A STUDY ON STUDENTS' AWARENESS ABOUT CLIMATE SOCIAL RESPONSIBILITY

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Abstract
Climate change has emerged as one of the most critical global challenges of the 21st century. Climate Social Responsibility (CSR 2.0 – Climate-Oriented Responsibility) emphasizes individual, institutional, and corporate accountability toward environmental sustainability. The present study examines the level of awareness, perception, and practices related to Climate Social Responsibility among Undergraduate (UG) and Postgraduate (PG) students in Pune city. The study is based on primary data collected from 120 students through a structured questionnaire using convenience sampling. Statistical tools such as percentage analysis, mean score analysis, and comparative analysis were used. The findings indicate moderate awareness levels, with PG students demonstrating comparatively higher conceptual understanding than UG students. However, practical engagement in climate-responsible behavior remains limited. The study suggests incorporating structured environmental education and institutional sustainability initiatives in higher education institutions.

Keywords: *Climate Change, Social Responsibility, Environmental Awareness, Sustainability, Students, Pune*

Introduction

Climate change has emerged as one of the most significant environmental challenges facing the world today. It refers to long-term alterations in temperature, precipitation patterns, and extreme weather events primarily caused by human activities such as industrialization, deforestation, urbanization, and the excessive use of fossil fuels. Rising global temperatures, melting glaciers, sea-level rise, and biodiversity loss are clear indicators of the growing environmental crisis. International bodies such as the United Nations have consistently emphasized urgent climate action through global initiatives like the Sustainable Development Goals (SDGs), particularly Goal 13: Climate Action.

In this context, the concept of Climate Social Responsibility has gained increasing importance. Climate Social Responsibility extends beyond corporate environmental obligations and highlights the responsibility of individuals, communities, educational institutions, and society at large to adopt environmentally sustainable behaviors. It encourages responsible consumption, waste reduction, energy conservation, and active participation in environmental protection initiatives. Students, as future leaders, professionals, and policymakers, play a critical role in shaping a sustainable future.

Educational institutions are not only centers of knowledge but also platforms for fostering environmental values and responsible citizenship. Pune city, known as the "Oxford of the East," hosts a diverse student population from various academic disciplines. This makes it an ideal setting to examine students' awareness and perception regarding Climate Social Responsibility. Understanding students' level of awareness and their practical engagement in climate-responsible behavior is essential for designing effective environmental education strategies. Therefore, this study aims to analyze the awareness, understanding, and practices related to Climate Social Responsibility among students in Pune city.

Review of Literature

Climate change awareness and environmental responsibility among students have been widely studied across global and Indian contexts. Several scholars have examined knowledge levels, attitudes, perceptions, and behavioural dimensions of climate responsibility.

Archie Carroll (1991) introduced the Pyramid of Corporate Social Responsibility, which laid the foundation for ethical and environmental accountability beyond economic obligations. Later, John Elkington (1997) proposed the Triple Bottom Line framework (People, Planet, Profit), emphasizing environmental sustainability as a core component of social responsibility.

United Nations (2015) highlighted climate responsibility globally through Sustainable Development Goal 13 (Climate Action), encouraging educational institutions to integrate sustainability into curricula.

Leiserowitz (2006) examined public climate change risk perception and found that awareness does not

always translate into personal action. O'Connor, Bord, and Fisher (1999) observed that environmental beliefs significantly influence climate-related behavioural intentions. Similarly, Kollmuss and Agyeman (2002) identified a persistent "value-action gap" between environmental knowledge and responsible behaviour.

Boyes and Stanisstreet (1993, 2012) conducted multiple studies on students' understanding of global warming and found conceptual misconceptions despite general awareness. Shepardson et al. (2009) reported that middle and high school students possessed fragmented knowledge about climate systems.

Pandve et al. (2009) studied medical students in India and found high awareness of global warming but limited understanding of mitigation strategies. Similarly, Sharma (2012) reported moderate climate awareness among Indian college students but identified limited active engagement.

