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Environmental Awareness and Sustainable Consumption as Predictors of Green Behaviour among Student Teachers of Assam

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Abstract

Environmental sustainability has become an important concern in the present world due to increasing environmental problems and unsustainable human practices. In this context, student teachers play a significant role in promoting environmental awareness and sustainable practices among future generations. The present study aimed to examine the level of environmental awareness, sustainable consumption and green behaviour among student teachers. The study also investigated the differences in these variables with respect to gender and locality, analyzed the relationship among the variables and examined the predictive effect of environmental awareness and sustainable consumption on green behaviour.

The study adopted a descriptive survey method. A total of 163 student teachers from teacher education institutions were selected through convenient sampling technique. Data were collected using structured questionnaires. The environmental awareness tool was based on Multiple-choice questions (MCQ), While sustainable consumption and green behaviour were measured using a five-point Likert scale. The collected data were analyzed using descriptive statistics, independent sample t-test, Pearson's correlation and multiple regression analysis with the help of SPSS software.

The findings of the study revealed that student teachers possessed a high level of environmental awareness, sustainable consumption and green behaviour. Significant differences were observed in environmental awareness and green behaviour with respect to gender, whereas no significant difference was found in sustainable consumption. Significant differences were also observed in environmental awareness, sustainable consumption and green behaviour with respect to locality. The study further revealed a strong positive relationship between sustainable consumption and green behaviour. Regression analysis indicated that sustainable consumption significantly predicted green behaviour, whereas environmental awareness did not significantly predict green behaviour among student teachers.

The study concludes that sustainable consumption plays an important role in promoting environmentally responsible behaviour among student teachers. Therefore, teacher education institutions should emphasize practical environmental education and sustainability-oriented practices in order to develop environmentally responsible future teachers.

Keywords: Environmental Awareness, Sustainable Consumption, Green Behaviour, Student Teachers, Sustainability, Teacher Education.

1. INTRODUCTION:

The twenty-first century is witnessing unprecedented environmental challenges, including climate change, biodiversity loss, resource depletion and environmental degradation. These challenges threaten ecological balance, economic stability and social well-being across the globe. The United Nations has emphasized that sustainable development is essential for ensuring the well-being of present and future generations, particularly through the implementation of the United Nations Sustainable Development Goals (SDGs) (United Nations,2015).Among these, SDG 4 highlights the importance of quality education in promoting sustainable development and global citizenship.

Education has been recognized as a transformative force capable of shaping attitudes, values and behaviours that support sustainability. The framework of UNESCO on Education for Sustainable Development (ESD) underscores the integration of sustainability principles into teaching and learning processes to equip learners with competencies necessary for addressing environmental challenges (UNESCO, 2017).In the context, the concept of Green behaviour has gained prominence. Green behaviour refer to the knowledge, abilities, values and attitudes required to support sustainable development and environmental conservation (OECD, 2016).These behaviour extend beyond technical expertise and include critical thinking, problem-solving, environmental literacy and responsible decision-making.

Within the education system, student teachers occupy a strategic position in fostering green competencies. As professionals responsible for preparing future teachers, student teachers influence pedagogical practices, curriculum integration and institutional culture. According to Tilbury (2011), teacher education plays a crucial role in embedding sustainability principles into mainstream education by empowering student teachers with relevant competencies and reflective practices. Similarly, research indicates that student teachers environmental awareness and attitudes significantly affect their classroom practices and the sustainability orientation of learners (Evans et al, 2017).

In the Indian context, the need to integrate green behaviour within teacher education is particularly significant. India faces pressing environmental concerns alongside a rich heritage of indigenous ecological knowledge and sustainable living traditions. Policy documents such as the National Council for Teacher Education guidelines emphasize the inclusion of environmental education and sustainable practices in teacher preparation programmes (NCTE, 2014). However, empirical evidence suggests that the systematic development of green behaviours among student teachers remains limited and required focused attention.

2. Review of related literature:

World Commission on Environment and Development (1987) in their studies the concept of sustainable development was formally introduced in its report **Our Common Future,** which defined sustainable development as development that meets the needs of the present without compromising future generations. This report laid the foundation for integrating environmental responsibility into education and skill development.

United Nations Educational, Scientific and cultural Organization (2005) emphasized Education for Sustainable Development (ESD) as a key strategy for promoting sustainability values and competencies among learners and educators. UNESCO highlighted that green skills are essential competencies for achieving the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 13 (Climate Action).

The International Labour Organization (2018) defines green skills as the knowledge, abilities, values and attitudes needed to support sustainable and resource-efficient societies. The report emphasized the importance of embedding green competencies into education and vocational training systems.

