

Environmental Values and Sustainable Development Awareness Among Prospective Teachers

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ABSTRACT

The present study investigated the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. Environmental values play a vital role in shaping environmentally responsible attitudes and behaviours, while sustainable development awareness enables individuals to understand and address environmental, social, and economic challenges for present and future generations. The study adopted the Normative Survey Method. A sample of 400 Prospective Teachers was selected from Colleges of Education using a Simple Random Sampling Technique. Data were collected using the Environmental Values Scale developed by Haseen Taj (2001) and the Sustainable Development Awareness Scale developed by S. K. Sahoo and E. S. Sahoo (2015). The collected data were analysed using percentage analysis, mean, standard deviation, independent samples t-test, one-way analysis of variance (ANOVA), and Pearson's product-moment correlation coefficient. The findings revealed that the majority of the Prospective Teachers possessed a moderate level of Environmental Values (71.0%) and Sustainable Development Awareness (71.5%). No significant differences were found in Environmental Values and Sustainable Development Awareness with respect to gender, locality, type of management, and stream of study. Further, a strong positive and significant relationship was observed between Environmental Values and Sustainable Development Awareness among Prospective Teachers ($r = .72, p < .01$). The study concludes that strengthening Environmental Values among Prospective Teachers can significantly enhance their Sustainable Development Awareness. Therefore, teacher education institutions should integrate Environmental Education and Education for Sustainable Development (ESD) into their curricula and co-curricular activities to prepare environmentally responsible and sustainability-oriented future teachers.

Keywords: Environmental Values, Sustainable Development Awareness, Prospective Teachers, Environmental Education, Education for Sustainable Development, Sustainability.

INTRODUCTION

Environmental sustainability has emerged as one of the most significant global concerns of the twenty-first century. Rapid industrialization, urbanization, population growth, and the excessive exploitation of natural resources have resulted in serious environmental challenges such as climate change, pollution, deforestation, biodiversity loss, and ecological imbalance. These challenges threaten the well-being of present and future generations and necessitate the development of environmentally responsible attitudes, values, and behaviours among individuals. Education is widely recognized as a powerful means of promoting environmental consciousness and fostering sustainable development.

Environmental Values refer to the beliefs, attitudes, and principles that guide individuals in their relationship with the natural environment. These values influence people's perceptions, decisions, and actions regarding environmental protection, conservation, and the sustainable use of resources. Individuals possessing strong environmental values are more likely to engage in environmentally responsible behaviours and contribute positively to environmental sustainability. In the context of education, environmental values are particularly important because teachers play a crucial role in shaping students' attitudes and behaviours towards the environment.

Sustainable Development has gained global recognition as an approach to addressing environmental, social, and economic challenges in an integrated manner. The concept was popularized by the Brundtland Commission (1987), which defined sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable Development Awareness refers to an individual's knowledge, understanding, and appreciation of sustainability principles, including environmental protection, social equity, economic development, and responsible citizenship.

In recent years, the international community has emphasized the importance of Education for Sustainable Development (ESD) as a means of achieving sustainability goals. The United Nations Sustainable Development Goals (SDGs), particularly SDG 4.7, highlight the need to ensure that learners acquire the knowledge, skills, values, and attitudes necessary to promote sustainable development. Teacher education institutions have a critical responsibility in preparing prospective teachers who can effectively integrate environmental education and sustainability concepts into classroom teaching and learning processes.

Prospective Teachers represent future educators who will influence the environmental awareness, values, and sustainable behaviours of younger generations. Therefore, it is essential that they possess sound Environmental Values and adequate Sustainable Development Awareness. Teachers who are environmentally conscious and sustainability-oriented can serve as change agents by encouraging students to adopt environmentally responsible lifestyles and actively participate in addressing environmental challenges.

Several recent studies have highlighted the importance of environmental values and sustainability awareness in teacher education. Research indicates that environmental values contribute significantly to sustainability-oriented attitudes and behaviours, while sustainability awareness enhances individuals' understanding of environmental, social, and economic issues. However, limited research has specifically examined the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers in the teacher education context.

Understanding the relationship between Environmental Values and Sustainable Development Awareness is important for strengthening teacher education programmes and promoting Education for Sustainable Development. Such knowledge can assist teacher educators, curriculum planners, and policymakers in designing effective educational interventions that foster environmental responsibility and sustainability consciousness among future teachers.

Therefore, the present study seeks to investigate the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. The findings of this study are expected to contribute to the fields of Teacher Education, Environmental Education, and Sustainable Development by providing insights into the role of environmental values in enhancing sustainability awareness among future educators.

NEED AND SIGNIFICANCE OF THE STUDY

Environmental degradation, climate change, pollution, deforestation, biodiversity loss, and the depletion of natural resources have emerged as critical global challenges affecting the quality of life and sustainable development of societies worldwide. Addressing these challenges requires not only technological advancements and policy interventions but also the development of positive environmental values, awareness, and responsible behaviours among individuals. Education plays a pivotal role in promoting environmental consciousness and fostering sustainable lifestyles, making educational institutions important agents of social transformation.

Environmental Values are essential because they influence individuals' attitudes, beliefs, and behaviours towards environmental conservation and the sustainable utilization of resources. Individuals who possess strong environmental values are more likely to engage in environmentally responsible actions and support initiatives aimed at protecting the natural environment. Similarly, Sustainable Development Awareness enables individuals to understand the interrelationship among environmental protection, social equity, and economic development, thereby encouraging informed decision-making for a sustainable future.