Chhokar (2010) emphasized the importance of environmental education in India, arguing that institutional efforts significantly shape youth attitudes toward sustainability. Singh and Bhaduri (2016) examined management students and found that while awareness levels were satisfactory, responsible consumption behaviour was inconsistent.

Lee et al. (2015) conducted a cross-national study and found that environmental concern among adolescents varied depending on education systems and media exposure. Stevenson et al. (2014) emphasized that climate change education improves critical thinking and increases civic engagement among youth.

Fielding and Head (2012) found that personal norms and social responsibility significantly predict pro-environmental behaviour. Bamberg and Möser (2007), through meta-analysis, confirmed that environmental knowledge indirectly influences behaviour through attitudes and moral norms.

Tuncer et al. (2009) studied university students' environmental attitudes and reported moderate ecological awareness but limited community participation. Vicente-Molina et al. (2013) compared European university students and found that although environmental awareness was high, sustainable behaviour was relatively low.

A survey by Kagawa (2007) among UK students revealed feelings of eco-anxiety but insufficient engagement in climate activism. Corner et al. (2015) argued that communication strategies strongly influence climate awareness among youth.

In the Indian context, Joseph and Raj (2020) found that social media plays a major role in shaping students' environmental awareness. Gupta and Gupta (2021) reported that higher education institutions can significantly influence climate-responsible behaviour through green campus initiatives.

Recent studies by Ogunbode et al. (2022) found that climate anxiety among youth is linked to increased willingness to participate in climate action. Similarly, Wray-Lake et al. (2022) emphasized that civic responsibility and institutional trust shape students' climate engagement.

Mishra and Pandey (2023) found that Indian postgraduate students demonstrate moderate awareness of climate change but lack structured opportunities for participation in sustainability initiatives.

Overall, the literature suggests that while awareness of climate change is generally increasing among students globally, the transition from awareness to Climate Social Responsibility — defined as consistent, ethical, and proactive climate action — remains insufficiently examined, particularly in localized urban educational contexts such as Pune.

Research Gap

From the above literature, the following gaps are identified:

1. Conceptual Gap: Most studies focus on climate change awareness or environmental attitudes but do not explicitly examine the concept of *Climate Social Responsibility* as a social and ethical obligation.
2. Behavioural Gap: There is a consistent "awareness–action gap" identified by Kollmuss and Agyeman (2002), yet limited research investigates how to bridge this gap among university students.
3. Indian Urban Context Gap: Few empirical studies focus specifically on students in urban academic hubs like Pune, which host diverse educational institutions.
4. Integrated Assessment Gap: Many studies measure either knowledge or attitude, but fewer studies integrate awareness, perception, and actual responsible practices in one framework.
5. Primary Data-Based Local Studies: There is limited primary data research assessing climate social responsibility among students in Maharashtra.

Objectives:

1. **To assess the level of awareness** among students in Pune city regarding the concept of Climate Social Responsibility, including their understanding of climate change, its causes, and its impacts on the environment.

2. **To analyze the attitudes and perceptions** of students towards climate change and Climate Social Responsibility, with a focus on their perceived individual and collective responsibility towards addressing climate issues.
3. **To evaluate the actual practices** of students in Pune city related to environmentally responsible behavior, such as waste reduction, energy conservation, and participation in sustainability initiatives, and identify the factors influencing these practices.

Hypotheses:

1. **H1**: There is a significant gap between students' awareness of climate change and their active engagement in Climate Social Responsibility practices, indicating a disparity between knowledge and action.
2. **H2**: Students in Pune city with higher levels of environmental education and exposure (e.g., through media or academic programs) will demonstrate greater awareness and more proactive engagement in Climate Social Responsibility behaviors.

Research Design

This study adopts a descriptive and quantitative research design to assess students' awareness, perceptions, and practices related to Climate Social Responsibility.