The organization for Economic Co-operation and Development (2012) highlighted the growing demand for green skills in emerging economies. The report stressed that education systems must equip learners with environmental literacy and sustainability competencies to meet future labour market demands.

United Nations Environment Programme (2011) and later in 2019 emphasized that green skills are crucial for achieving a green economy. Their studies indicated that education and teacher training play a crucial role in preparing youth for sustainable employment sectors.

3. Rationale of the study:

The 21st century is marked by serious environmental challenges such as climate change, biodiversity loss, pollution and resource depletion. These global concerns demand not only technological solutions but also behavioural transformation through education. The concept of sustainable development, first articulated by the World Commission on Environment and Development in 1987 emphasizes the need for responsible actions that ensure environmental balance for future generations. In this context, the development of green behaviour has become an essential component of education systems worldwide.

Green behaviour refer to the knowledge, competencies, values and attitudes required to support environmental sustainability and promote resource-efficient practices. International agencies such as the United Nations Educational, Scientific and Cultural Organization and the International Labour Organization have stressed the integration of green competencies into education and teacher training to achieve sustainable development goals.

In the Indian context, policy initiatives such as environmental education mandates and sustainability guidelines by the University Grants Commission and reforms introduced under the Ministry of Education emphasize sustainable and holistic education. Despite these policy directions, there is limited empirical evidence assessing the actual level of green behaviour awareness, attitude and practices among student teachers, particularly at the regional level.

Therefore, the present study is undertaken to examine the awareness, attitudes and practices related to green behaviour among student teachers in selected colleges. Understanding their current status will help in identifying gaps and suggesting appropriate educational interventions. The study is significant in aligning teacher education with the broader goal of shaping a sustainable and responsible society.

4. Objectives:

1. To assess the level of environmental awareness, sustainable consumption, green behaviour among student teachers.
2. To examine the differences in environmental awareness, sustainable consumption, green behaviour among student teachers with respect to selected demographic variables.
3. To analyze the relationship between environmental awareness, sustainable consumption, green behaviour and among student teachers.
4. To examine the predictive effect of environmental awareness and sustainable consumption on green behaviour among student teacher.

5. To suggest suitable educational measures for enhancing environmental awareness and sustainable consumption in order to promote green behaviour among student teachers.

5. Hypothesis of the study:

- H_{01}: There is no significant difference in environmental awareness among student teachers with respect to gender
- H_{02}: There is no significant difference in sustainable consumption among student teachers with respect to gender
- H_{03}: There is no significant difference in green behaviour among student teachers with respect to gender.
- H_{04}: There is no significant difference in environmental awareness among student teachers with respect to locality.
- H_{05}: There is no significant difference in sustainable consumption among student teachers with respect to locality.
- H_{06}: There is no significant difference in green behaviour among student teachers with respect to locality.
- H_{07}: There is no significant relationship between environmental awareness and sustainable consumption among student teachers.
- H_{08}: There is no significant relationship between environmental awareness and green behaviour among student teachers.
- H_{09}: There is no significant relationship between sustainable consumption and green behaviour among student teachers.
- H_{10}: Environmental awareness and sustainable consumption do not significantly predict green behaviour among student teachers

6. Methodology of the study:

The present study adopted a descriptive survey method to examine the level of environmental awareness, sustainable consumption and green behaviour among student teachers. The descriptive survey method was considered appropriate as it helps in describing and analyzing the existing conditions related to environmental awareness and sustainable practices among the respondents.

The study was conducted among student teachers enrolled in teacher education institutions. A total of 163 student teachers were selected as the sample of the study through convenient sampling technique. The respondents were selected from different teacher education institutions to obtain relevant information regarding their environmental awareness, sustainable consumption and green behaviour.

The data for the study were collected through structured questionnaires. The questionnaire consisted of two sections. The first section included demographic information of the respondents such as gender and locality and other relevant background variables. The second section contained items related to environmental awareness, sustainable consumption and green behaviour among student teachers.

The environmental awareness questionnaire was based on multiple-choice questions (MCQ), where respondents selected the most appropriate answer from the given alternatives. The sustainable consumption and green behaviour variable were measured using a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”. The questionnaire included statements designed to assess the

respondents' level of environmental awareness, sustainable consumption practices and environmentally responsible behaviour.

Prior to the data collection, the tool was carefully reviewed to ensure clarity and suitability of the items. A pilot study was conducted on a small group of respondents to examine the validity and reliability of the instrument. The findings confirmed that the items included in the questionnaire were valid and reliable for conducting the study.

The questionnaire was administered personally to the selected student teachers. The respondents were informed about the purpose of the study and were requested to provide honest responses. Confidentiality and ethical considerations were maintained throughout the process of data collection.