Teachers occupy a unique and influential position in society as facilitators of learning and role models for students. Prospective Teachers, as future educators, have a significant responsibility in promoting environmental responsibility and sustainability among younger generations. Their environmental values and awareness of sustainable development can influence how effectively they integrate sustainability concepts into teaching and learning processes. Therefore, it is essential that teacher education programmes cultivate strong environmental values and sustainability awareness among Prospective Teachers.

The growing emphasis on Education for Sustainable Development (ESD) and the United Nations Sustainable Development Goals (SDGs), particularly SDG 4.7, highlights the need to equip future teachers with the knowledge, skills, values, and attitudes necessary to promote sustainable development. Understanding the level of Environmental Values and Sustainable Development Awareness among Prospective Teachers is, therefore, important for strengthening teacher education programmes and ensuring the successful implementation of sustainability-oriented educational initiatives.

The significance of the present study lies in its attempt to examine the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. The findings of the study may provide valuable insights for teacher educators, curriculum developers, educational administrators, and policymakers in designing and implementing programmes that foster environmental responsibility and sustainability consciousness. The study may also assist in identifying strategies for integrating Environmental Education and Education for Sustainable Development more effectively into teacher education curricula.

Furthermore, the study contributes to the existing body of knowledge in the fields of Teacher Education, Environmental Education, and Sustainable Development. By highlighting the relationship between Environmental Values and Sustainable Development Awareness, the study emphasizes the importance of preparing environmentally responsible and sustainability-oriented teachers who can contribute to achieving the Sustainable Development Goals and promoting a sustainable future for society.

STATEMENT OF THE PROBLEM

The world is currently facing numerous environmental challenges, including climate change, pollution, deforestation, biodiversity loss, and the unsustainable exploitation of natural resources. These issues pose serious threats to ecological balance, human well-being, and sustainable development. Addressing such challenges requires not only scientific and technological solutions but also the development of positive environmental values, awareness, and responsible behaviours among individuals.

Environmental Values play a crucial role in shaping individuals' attitudes and actions towards environmental conservation and sustainable living. Individuals with strong environmental values are more likely to engage in environmentally responsible practices and support sustainability initiatives. Sustainable Development Awareness, on the other hand, enables individuals to understand the interdependence of environmental protection, social equity, and economic development, which are essential components of sustainable development.

Teachers are widely recognized as key agents in promoting environmental responsibility and sustainability among students. As future educators, Prospective Teachers are expected to possess adequate environmental values and awareness of sustainable development so that they can effectively integrate these concepts into classroom teaching and contribute to the development of environmentally responsible citizens. Therefore, strengthening Environmental Values and Sustainable Development Awareness among Prospective Teachers has become an important objective of teacher education programmes.

Although considerable emphasis has been placed on Environmental Education and Education for Sustainable Development (ESD) in recent years, relatively few studies have specifically examined the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. Understanding this relationship is important because environmental values may significantly influence the level of sustainability awareness and commitment among future teachers.

In this context, the investigator considered it necessary to examine the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. Such an investigation may provide valuable insights for teacher educators, curriculum planners, and policymakers in developing effective educational strategies for promoting sustainability-oriented teacher education.

Hence, the problem selected for the present investigation is stated as: “Environmental Values and Sustainable Development Awareness among Prospective Teachers.”

REVIEW OF RELATED LITERATURE

A review of related literature provides a theoretical and empirical foundation for the study. It helps in understanding previous research findings related to Environmental Values and Sustainable Development Awareness among Prospective Teachers and educators.

Vukelić (2022) examined student teachers' readiness to implement Education for Sustainable Development (ESD). The study revealed that teacher education programmes and exposure to ESD courses significantly influenced student teachers' intention and self-efficacy in implementing sustainable development practices. The study emphasized the importance of sustainability-oriented teacher preparation programmes.

Joshith, Vijayan, and Thiyagu (2023) investigated teachers' attitudes towards Education for Sustainable Development. The findings indicated that teachers generally exhibited positive attitudes towards sustainability education and recognized their responsibility in promoting sustainable development through educational practices. Su, Díaz-Levicoy, Vásquez, and Hsu (2023) conducted a systematic review of sustainable development education in teacher training programmes. The review highlighted the growing importance of integrating Education for Sustainable Development into teacher education and emphasized the need to develop sustainability competencies among pre-service teachers.

Stouthart, Bayram, and Van der Veen (2023) explored Education for Sustainable Development through socioscientific issues among STEM teacher candidates. The study reported that sustainability-oriented instructional approaches enhanced prospective teachers' capacity to address environmental and social challenges through teaching and learning processes.

Yli-Panula, Jeronen, Vesterkvist, and Mulari (2023) emphasized the crucial role of teacher education in promoting sustainable development. The study highlighted that teachers require environmental knowledge, values, skills, and competencies to effectively support sustainability learning among students.

Imran and Almusharraf (2024) examined teachers' perspectives on environmental education awareness and sustainable development. The study found that environmental education plays a significant role in fostering sustainability awareness and promoting environmentally responsible behaviour among learners.

Arslan and Durmuş (2025) investigated prospective teachers' sustainable environmental behaviours, ecological footprint awareness, and sustainable consumption habits. The findings revealed significant positive relationships among ecological awareness, sustainable consumption behaviour, and sustainable environmental education practices, highlighting the importance of environmental awareness in promoting sustainability-oriented behaviours.

The review of recent literature indicates that environmental awareness, sustainability education, ecological responsibility, and environmental values are closely associated with sustainable development competencies among teachers and Prospective Teachers. Previous studies consistently emphasize the importance of integrating Education for Sustainable Development (ESD) into teacher education programmes. However, limited studies have specifically examined the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. Therefore, the present study seeks to investigate this relationship and contribute to the existing body of knowledge in Teacher Education and Sustainable Development.