Population and Sample:

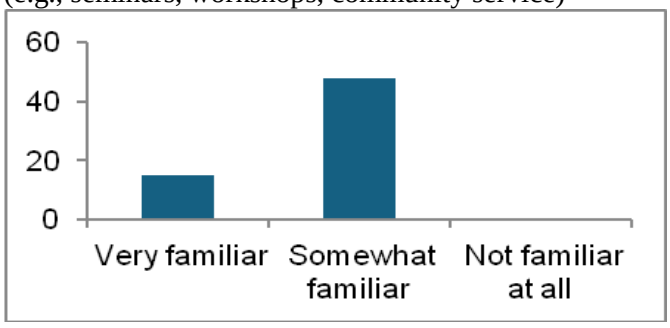
- **Population:** Undergraduate (UG) and Postgraduate (PG) students from various educational institutions in Pune city.
- **Sample Size:** 120 students selected using convenience sampling.
- **Sampling Technique:** Convenience sampling is used to select students from different educational institutions in Pune.

Data Analysis Techniques:

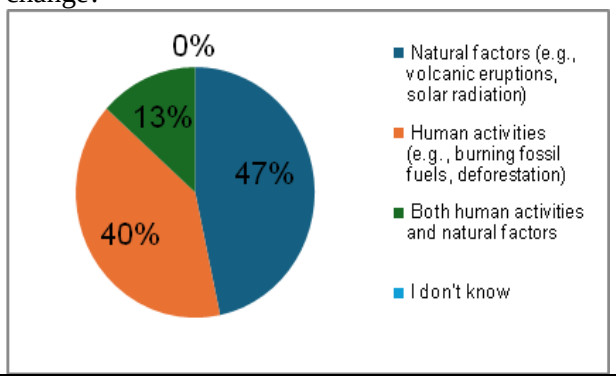
- **Percentage Analysis:** To determine the distribution of responses.
- **Mean Score Analysis:** To assess the level of awareness and attitudes towards climate change and CSR.
- **Comparative Analysis:** To compare awareness and engagement levels between UG and PG students using chi-square tests and other relevant statistical tools.

Data Analysis

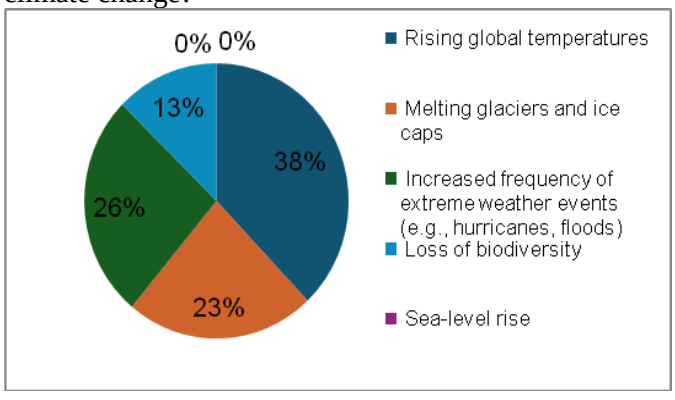
How frequently do you participate in environmental awareness or sustainability-related events or programs (e.g., seminars, workshops, community service)



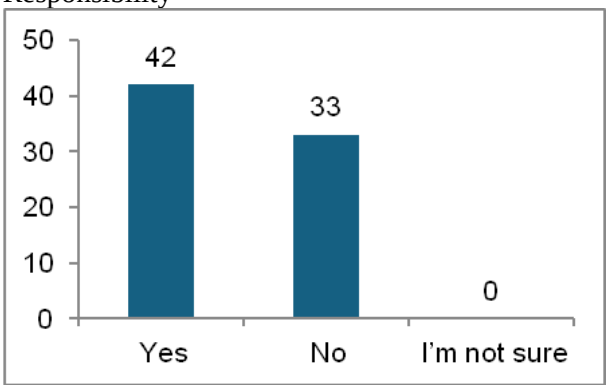
What do you believe is the primary cause of climate change?