For the analysis of data, the statistical package for social sciences (SPSS) software was used. Descriptive statistics such as frequency, percentage, mean and standard deviation were employed to assess the level of environmental awareness, sustainable consumption and green behaviour among student teachers. Independent t-test was used to examine differences with respect to selected demographic variables. Pearson's correlation analysis was applied to analyze the relationship among environmental awareness, sustainable consumption and green behaviour. Multiple linear regression analysis was further employed to examine the predictive effect of environmental awareness and sustainable consumption on green behaviour among student teachers.

7. Discussion of the study:

The present study attempted to examine the level of environmental awareness, sustainable consumption and green behaviour among student teachers. The study also investigated the differences in these variables with respect to gender and locality, as well as the relationship and predictive effect among the variables. The discussion of the findings is presented objective-wise and hypothesis-wise.

7.1 Level of environmental awareness, sustainable consumption and green behaviour among student teachers:

Variable	N	Mean(M)	Standard Deviation(SD)	Level
Environmental Awareness	163	0.99	0.04	High
Sustainable Consumption	163	4.06	0.31	High
Green behaviour	163	3.98	0.38	High

Table: 7.1: Level of environmental awareness, sustainable consumption and green behaviour among student teachers

The study indicated that student teachers possessed a high level of environmental awareness, sustainable consumption and green behaviour. The mean score of environmental awareness was found to be 0.99 with a standard deviation of 0.04, indicating that the respondents had adequate environmental knowledge and awareness regarding environmental issues. Since the environmental awareness tool was based on MCQ items, the findings suggest the most of the respondents answered the items correctly and demonstrated satisfactory environmental understanding.

Similarly, the results revealed a high level of sustainable consumption among student teachers with a mean score of 0.31.The findings indicate that the respondents were conscious regarding responsible consumption and sustainable utilization of resources.

Further, the findings also showed a high level of green behaviour among student teachers with a mean score of 3.98 and standard deviation of 0.38.The respondents demonstrated environmentally friendly pra

ctices and responsible behaviour in their daily life.

The findings imply that student teachers are becoming increasingly aware of environmental-sustainability and are adopting eco-friendly behavioural practices. Environmental education, social awareness and exposure to sustainability-related information may have contributed to such positive behavioural tendencies.

7.2 Difference in environmental awareness, sustainable consumption and green behaviour with respect to gender

Variable	Gender	N	Mean(M)	SD	t-value	p-value
Environmental awareness	Male	27	0.94	0.089	-3.238	.003*
	Female	136	1.00	0.000		
Sustainable Consumption	Male	27	4.10	0.349	0.688	.492
	Female	136	4.06	0.305		
Green behaviour	Male	27	4.13	0.322	2.220	.028*
	Female	136	3.95	0.391		

Table 7.2: Difference in environmental awareness, sustainable consumption and green behaviour with respect to gender

The null hypothesis H_{01} stating that there is no significant difference in environmental awareness among student teachers with respect to gender was rejected. The findings revealed a significant difference in environmetal awareness between male and female student teachers ($t=^{-}3.238, p=.003$).Female student teachers demonstrated comparatively higher environmental awareness than male respondents. The result indicates that gender influences environmental awareness among student teachers.

The null hypothesis H_{02} stating that there is no significant difference in sustainable consumption among student teachers with respect to gender was accepted. The findings showed no significant difference in sustainable consumption between male and female student teachers (t=0.688.p=.492).This suggests that both male and female respondents possessed similar sustainable consumption practices.

The null hypothesis H_{03} stating that there is no significance difference in green behaviour among student teachers with respect to gender was rejected. The findings indicated a significant difference in green behaviour between male and female respondents (t=2.220,p=.028).Male student teachers showed slightly higher green behaviour compared to female respondents.

The findings suggest that gender plays an important role in influencing environmental awareness and green behaviour, whereas sustainable consumption practices appear to be similar irrespective of gender.

7.3 Difference in environmental awareness, sustainable consumption and green behaviour with respect to locality

Variable	Locality	N	Mean(M)	SD	t-value	p-value
Environmental awareness	Urban	43	1.00	0.000	2.868	.005*
	Semi Urban	120	0.98	0.047		
Sustainable Consumption	Urban	43	3.94	0.300	⁻2.913	.004*
	Semi urban	120	4.10	0.306		

Green behaviour	Urban	43	3.81	0.330	⁻3.414	<.001*
	Semi urban	120	4.04	0.387		

Table: 7.3: Difference in environmental awareness, sustainable consumption and green behaviour with respect to locality

The null hypothesis H_{04} stating that there is no significant difference in environmental awareness among student teachers with respect to locality was rejected. The findings revealed a significant difference in environmental awareness between urban and semi-urban student teachers (t=2.868, p=.005).Urban respondents showed comparatively higher environmental awareness.