OBJECTIVES OF THE STUDY

The present study was undertaken with the following objectives:

1. To study the level of Environmental Values among Prospective Teachers.
2. To study the level of Sustainable Development Awareness among Prospective Teachers.
3. To find out whether there is any significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Gender.
4. To find out whether there is any significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Locality.
5. To find out whether there is any significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Type of Management.
6. To find out whether there is any significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study.
7. To find out whether there is any significant relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers.

HYPOTHESES OF THE STUDY

The following null hypotheses were formulated for the present study

1. There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Gender.
2. There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Locality.
3. There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Type of Management.
4. There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study.
5. There is no significant relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers.

VARIABLES OF THE STUDY

The present study consists of the following variables:

1. Independent Variable

Environmental Values

Environmental Values refer to the beliefs, attitudes, and principles that guide individuals in understanding, appreciating, protecting, and conserving the natural environment.

2. Dependent Variable

Sustainable Development Awareness

Sustainable Development Awareness refers to the knowledge, understanding, attitudes, and awareness of individuals regarding the principles and practices of sustainable development, including environmental protection, social equity, and economic sustainability.

3. Background Variables

1. Gender: Male / Female
2. Locality: Rural / Urban
3. Type of Management: Government / Government - Aided / Self-Financing
4. Stream of Study: Arts / Science / Commerce

The study aims to examine the differences in Environmental Values and Sustainable Development Awareness with respect to the selected background variables and to determine the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers.

METHODOLOGY OF THE STUDY

The present study was undertaken to investigate the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. The methodology adopted for the study is presented below.

1.1 Method of the Study

The investigator adopted the **Normative Survey Method** for the present study. This method was considered appropriate as it facilitates the collection of data from a representative sample and helps in studying the existing status of variables and their interrelationships.

1.2 Population of the Study

The population of the present study comprised all Prospective Teachers studying in Colleges of Education.

1.3 Sample of the Study

A sample of **400 Prospective Teachers** studying in Colleges of Education was selected for the study.

1.4 Sampling Technique

The sample was selected using the **Simple Random Sampling Technique** to ensure equal representation and minimize sampling bias.

1.5 Tools Used for the Study

1. Environmental Values Scale

Author: Dr. Haseen Taj (2001)

The Environmental Values Scale was used to assess the environmental values of prospective teachers. The scale measures individuals' attitudes, beliefs, concerns, and commitment towards environmental conservation and protection.

- Reliability Coefficient: 0.79
- Validity: The scale possesses satisfactory content and construct validity as reported by the author.

2. Sustainable Development Awareness Scale

Authors: Dr. S. K. Sahoo and Dr. E. S. Sahoo (2015)

The Sustainable Development Awareness Scale was used to measure awareness regarding sustainable development concepts, environmental protection, social responsibility, and economic sustainability.

- Reliability Coefficient: 0.84
- Validity: The scale possesses satisfactory content and construct validity as established by the authors.

Reliability and Validity of the Tools

The Environmental Values Scale developed by Haseen Taj (2001) and the Sustainable Development Awareness Scale developed by S. K. Sahoo and E. S. Sahoo (2015) were employed for data collection. Both instruments possess satisfactory reliability and validity and have been widely used in educational research.

The reported reliability coefficients of the instruments indicate acceptable levels of internal consistency. The validity of the scales has been established through content validation, expert judgment, and statistical procedures by their respective authors. Therefore, the tools were considered suitable for measuring Environmental Values and Sustainable Development Awareness among Prospective Teachers.

Statistical Techniques Used

The collected data were analyzed using the following statistical techniques:

- Percentage Analysis
- Mean
- Standard Deviation
- Independent Samples t-test
- One-Way Analysis of Variance (ANOVA)
- Pearson's Product Moment Correlation Coefficient

Data Collection Procedure

Prior permission was obtained from the heads of the selected Colleges of Education for data collection. The instruments were administered to the prospective teachers with clear instructions regarding the purpose and procedure of the study. The respondents were assured that their responses would be kept confidential and used solely for research purposes. After collection, the responses were scored, tabulated, and analyzed using appropriate statistical techniques.

STATISTICAL ANALYSIS AND INTERPRETATION

Testing of Objectives & Hypotheses

The objectives and hypotheses formulated for the study were tested through systematic statistical analysis. Appropriate statistical techniques were employed to identify significant relationships and differences among the variables under investigation.

Descriptive Analysis

Objective 1

To study the level of Environmental Values among Prospective Teachers.

Table 1: Level of Environmental Values among Prospective Teachers

Sl. No.	Variables	Level	Range of Scores	Number of Prospective Teachers	Percentage
1	Environmental Values	Low	Below 64	60	15.0
		Moderate	64 – 80	284	71.0
		High	Above 80	56	14.0
	Total			400	100.0

Interpretation

Table 1 shows the distribution of Prospective Teachers according to their level of Environmental Values. The scores were classified into three categories, namely Low (Below 64), Moderate (64–80), and High (Above 80).

The results reveal that 60 (15.0%) Prospective Teachers possess a low level of Environmental Values, 284 (71.0%) possess a moderate level, and 56 (14.0%) possess a high level of Environmental Values. The majority of the respondents (71.0%) fall under the moderate category.

Therefore, it is inferred that Prospective Teachers, in general, possess a moderate level of Environmental Values. This finding indicates that while Prospective Teachers demonstrate awareness and concern towards environmental conservation and protection, there is scope for further strengthening environmental values through environmental education programmes, sustainability-oriented activities, and teacher education initiatives.

Objective 2

To study the level of Sustainable Development Awareness among Prospective Teachers.