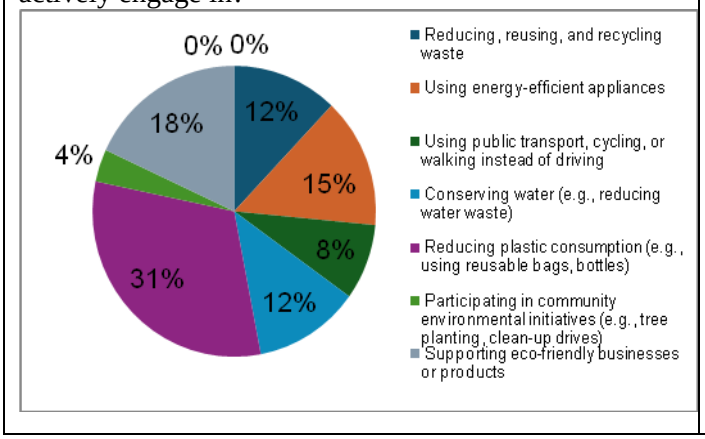
Which of the following are common consequences of climate change?



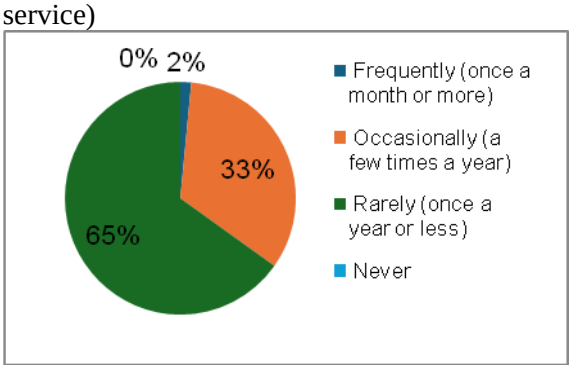
Are you aware of the concept of "Climate Social Responsibility"



Which of the following sustainable practices do you actively engage in?



How frequently do you participate in environmental awareness or sustainability-related events or programs (e.g., seminars, workshops, community service)



Statistic	Value	
Chi-Square Statistic	7.96	Fail to reject H0 (no significant relationship)
Degrees of Freedom	88	
P-value	0.25	

Statistic	Value	
Chi-Square Statistic (χ^2)	2.46	Fail to reject H0 (no significant relationship)
Degrees of Freedom (df)	88	
P-value	0.88	

H1 (Gap between awareness and action): There is no significant gap between students' awareness of climate change and their engagement in Climate Social Responsibility practices. This suggests that increasing awareness alone may not be enough to encourage more active participation in sustainability practices.

H2 (Effect of education and exposure): Environmental education and exposure do not have a significant impact on students' awareness or engagement in sustainability-related behaviors, according to this data.

Conclusion:

The study aimed to assess the awareness, attitudes, and engagement of students in Pune city regarding Climate Social Responsibility (CSR), with a particular focus on understanding the gap between awareness and action, and the impact of environmental education and exposure on CSR behaviors.

Key Findings:

1. **Awareness vs. Action:**

The hypothesis (H1) proposed that there is a significant gap between students' awareness of climate change and their active engagement in CSR practices. However, the data analysis using Chi-Square tests indicated that there is no significant gap between awareness and engagement in CSR practices. The p-value of 0.25 suggests that increased awareness of climate change does not necessarily translate into higher levels of active participation in sustainability practices. This finding emphasizes that simply raising awareness about climate issues might not be sufficient to motivate students to take proactive environmental actions.

2. **Impact of Education and Exposure:**

The second hypothesis (H2) suggested that students with higher levels of environmental education and exposure (e.g., through media or academic programs) would demonstrate greater awareness and more proactive engagement in CSR. However, the Chi-Square test results (p-value of 0.88) revealed that environmental education and exposure did not have a significant impact on students' awareness or their engagement in sustainable behaviors. This finding suggests that other factors, beyond formal education and media exposure, might play a more crucial role in influencing students' environmental attitudes and actions.

3. **Awareness-Action Gap:**

While students in Pune are aware of climate change, there seems to be a disconnect between knowledge and action. This highlights the need for more effective strategies that bridge the awareness-action gap. Educational institutions and environmental programs might need to integrate more practical and participatory approaches that not only inform students but also engage them in tangible climate action.

