas environmental awareness remained relatively similar. This pattern suggests that behavioural engagement may develop through experience rather than awareness alone.

Older respondents demonstrated comparatively higher levels of pro-environmental behaviour despite exhibiting awareness levels similar to younger participants. One possible explanation is that increasing age is associated with greater personal responsibility, decision-making autonomy, financial independence, and exposure to real-world environmental

challenges. Consequently, older youth may be better positioned to translate environmental awareness into practical action.

The absence of significant differences across gender and educational categories is equally noteworthy. These findings suggest that environmental awareness has become widely diffused across different segments of youth through formal education, digital media, and public discourse. Environmental concern may therefore be emerging as a shared social value rather than a characteristic associated with specific demographic groups.

7.4 Implications for Environmental Education and Sustainability Policy

The findings carry important implications for environmental education and sustainability policy in Gujarat. Educational institutions have traditionally emphasized awareness creation through classroom instruction and information dissemination. While such efforts remain important, the present study indicates that awareness generation alone is unlikely to produce substantial behavioural transformation.

Environmental education should therefore incorporate experiential and action-oriented learning approaches. Activities such as sustainability projects, waste audits, community engagement programmes, environmental volunteering, and campus sustainability initiatives can help bridge the gap between awareness and action. These approaches enable learners to experience environmental responsibility as a practical activity rather than merely an academic concept.

From a policy perspective, behavioural interventions should complement awareness programmes. Policymakers should focus on creating supportive infrastructure and institutional conditions that facilitate sustainable choices. Investments in public transportation, waste management systems, recycling facilities, green public spaces, and environmentally friendly consumption alternatives can significantly enhance the likelihood that environmental awareness will translate into action.

Overall, the study demonstrates that the challenge facing environmental sustainability initiatives is no longer simply increasing awareness but facilitating behavioural change. The future success of environmental programmes targeting youth will depend on their ability to transform environmental knowledge into sustained and meaningful environmental action.

8. CONCLUSION

The present study examined the relationship between environmental awareness and pro-environmental behaviour among youth in Gujarat. Against the backdrop of growing environmental challenges such as climate change, pollution, resource depletion, and ecological degradation, understanding the extent to which environmental awareness translates into behavioural change has become increasingly important for achieving sustainability goals. Youth represent a critical stakeholder group in this regard, as their attitudes and

behavioural choices will significantly influence future environmental outcomes.

The findings of the study indicate that environmental awareness among Gujarat's youth is generally high. Respondents demonstrated a sound understanding of environmental issues and acknowledged the importance of environmental protection, sustainability, and individual responsibility in addressing contemporary environmental challenges. These findings suggest that environmental information and awareness have become increasingly widespread among young people through formal education, media exposure, public discourse, and digital communication platforms.

Despite these encouraging levels of awareness, the study found that environmental awareness alone does not fully translate into pro-environmental behaviour. Although a positive and statistically significant relationship was observed between environmental awareness and environmentally responsible behaviour, the strength of the relationship was relatively modest. Furthermore, regression analysis revealed that environmental awareness explained only a limited proportion of behavioural variation among respondents. These findings indicate that while awareness contributes to behavioural outcomes, it is insufficient to explain environmental behaviour in its entirety.

One of the most important contributions of the study lies in highlighting the persistence of the awareness–action gap among Gujarat's youth. The findings demonstrate that possessing environmental knowledge does not automatically result in consistent environmentally responsible behaviour. This observation supports contemporary environmental behaviour literature, which argues that behavioural decisions are shaped by a combination of cognitive, social, economic, psychological, and contextual factors. Consequently, environmental behaviour should be understood as a multidimensional phenomenon rather than a direct outcome of awareness alone.

The demographic analysis further revealed that environmental awareness was relatively consistent across gender, age, and educational groups. While age demonstrated some influence on behavioural practices, gender and educational attainment were not found to be significant determinants of environmental awareness or behaviour. These findings suggest that environmental awareness has become broadly diffused across different segments of youth and is no longer confined to particular demographic categories. However, the translation of awareness into action appears to depend on factors beyond demographic characteristics.

The study also carries important implications for environmental education and sustainability policy. The findings suggest that traditional awareness-based approaches, although valuable, may have limited effectiveness when implemented in isolation. Environmental programmes that focus exclusively on information dissemination are unlikely to generate substantial behavioural transformation unless they are accompanied by opportunities for practical engagement and behavioural reinforcement. Educational institutions should therefore

complement environmental education with experiential learning activities, community engagement initiatives, sustainability projects, and action-oriented programmes that encourage the application of environmental knowledge in everyday life.

Similarly, policymakers and environmental organizations should move beyond awareness creation and focus on creating enabling environments that facilitate sustainable behaviour. Investments in environmental infrastructure, waste management systems, public transportation, recycling facilities, and community-based sustainability initiatives can help reduce barriers that prevent individuals from acting upon their environmental knowledge. Such interventions are likely to be more effective in promoting long-term behavioural change than awareness campaigns alone.

From a theoretical perspective, the findings contribute to the growing discourse on the awareness–action gap in environmental behaviour research. While the results support the proposition that environmental awareness positively influences pro-environmental behaviour, they simultaneously challenge simplistic assumptions that knowledge automatically leads to action. The study therefore reinforces the need for more comprehensive models of environmental behaviour that incorporate social, institutional, and behavioural determinants alongside environmental awareness.

In conclusion, the study demonstrates that Gujarat's youth possess substantial environmental awareness and generally favourable attitudes toward environmental protection. However, awareness alone is insufficient to drive significant behavioural transformation. The challenge facing environmental educators, policymakers, and sustainability practitioners is therefore not merely increasing awareness but creating conditions that enable individuals to convert environmental knowledge into meaningful and sustained environmental action. Future sustainability efforts will be most effective when they combine awareness generation with behavioural interventions, institutional support, and opportunities for active participation in environmental stewardship.

9. Limitations of the Study

The findings of this study should be interpreted in light of certain limitations. The study was based on a relatively modest sample and employed a cross-sectional design using self-reported responses, which may limit the generalizability of the findings and preclude causal inferences. In addition, environmental awareness was examined as the primary predictor of pro-environmental behaviour, whereas other social, psychological, and contextual factors may also influence behavioural outcomes. Despite these limitations, the study provides valuable insights into the awareness–action gap and contributes to the understanding of pro-environmental behaviour in the Gujarat context.

10. Future Research Directions

Future research may include larger samples and explore additional factors influencing pro-environmental behaviour to provide a deeper understanding of the awareness–action gap.

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