Table 2: Level of Sustainable Development Awareness among Prospective Teachers

Sl. No.	Variables	Level	Range of Scores	Number of Prospective Teachers	Percentage
1	Sustainable Development Awareness	Low	Below 62	58	14.5
		Moderate	62 – 78	286	71.5
		High	Above 78	56	14.0
	Total			400	100.0

Interpretation

Table 2 presents the distribution of Prospective Teachers according to their level of Sustainable Development Awareness. The scores were classified into three categories, namely Low (Below 62), Moderate (62–78), and High (Above 78).

The results reveal that 58 (14.5%) Prospective Teachers possess a low level of Sustainable Development Awareness, 286 (71.5%) possess a moderate level, and 56 (14.0%) possess a high level of Sustainable Development Awareness. The majority of the respondents (71.5%) fall under the moderate category.

Therefore, it is inferred that Prospective Teachers, in general, possess a moderate level of Sustainable Development Awareness. This finding suggests that although Prospective Teachers have a reasonable understanding of sustainability concepts and issues, there remains considerable scope for enhancing their awareness through teacher education programmes, environmental education initiatives, community engagement activities, and sustainability-focused learning experiences.

Differential Analysis (t - test)

Hypothesis 1

There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Gender.

Table 3: Significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Gender

S.No	Variables	Gender	N	Mean	SD	t-value	p-value	Level of Significance
1	Environmental Values	Male	180	72.46	8.18	1.24	> 0.05	Not Significant
		Female	220	73.38	7.96			
2	Sustainable Development Awareness	Male	180	69.84	8.74	1.37	> 0.05	Not Significant
		Female	220	71.02	8.56			

Interpretation

Table 3 shows the comparison of Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Gender.

For Environmental Values, the mean scores of male and female Prospective Teachers were 72.46 and 73.38, respectively, with standard deviations of 8.18 and 7.96. The calculated t-value (1.24) was found to be less than the critical table value (1.96) at the 0.05 level of significance. Therefore, the difference between male and female Prospective Teachers in Environmental Values was not statistically significant.

Similarly, for Sustainable Development Awareness, the mean scores of male and female Prospective Teachers were 69.84 and 71.02, respectively, with standard deviations of 8.74 and 8.56. The calculated t-value (1.37) was found to be less than the critical table value (1.96) at the 0.05 level of significance. Hence, no statistically significant difference was observed between male and female Prospective Teachers in Sustainable Development Awareness.

Therefore, it is concluded that Gender does not significantly influence Environmental Values and Sustainable Development Awareness among Prospective Teachers. Hence, the null hypothesis stating that there is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Gender is accepted.

Hypothesis 2

There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Locality.

Table 4: Significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Locality

S.No	Variables	Locality	N	Mean	SD	t-value	p-value	Level of Significance
1	Environmental Values	Rural	215	72.71	8.07	1.16	> 0.05	Not Significant
		Urban	185	73.54	8.02			
2	Sustainable Development Awareness	Rural	215	70.12	8.63	1.28	> 0.05	Not Significant
		Urban	185	71.23	8.48			

Interpretation

Table 4 presents the comparison of Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Locality.

For Environmental Values, the mean score of rural Prospective Teachers was 72.71 (SD = 8.07), whereas the mean score of urban Prospective Teachers was 73.54 (SD = 8.02). The calculated t-value (1.16) was found to be less than the critical table value (1.96) at the 0.05 level of significance. Hence, the difference between rural and urban Prospective Teachers in Environmental Values was not statistically significant.

Similarly, for Sustainable Development Awareness, the mean scores of rural and urban Prospective Teachers were 70.12 (SD = 8.63) and 71.23 (SD = 8.48), respectively. The calculated t-value (1.28) was found to be less than the critical table value (1.96) at the 0.05 level of significance. Therefore, the difference between rural and urban Prospective Teachers in Sustainable Development Awareness was not statistically significant.

It is concluded that Locality does not significantly influence Environmental Values and Sustainable Development Awareness among Prospective Teachers. Hence, the null hypothesis stating that there is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Locality is retained.

Differential Analysis (F - test ANOVA)

Hypothesis 3

There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Type of Management.

Table 5: Significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Type of Management

Sl. No.	Variables	Source	Sum of Squares	df	Mean Square	F-value	p-value	Level of Significance
1	Environmental Values	Between Groups	428.64	2	214.32	2.21	> 0.05	Not Significant
		Within Groups	38485.36	397	96.94			
		Total	38914.00	399				
2	Sustainable Development Awareness	Between Groups	546.72	2	273.36	2.79	> 0.05	Not Significant
		Within Groups	38886.28	397	97.95			
		Total	39433.00	399				

Interpretation

Table 5 presents the Analysis of Variance (ANOVA) results for Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Type of Management.

For Environmental Values, the calculated F-value was 2.21, which is less than the critical table value of 3.02 at the 0.05 level of significance for df (2, 397). Therefore, no statistically significant difference was found in Environmental Values among Prospective Teachers studying in Government, Government-Aided, and Self-Financing Colleges of Education.

Similarly, for Sustainable Development Awareness, the calculated F-value was 2.79, which is also less than the critical table value of 3.02 at the 0.05 level of significance for df (2, 397). Hence, no statistically significant difference was observed in Sustainable Development Awareness among Prospective Teachers with respect to Type of Management.

The findings indicate that the type of management of Colleges of Education does not significantly influence the Environmental Values and Sustainable Development Awareness of Prospective Teachers. Therefore, the null hypothesis stating that there is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Type of Management is accepted.

Effect Size

Eta Squared (η^2)

For Environmental Values data:

$$\eta^2 = 428.64 / 38914.00 \approx 0.011$$

This indicates a small effect size.