4. **Role of Education and Exposure:**

The findings also raise questions about the effectiveness of current environmental education initiatives. While exposure to environmental topics through academia and media is important, these

may not be sufficient by themselves to drive significant behavioral change. More action-oriented and interactive learning models that emphasize hands-on experience and personal responsibility could potentially lead to greater engagement in sustainable practices.

5. **Need for Comprehensive Engagement:**

The study suggests that fostering a more holistic approach to environmental responsibility—one that goes beyond awareness and includes practical applications, personal values, and social norms—could help in shifting students from passive awareness to active participation. Encouraging community-based initiatives, peer collaboration, and offering tangible incentives for sustainable practices might be effective ways to foster deeper engagement with CSR.

This study contributes to the growing body of literature on climate change awareness and CSR, particularly in the Indian context. It underscores the need to rethink the traditional methods of environmental education and move towards more interactive, community-centered approaches that can better engage students in sustainable behaviors. Despite the lack of significant relationships between awareness, education, and action in this study, further research exploring other factors—such as personal motivation, peer influence, and institutional support—could offer valuable insights into how to effectively promote climate responsibility among students. Ultimately, while awareness of climate change is increasing, the transition to responsible action remains a key challenge. Moving forward, a combination of awareness-building, experiential learning, and strong institutional support will be critical in encouraging students to take proactive steps toward a sustainable future.

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Questionnaire

1. **What is your age?**
   - ☐ 18-22 ☐ 23-27 ☐ 28-32 ☐ 33 or older
2. **What is your gender?**
   - ☐ Male ☐ Female ☐ Non-binary/Third gender ☐ Prefer not to say
3. **Which level of study are you currently in?**
   - ☐ Undergraduate ☐ Postgraduate ☐ PhD ☐ Other (please specify): ___
4. **What do you believe is the primary cause of climate change?**
   - ☐ Natural factors (e.g., volcanic eruptions, solar radiation)
   - ☐ Human activities (e.g., burning fossil fuels, deforestation)
   - ☐ Both human activities and natural factors
   - ☐ I don't know
5. **Are you aware of the concept of "Climate Social Responsibility" (CSR)?**
   - ☐ Yes ☐ No ☐ I'm not sure
6. **In your opinion, who is primarily responsible for addressing climate change?** (Select one or more)
   - ☐ Governments and policymakers ☐ Corporations and industries
   - ☐ Individuals and communities ☐ Educational institutions
   - ☐ Non-governmental organizations (NGOs) ☐ Other (please specify): ___

7. **Which of the following sustainable practices do you actively engage in?**
   (Select all that apply)
   - ☐ Reducing, reusing, and recycling waste
   - ☐ Using energy-efficient appliances
   - ☐ Using public transport, cycling, or walking instead of driving
   - ☐ Conserving water (e.g., reducing water waste)
   - ☐ Reducing plastic consumption (e.g., using reusable bags, bottles)
   - ☐ Participating in community environmental initiatives (e.g., tree planting, clean-up drives)
   - ☐ Supporting eco-friendly businesses or products
   - ☐ I don't actively engage in any of these practices
8. **How frequently do you participate in environmental awareness or sustainability-related events or programs (e.g., seminars, workshops, community service)?**
   - ☐ Frequently (once a month or more) ☐ Occasionally (a few times a year)
   - ☐ Rarely (once a year or less) ☐ Never
9. **Do you think that the university or college you attend is doing enough to promote environmental responsibility among students?**
   - ☐ Yes, very effectively ☐ Somewhat effectively
   - ☐ Not effectively ☐ Not at all
10. **Have you received formal education about climate change and sustainability (e.g., in your courses, workshops)?**
    ☐ Yes, extensively ☐ Yes, but only briefly ☐ No, not at all
11. **What suggestions do you have for improving Climate Social Responsibility practices among students in Pune city?**
    (Open-ended response)