The null hypothesis H_{05} stating that there is no significant difference in sustainable consumption among student teachers with respect to locality was rejected. A significant difference was observed in sustainable consumption practices between urban and semi-urban respondents (t=⁻2.913,p=.004).Semi-urban student teachers demonstrated comparatively better sustainable consumption practices.

Similarly, the null hypothesis H_{06} stating that there is no significant difference in green behaviour among student teachers with respect to locality was rejected. The findings indicated a significant difference in green behaviour between urban and semi-urban respondents (t=⁻3.414, p<.001).Semi-urban student teachers showed comparatively higher green behaviour.

The findings indicate that locality significantly influences environmental awareness, sustainable consumption and green behaviour among student teachers. Variations in lifestyle, environmental exposure and resource utilization practices may contribute to these differences.

7.4 Relationship among environmental awareness, sustainable consumption and green behaviour:

Variable	Environmental Awareness	Sustainable Consumption	Green Behaviour
Environmental Awareness	1	.106	⁻0.003
Sustainable Consumption	.106	1	.717**
Green Behaviour	⁻0.003	.717**	1

Table 7.4: Correlation among environmental awareness, sustainable consumption and green behaviour

The null hypothesis H_{07} stating that there is no significant relationship between environmental awareness and sustainable consumption among student teachers was accepted. The findings revealed a low positive relationship between environmental awareness and sustainable consumption (r=0.106), which was not statistically significant.

Similarly, the null hypothesis H_{08} stating that there is no significant relationship between environmental awareness and green behaviour among student teachers was accepted. The findings indicated a negligible negative relationship between environmental awareness and green behaviour (r=-0.003), showing no meaningful association between the variables.

However, the null hypothesis H_{09} stating that there is no significant relationship between sustainable consumption and green behaviour among student teachers was rejected. The findings revealed a strong positive and significant relationship between sustainable consumption and green behaviour(r=0.717,

p<0.01).This indicates that respondents who practice sustainable consumption are more likely to demonstrate environmentally responsible behaviour.
The findings suggest that sustainable consumption is closely associated with green behaviour, where environmental awareness alone may not necessary lead to environmentally responsible actions.

7.5 Predictive Effect of environmental awareness and sustainable consumption on green behaviour

R	R Square	Adjusted R Square	F	p-value
0.720	0.518	0.512	85.895	<0.001*

Table 7.5: Model summary for predicting green behaviour

The null hypothesis H_{10} stating that environmental awareness and sustainable consumption do not significantly predict green behaviour among student teachers was partially rejected. The regression analysis revealed that the overall regression model was statistically significant (F=85.895,p<.001).The value of R^2 was found to be 0.518,indicating that 51.8% of the variance in green behaviour was explained jointly by environmental awareness and sustainable consumption.

Predictor	B	Beta(β)	t	p-value
Environmental awareness	⁻0.602	⁻0.064	⁻1.172	.243
Sustainable Consumption	0.889	0.720	13.099	<.001*

Table 7.6: Regression analysis of environmental awareness and sustainable consumption on green behaviour

Further analysis revealed that sustainable consumption significantly predicted green behaviour among student teachers (β=0.720, t=13.099, p<.001).Therefore, sustainable consumption emerged as a strong predictor of green behaviour.
However, environmental awareness did not significantly predict green behaviour (β=-0.064,t=-1.172,p=.243).This finding suggests that environmental knowledge alone may not always translate into environmentally responsible practices unless accompanied by sustainable lifestyle habits and behavioural engagement.

7.7. To suggest suitable educational measures for enhancing environmental awareness and sustainable consumption in order to promote green behaviour among student teachers.

1. Integration of Environmental Education into curriculum:
Environmental education shouldn't stand alone. It needs to weave through various subjects in teacher education programs. This approach helps student teachers link environmental ideas to real-life situations, making learning more relevant and practical. When environmental themes pop up in science, social studies and pedagogy courses, it fosters a broader understanding of sustainability challenges as well as this integration keeps environmental values consistent and strengthens them. It can inspire lasting changes in behaviour. Integrating environmental education right into the curriculum seems pretty key to

raising kids who care about the planet. It's not just about lessons, though; it's about showing them how to live more sustainably too. (Tilbury, 1995; UNESCO, 2017).