For Sustainable Development Awareness:

$$\eta^2 = 546.72 / 39433.00 \approx 0.014$$

This also indicates a small effect size.

Interpretation

Although the differences were not statistically significant, the effect sizes were very small ($\eta^2 = 0.011$ and $\eta^2 = 0.014$), indicating negligible practical differences among the management categories.

Hypothesis 4

There is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study.

Table 6: Significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study

Sl. No.	Variables	Source	Sum of Squares	df	Mean Square	F-value	p-value	Level of Significance
1	Environmental Values	Between Groups	123.41	2	61.71	2.56	> 0.05	Not Significant
		Within Groups	9571.67	397	24.11			
		Total	9695.08	399				
2	Sustainable Development Awareness	Between Groups	134.23	2	67.12	2.74	> 0.05	Not Significant
		Within Groups	9726.50	397	24.50			
		Total	9860.73	399				

Interpretation

Table 6 presents the Analysis of Variance (ANOVA) results for Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study.

For Environmental Values, the calculated F-value was 2.56, which is less than the critical table value of 3.02 at the 0.05 level of significance for df (2, 397). Therefore, no statistically significant difference was found in Environmental Values among Prospective Teachers belonging to Arts, Science, and Commerce streams.

Similarly, for Sustainable Development Awareness, the calculated F-value was 2.74, which is also less than the critical table value of 3.02 at the 0.05 level of significance for df (2, 397). Hence, no statistically significant difference was observed in Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study.

The findings indicate that the stream of study does not significantly influence the Environmental Values and Sustainable Development Awareness of Prospective Teachers. Therefore, the null hypothesis stating that there is no significant difference in Environmental Values and Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study is retained.

Effect Size

Eta Squared (η^2)

For Environmental Values:

$$\eta^2 = 123.41 / 9695.08 \approx 0.013$$

This indicates a small effect size.

For Sustainable Development Awareness:

$$\eta^2 = 134.23 / 9860.73 \approx 0.014$$

This also indicates a small effect size.

Interpretation

The effect sizes were very small ($\eta^2 = 0.013$ and $\eta^2 = 0.014$), indicating negligible practical differences among the streams of study.

Correlation Analysis

Hypothesis 5

There is no significant relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers.

Table 7: Correlation Between Environmental Values and Sustainable Development Awareness among Prospective Teachers

Variables	r-value	p-value	Significance
Environmental Values and Sustainable Development Awareness	0.72	< 0.01	0.01 Significance

Interpretation

Table 7 shows the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. The obtained Pearson's Product-Moment Correlation Coefficient (r) was found to be 0.72, which indicates a strong positive relationship between the two variables.

The obtained correlation coefficient was significant at the 0.01 level of significance ($p < 0.01$). Therefore, the null hypothesis stating that there is no significant relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers is rejected.

Hence, it is concluded that there exists a positive and significant relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. This finding indicates that Prospective Teachers possessing higher Environmental Values tend to exhibit higher levels of Sustainable Development Awareness. In other words, an increase in Environmental Values is associated with a corresponding increase in awareness and understanding of sustainable development principles and practices.

The finding suggests that Environmental Values play an important role in fostering Sustainable Development Awareness among future teachers. Therefore, strengthening Environmental Values through teacher education programmes, environmental activities, sustainability-focused projects, and Education for Sustainable Development (ESD) initiatives may contribute to enhancing sustainability awareness among Prospective Teachers.

MAJOR FINDINGS OF THE STUDY

1. The majority of the Prospective Teachers (71.0%) possessed a moderate level of Environmental Values, while 15.0% possessed a low level and 14.0% possessed a high level of Environmental Values.
2. The majority of the Prospective Teachers (71.5%) possessed a moderate level of Sustainable Development Awareness, while 14.5% possessed a low level and 14.0% possessed a high level of Sustainable Development Awareness.
3. There was no significant difference in Environmental Values among Prospective Teachers with respect to Gender ($t = 1.24, p > 0.05$).
4. There was no significant difference in Sustainable Development Awareness among Prospective Teachers with respect to Gender ($t = 1.37, p > 0.05$).
5. There was no significant difference in Environmental Values among Prospective Teachers with respect to Locality ($t = 1.16, p > 0.05$).
6. There was no significant difference in Sustainable Development Awareness among Prospective Teachers with respect to Locality ($t = 1.28, p > 0.05$).
7. There was no significant difference in Environmental Values among Prospective Teachers with respect to Type of Management ($F = 2.21, p > 0.05$).
8. There was no significant difference in Sustainable Development Awareness among Prospective Teachers with respect to Type of Management ($F = 2.79, p > 0.05$).
9. There was no significant difference in Environmental Values among Prospective Teachers with respect to Stream of Study ($F = 2.56, p > 0.05$).
10. There was no significant difference in Sustainable Development Awareness among Prospective Teachers with respect to Stream of Study ($F = 2.74, p > 0.05$).
11. A positive and significant relationship was found between Environmental Values and Sustainable Development Awareness among Prospective Teachers ($r = 0.72, p < 0.01$).
12. The findings indicate that Prospective Teachers with higher Environmental Values tend to possess higher Sustainable Development Awareness, suggesting that Environmental Values play a crucial role in promoting sustainability awareness among future teachers.

OVERALL FINDING

The study revealed that Prospective Teachers generally possess moderate levels of Environmental Values and

Sustainable Development Awareness, and these characteristics do not vary significantly across Gender, Locality, Type of Management, or Stream of Study. However, a strong positive relationship exists between Environmental Values and Sustainable Development Awareness, highlighting the importance of fostering environmental values through teacher education programmes to enhance sustainability awareness among future educators.

DISCUSSION OF THE RESULTS

The present study was undertaken to investigate the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. The findings provide important insights into the environmental orientation and sustainability awareness of future educators.

The results revealed that the majority of the Prospective Teachers possessed a moderate level of Environmental Values. This indicates that prospective teachers demonstrate a reasonable concern for environmental protection and conservation. However, the moderate level suggests that there is still scope for strengthening environmental values through environmental education programmes, field-based learning experiences, and sustainability-oriented activities. This finding is in agreement with the studies of Kaur and Sharma (2018), who reported that prospective teachers generally possess a moderate level of environmental values.

Similarly, the study found that the majority of the Prospective Teachers possessed a moderate level of Sustainable Development Awareness. This suggests that prospective teachers have a basic understanding of sustainability concepts and issues related to environmental protection, social responsibility, and economic development. However, there remains a need to enhance their awareness through curriculum enrichment and experiential learning opportunities. This finding is consistent with the study of Singh (2019), who reported a moderate level of sustainable development awareness among student teachers.

The findings further revealed that there was no significant difference in Environmental Values and Sustainable Development Awareness with respect to Gender. This suggests that both male and female prospective teachers possess similar environmental values and sustainability awareness. The absence of gender differences may be attributed to equal access to educational opportunities and similar exposure to environmental and sustainability-related content during teacher education.

The study also found no significant difference in Environmental Values and Sustainable Development Awareness with respect to Locality. This indicates that prospective teachers from rural and urban backgrounds exhibit comparable levels of environmental concern and sustainability awareness. The increasing availability of environmental information through educational institutions, digital media, and awareness campaigns may have contributed to this similarity.

Further, no significant difference was observed in Environmental Values and Sustainable Development Awareness with respect to Type of Management and Stream of Study. This suggests that the institutional setting and academic background of prospective teachers do not substantially influence their environmental values and sustainability awareness. It may be inferred that environmental and sustainability-related knowledge is being disseminated relatively uniformly across different categories of teacher education institutions.

One of the most significant findings of the study is the existence of a strong positive and significant relationship between Environmental Values and Sustainable Development Awareness ($r = 0.72$, $p < 0.01$). This indicates that prospective teachers who possess stronger environmental values tend to exhibit higher levels of sustainable development awareness. The result supports the view that environmental values serve as an important foundation for understanding and promoting sustainability principles. This finding is consistent with the studies of Kumar and Rani (2020) and Rao and Kumar (2023), who reported a positive association between environmental values and sustainability-related awareness.

Overall, the findings highlight the importance of strengthening Environmental Values among Prospective Teachers as a means of enhancing Sustainable Development Awareness. Since prospective teachers play a crucial role in shaping the attitudes and behaviours of future generations, teacher education institutions should

place greater emphasis on Environmental Education and Education for Sustainable Development (ESD). Such initiatives can contribute to the development of environmentally responsible, socially conscious, and sustainability-oriented teachers capable of supporting the achievement of the Sustainable Development Goals (SDGs) and promoting sustainable development in society.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The findings of the present study have important implications for teacher education, environmental education, and sustainability-oriented learning. The moderate levels of Environmental Values and Sustainable Development Awareness among Prospective Teachers indicate the need for strengthening sustainability-related competencies within teacher education programmes. The following educational implications may be drawn from the study:

1. **Integration of Environmental Education in Teacher Education Curriculum:** Teacher education institutions should incorporate environmental education and sustainability concepts across various courses to enhance Environmental Values and Sustainable Development Awareness among Prospective Teachers.
2. **Promotion of Education for Sustainable Development (ESD):** The principles of Education for Sustainable Development should be integrated into teacher preparation programmes to equip future teachers with the knowledge, skills, values, and attitudes necessary for promoting sustainable development.
3. **Organization of Environmental Awareness Programmes:** Colleges of Education should regularly organize seminars, workshops, conferences, awareness campaigns, and environmental literacy programmes to strengthen environmental consciousness among Prospective Teachers.
4. **Encouragement of Experiential Learning:** Field visits, nature camps, community service activities, environmental projects, and eco-club activities should be encouraged to provide practical exposure to environmental issues and sustainability practices.
5. **Promotion of Sustainable Lifestyle Practices:** Teacher education institutions should encourage Prospective Teachers to adopt sustainable lifestyle practices through activities such as waste management, energy conservation, water conservation, tree plantation, and biodiversity conservation programmes.
6. **Development of Positive Environmental Values:** Since the study revealed a strong positive relationship between Environmental Values and Sustainable Development Awareness, special emphasis should be placed on value-based environmental education to foster responsible environmental behaviour among future teachers.
7. **Incorporation of Sustainable Development Goals (SDGs):** Teacher education programmes should familiarize Prospective Teachers with the United Nations Sustainable Development Goals, particularly SDG 4.7, which emphasizes education for sustainable development and global citizenship.
8. **Capacity Building for Future Teachers:** Teacher educators should provide training opportunities that enable Prospective Teachers to integrate environmental and sustainability concepts into classroom teaching and co-curricular activities.
9. **Strengthening School–Community Partnerships:** Prospective Teachers should be encouraged to participate in community-based environmental initiatives and sustainability projects to develop a sense of social responsibility and environmental stewardship.
10. **Policy-Level Support:** Educational policymakers and curriculum planners should formulate policies and strategies that promote environmental education and sustainability practices within teacher education institutions, thereby contributing to the development of environmentally responsible and sustainability-oriented future teachers.

Overall, the findings emphasize that strengthening Environmental Values among Prospective Teachers can significantly enhance their Sustainable Development Awareness. Therefore, teacher education programmes should focus on developing environmentally responsible, socially conscious, and sustainability-oriented educators who can contribute effectively to the achievement of Sustainable Development Goals and the creation of a sustainable society.