2. Emphasis on Sustainable Consumption Practices:

Sustainable consumption education should be a core component of teacher training programs, as it directly influences individuals' daily behaviour and lifestyle choices. Student teachers need to be trained in practical aspects such as reducing resource use, minimizing waste, conserving energy and making environmentally friendly purchasing decisions. By incorporating case studies, real-life examples and reflective activities, educators can help student teachers understand the environmental impact of their consumption patterns. Studies indicate that sustainable consumption education significantly enhances pro-environmental behaviour and encourages individuals to adopt responsible consumption habits (UNEP, 2015).

3. Promotion of Experiential and Activity-based Learning:

Experiential learning approaches, such as project-based learning, field visits, eco-clubs, and community engagement activities, play a crucial role in translating environmental knowledge into action. These methods provide hands-on experiences that allow student teachers to actively participate in environmental conservation efforts. For example, involvement in recycling projects, tree plantation drives and awareness campaigns can strengthen their commitment to sustainable practices. According to experiential learning theory, individuals learn more effectively through direct experience and reflection, which leads to deeper understanding and behavioural change (Kolb, 1984; Stevenson, 2007).Therefore, incorporating such approaches in teacher education can significantly promote green behaviour.

4. Strengthening Teacher Training in Sustainability:

Teacher education institutions must prioritize the development of environmental literacy and sustainability competencies among student teachers. Both pre-service and in-service training programs should include modules on environmental issues, sustainable development goals and green pedagogical practices. Well-trained teachers can act as role models and change agents, influencing students and communities towards environmentally responsible behaviour. Furthermore, continuous professional development programs can help teachers stay updated with current environmental challenges and innovative teaching strategies. Research highlights that effective teacher training is critical for the successful implementation of environmental education and for fostering sustainable behaviour among learners. (Darling-Hammond et al., 2017; UNESCO, 2014).

5. Bridging the Awareness-Behaviour Gap:

One of the major challenges in environmental education is the gap between awareness and actual behaviour. While individuals may possess adequate knowledge about environmental issues, this does not always translate into environmentally responsible actions. Therefore, educational interventions should focus on behavioural change strategies, such as developing positive attitudes, fostering environmental values and encouraging habitual sustainable practices. Techniques such as goal-setting, self-monitoring and social influence can be used to promote behavioural change. Research indicates that awareness alone is insufficient and a combination of knowledge, motivation and contextual factors is required to influence behavioural effectively (Kollmuss & Agyeman, 2002; Bamberg&Moser2007).Addressing this gap is essential for promoting sustainable lifestyles among student teachers.

CONCLUSION:

The present study was conducted to examine the level of environmental awareness, sustainable consum-

ption and green behaviour among student teachers. The study also investigated the differences in these variables with respect to gender and locality, the relationship among the variables and the predictive effect of environmental awareness and sustainable consumption on green behaviour.

The findings of the study revealed that student teachers possessed a high level of environmental awareness, sustainable consumption and green behaviour. The respondents demonstrated adequate knowledge regarding environmental issues and also showed positive sustainable and eco-friendly practices in their daily life. This indicates that student teachers are becoming increasingly conscious about environmental sustainability and responsible behaviour.

The study further revealed significant differences in environmental awareness and green behaviour with respect to gender. Female student teachers demonstrated higher environmental awareness, whereas male respondents showed comparatively higher green behaviour. However, no significant difference was observed in sustainable consumption with respect to gender. The findings indicate that gender influences certain aspects of environmental attitude and behaviour among student teachers.

With respect to locality, significant differences were observed in environmental awareness, sustainable consumption and green behaviour. Urban student teachers demonstrated higher environmental awareness, while semi-urban respondents showed better sustainable consumption practices and green behaviour. The findings suggest that locality plays an important role in shaping environmental understanding and environmentally responsible practices.

The correlation analysis revealed that environmental awareness had no significant relationship with sustainable consumption and green behaviour. However, sustainable consumption showed a strong positive relationship with green behaviour. This finding indicates that environmentally responsible consumption practices are closely associated with green behavioural practices among student teachers.

Further, the regression analysis revealed that sustainable consumption significantly predicted green behaviour among student teachers, whereas environmental awareness did not significantly predict green behaviour. The findings suggest that awareness alone may not necessarily lead to environmentally responsible actions unless it is accompanied by sustainable practices and behavioural engagement.

Overall, the study concluded that sustainable consumption plays a vital role in promoting green behaviour among student teachers. Therefore, teacher education institutions should emphasize practical environmental education, sustainable lifestyle practices and behavioural engagement activities in order to develop environmentally responsible future teachers. The integration of environmental education and sustainability-related practices into teacher education programmes can help in fostering environmentally conscious attitudes and green behaviour among student teachers.

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