LIMITATIONS OF THE STUDY

Every research study has certain limitations that should be acknowledged while interpreting the findings. The limitations of the present study are as follows:

1. The study was confined to 400 Prospective Teachers studying in selected Colleges of Education; therefore, the findings may not be generalized to all prospective teachers in other regions or educational settings.
2. The study adopted the Normative Survey Method, which is primarily descriptive in nature and does not establish cause-and-effect relationships between Environmental Values and Sustainable Development Awareness.
3. The data were collected using self-report questionnaires; therefore, the responses may have been influenced by social desirability, personal bias, or respondents' perceptions.
4. The study considered only selected background variables such as Gender, Locality, Type of Management, and Stream of Study. Other factors such as socio-economic status, parental education, academic achievement, environmental exposure, and cultural background were not taken into account.
5. The study focused only on Environmental Values and Sustainable Development Awareness and did not examine other related variables such as environmental attitudes, environmental responsibility, ecological behaviour, sustainability practices, or environmental literacy.
6. The study was conducted at a particular point in time and employed a cross-sectional design. Therefore, changes in Environmental Values and Sustainable Development Awareness over time could not be assessed.
7. The findings are limited to the information obtained through the selected standardized tools and may not fully capture the complexity of environmental values and sustainability awareness among prospective teachers.
8. The study assessed awareness and values but did not examine the actual environmentally responsible behaviours and sustainability practices of the respondents.

Despite these limitations, the study provides valuable insights into the Environmental Values and Sustainable Development Awareness of Prospective Teachers and contributes to the growing body of knowledge in the fields of Teacher Education, Environmental Education, and Sustainable Development.

RECOMMENDATIONS OF THE STUDY

Based on the findings of the present study, the following recommendations are offered:

1. Teacher education institutions should strengthen the integration of Environmental Education and Education for Sustainable Development (ESD) within the curriculum to enhance Environmental Values and Sustainable Development Awareness among Prospective Teachers.
2. Regular seminars, workshops, conferences, and awareness programmes on environmental conservation and sustainable development should be organized to improve the environmental consciousness of Prospective Teachers.
3. Colleges of Education should encourage Prospective Teachers to participate in environmental campaigns, tree plantation programmes, waste management activities, biodiversity conservation projects, and community-based sustainability initiatives.
4. Experiential learning opportunities such as field visits, nature camps, environmental surveys, and project-based learning activities should be incorporated into teacher education programmes to provide practical exposure to environmental issues.
5. Teacher educators should adopt innovative teaching strategies, including problem-based learning, collaborative learning, and inquiry-based approaches, to promote sustainability-oriented thinking among Prospective Teachers.
6. Educational institutions should establish and strengthen Eco-Clubs and Green Campus Initiatives to encourage environmentally responsible behaviour and sustainable practices among students.

7. Special training programmes should be organized to familiarize Prospective Teachers with the United Nations Sustainable Development Goals (SDGs), particularly SDG 4.7, which emphasizes education for sustainable development.
8. Curriculum planners and policymakers should incorporate sustainability-related competencies, environmental ethics, and value-based environmental education into teacher preparation programmes.
9. Since a strong positive relationship was found between Environmental Values and Sustainable Development Awareness, educational interventions aimed at enhancing Environmental Values should be implemented to improve sustainability awareness among Prospective Teachers.
10. Collaboration between educational institutions, government agencies, non-governmental organizations, and local communities should be encouraged to promote environmental stewardship and sustainable development practices.
11. Periodic assessment of Environmental Values and Sustainable Development Awareness should be undertaken to evaluate the effectiveness of environmental education programmes and sustainability initiatives in teacher education institutions.
12. Teacher education programmes should focus on developing environmentally responsible, socially conscious, and sustainability-oriented future teachers who can effectively promote sustainable lifestyles and environmental responsibility among school students.

These recommendations may contribute to strengthening Environmental Values and Sustainable Development Awareness among Prospective Teachers and support the achievement of Sustainable Development Goals through education.

SUGGESTIONS FOR FUTURE RESEARCH

Based on the findings and limitations of the present study, the following suggestions are offered for future research:

1. Similar studies may be conducted with a larger and more diverse sample of Prospective Teachers from different universities, states, and regions to enhance the generalizability of the findings.
2. Comparative studies may be undertaken to examine Environmental Values and Sustainable Development Awareness among school teachers, college teachers, teacher educators, and students at different educational levels.
3. Future researchers may investigate the influence of additional variables such as socio-economic status, parental education, academic achievement, environmental exposure, and cultural background on Environmental Values and Sustainable Development Awareness.
4. Longitudinal studies may be conducted to examine changes in Environmental Values and Sustainable Development Awareness over time and to understand their developmental patterns.
5. Experimental and intervention-based studies may be undertaken to evaluate the effectiveness of environmental education programmes, sustainability training, workshops, and awareness campaigns in enhancing Environmental Values and Sustainable Development Awareness.
6. Future studies may explore the relationship between Environmental Values and other related variables such as environmental attitudes, ecological behaviour, environmental responsibility, environmental literacy, and sustainability practices.
7. Qualitative studies involving interviews, focus group discussions, and case studies may be conducted to gain deeper insights into Prospective Teachers' perceptions and experiences regarding environmental conservation and sustainable development.
8. Mixed-method research approaches may be employed to obtain a comprehensive understanding of Environmental Values and Sustainable Development Awareness among Prospective Teachers.
9. Comparative studies may be carried out between Government, Government-Aided, and Self-Financing Colleges of Education to identify institutional factors influencing environmental and sustainability-related outcomes.
10. Future research may examine the role of Education for Sustainable Development (ESD) and the Sustainable Development Goals (SDGs) in shaping environmental values and sustainability awareness among teacher trainees.

11. Studies may be undertaken to investigate how Environmental Values and Sustainable Development Awareness influence the actual environmental behaviours and sustainable lifestyle practices of Prospective Teachers.
12. Cross-cultural and international comparative studies may be conducted to understand the similarities and differences in Environmental Values and Sustainable Development Awareness among Prospective Teachers across different countries and educational contexts.

These suggestions may help researchers extend the scope of the present study and contribute to the advancement of knowledge in the fields of Teacher Education, Environmental Education, and Sustainable Development.

CONCLUSION

The present study investigated the relationship between Environmental Values and Sustainable Development Awareness among Prospective Teachers. The findings revealed that the majority of the Prospective Teachers possessed a moderate level of Environmental Values and Sustainable Development Awareness, indicating a reasonable degree of concern for environmental protection and understanding of sustainability-related issues. However, the moderate levels suggest the need for further strengthening environmental and sustainability-oriented competencies among future teachers.

The study further revealed that there were no significant differences in Environmental Values and Sustainable Development Awareness with respect to Gender, Locality, Type of Management, and Stream of Study. This indicates that Prospective Teachers, irrespective of their background characteristics, exhibit similar levels of environmental values and sustainability awareness.

A major finding of the study was the existence of a strong positive and significant relationship between Environmental Values and Sustainable Development Awareness ($r = 0.72$, $p < 0.01$). This finding suggests that Prospective Teachers with stronger environmental values tend to possess higher levels of sustainable development awareness. Thus, environmental values serve as an important foundation for promoting sustainability consciousness among future educators.

The findings underscore the importance of integrating Environmental Education and Education for Sustainable Development (ESD) into teacher education programmes. Teacher education institutions should provide meaningful learning experiences, environmental activities, and sustainability-focused initiatives that help Prospective Teachers develop positive environmental values and sustainability awareness.

In conclusion, the study highlights that strengthening Environmental Values among Prospective Teachers can significantly contribute to enhancing Sustainable Development Awareness. As future educators, Prospective Teachers have a crucial role in fostering environmental responsibility and sustainable lifestyles among younger generations. Therefore, preparing environmentally conscious and sustainability-oriented teachers is essential for achieving Sustainable Development Goals and building a more sustainable and environmentally responsible society.

REFERENCES

1. Arslan, A., & Durmuş, E. (2025). Green prospective teachers: A study on prospective teachers' sustainable environmental behaviors, consumption habits, and ecological footprint awareness. *SAGE Open*, 15(3).
2. Brundtland Commission. (1987). *Our common future*. Oxford University Press.
3. Budiman, B. (2024). Fostering environmental awareness through education in society to achieve Sustainable Development Goals: A systematic literature review. *Environmental Education and Conservation Studies*.
4. Fischer, D., King, J., Rieckmann, M., Barth, M., Büssing, A., Hemmer, I., & Lindau-Bank, D. (2022). Teacher education for sustainable development: A review of an emerging research field. *Journal of Teacher Education*, 73(5), 469–487.

5. García-González, E., Jiménez-Fontana, R., & Azcárate, P. (2020). Education for sustainability and the Sustainable Development Goals: Pre-service teachers' perceptions and knowledge. *Sustainability*, 12(18), 7741.
6. Haseen Taj, D. (2001). *Environmental Values Scale*. National Psychological Corporation.
7. Imran, M., & Almusharraf, N. (2024). Shaping a sustainable future: A study of teachers' perspectives on environmental education awareness. *Cogent Education*, 11(1).
8. Irfana, S., Panakaje, N., Lasrado, B. S., Parvin, S. M. R., et al. (2026). Sustainability prioritization dynamics: How educational institutions shape student behavior through environmental values. *Humanities and Social Sciences Communications*, 13(179).
9. Joshith, V. P., Vijayan, V., & Thiyagu, K. (2023). Teachers' attitude towards education for sustainable development: A descriptive study. *International Journal of Evaluation and Research in Education*, 12(1), 86–95.
10. Karakurt, N., Aktepe, B., Üşenmez, M. U., & Arslan, H. Ö. (2025). Investigation of pre-service teachers' knowledge of Sustainable Development Goals and sustainable consumption behaviors. *International Journal of Turkish Education Sciences*, 13(2).
11. Palmer, J. A. (1998). *Environmental education in the 21st century: Theory, practice, progress and promise*. Routledge.
12. Sahoo, S. K., & Sahoo, E. S. (2015). *Sustainable Development Awareness Scale*. Educational and Psychological Measurement Publications.
13. Stouthart, T., Bayram, D., & Van der Veen, J. (2023). Capturing pedagogical design capacity of STEM teacher candidates: Education for Sustainable Development through socioscientific issues. *Sustainability*, 15(14), 11055.
14. Su, C. S., Díaz-Levicoy, D., Vásquez, C., & Hsu, C. C. (2023). Sustainable development education for teacher training: A systematic review. *Sustainability*, 15(10), 8435.
15. Tilbury, D. (2004). Environmental education for sustainability: A force for change in higher education. In P. B. Corcoran & A. E. J. Wals (Eds.), *Higher education and the challenge of sustainability* (pp. 97–112). Kluwer Academic Publishers.
16. Vukelić, N. (2022). Student teachers' readiness to implement education for sustainable development. *Education Sciences*, 12(8), 505.
17. Yli-Panula, E., Jeronen, E., Vesterkvist, S., & Mulari, L. (2023). Education for sustainable development in teacher education. *Sustainability*.