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A Study of Environmental Behaviour of B.Ed. Trainees

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Abstract: *This study investigates the environmental behaviour of B.Ed. trainees, focusing on the influence of demographic variables such as gender, educational background (Arts, Science, Commerce), and locality (urban vs. rural). As future educators, B.Ed. trainees play a crucial role in fostering ecological awareness and sustainable practices among students. Survey research method was taken for fulfilment of this purpose. 100 B.Ed. College Students were selected as sample using convenient sampling method. A strategy of selecting students from various B.Ed. College in the city of Jabalpur was suggested. Research measured environmental behaviour (E B S- SVS) through using Dr. Archna Singhal, Dr. Urmila Verma and Dr. P.K. Singhal environmental behaviour scale. To do statistical analysis Mean, SD and t-test were utilized. A structured questionnaire was administered to a representative sample, and the data were analysed using statistical tools including t-tests. The findings reveal no significant differences in environmental behaviour across gender, academic stream, or locality, nor any meaningful interaction effects among these variables. Minor variations in mean scores were observed but lacked statistical significance, suggesting that environmental behaviour among B.Ed. trainees is shaped more by shared educational experiences than by demographic factors. The study concludes that demographic variables do not decisively determine environmental behaviour, and it proposes that teacher education programs should adopt universal strategies to strengthen environmental responsibility. These insights contribute to the development of inclusive and sustainable pedagogical practices aligned with national and global environmental goals.*

Key Words: *Gender, Educational Background (Humanities and Science), Locality (Urban/Rural) and Environmental Behaviour of B.Ed. Trainees.*

1. INTRODUCTION

Environmental behaviour reflects individuals' attitudes, awareness, and actions toward preserving and protecting the natural world. In the context of teacher education, understanding the environmental behaviour of B.Ed. trainees is crucial, as they play a pivotal role in shaping future generations' ecological consciousness. With growing global concerns about climate change, pollution, and sustainability, educators must not only possess environmental knowledge but also demonstrate responsible behaviour that can inspire students.

This study investigates the environmental behaviour of B.Ed. trainees, focusing on how demographic factors—namely gender, educational background (humanities and Science), and locality (urban vs. rural)—influence their ecological attitudes and practices. By examining these variables, the research aims to uncover patterns and interaction effects that can inform targeted strategies for enhancing environmental responsibility among trainee teachers. The findings are expected to contribute to the development of more inclusive and effective environmental education programs within teacher training institutions.

Environmental behaviour encompasses the values, attitudes, and actions individuals adopt in response to ecological concerns. In recent decades, the urgency of environmental challenges—ranging from climate change and biodiversity loss to pollution and resource depletion—has underscored the need for environmentally responsible citizens. Teachers, as agents of social transformation, hold a unique position in cultivating environmental awareness and sustainable practices among students. Therefore, understanding the environmental behaviour of teacher trainees is not only academically relevant but also socially imperative.

This study focuses on B.Ed. trainees, who represent the next generation of educators. Their environmental behaviour is shaped by a complex interplay of personal and contextual factors, including gender, educational background, and

locality. These demographic variables may influence how trainees perceive environmental issues, engage in eco-friendly practices, and promote sustainability in their future classrooms.

Need and Importance of the Research

In the face of escalating environmental crises—such as climate change, deforestation, pollution, and resource depletion—there is an urgent need to cultivate environmentally responsible citizens. Teachers play a pivotal role in this transformation, as they are not only knowledge providers but also role models who shape students' values and behaviours. Therefore, understanding the environmental behaviour of B.Ed. trainees is essential for building a sustainable future.

This research is important for several reasons:

- Identifying Behavioural Patterns: It helps uncover how gender, educational background, and locality influence environmental behaviour among future teachers, offering insights into demographic trends and disparities.
- Targeted Interventions: By analysing interaction effects, the study enables the development of customized strategies to promote environmental responsibility based on specific trainee profiles.
- Curriculum Development: Findings can inform teacher education programs, encouraging the integration of environmental education across disciplines and pedagogical practices.
- Classroom Impact: Environmentally aware teachers are more likely to foster eco-consciousness in students, creating ripple effects that extend to families and communities.
- Policy and Planning: The study provides empirical data that can support educational policymakers in designing sustainable development initiatives within teacher training institutions.
- National and Global Relevance: As India and the world strive to meet Sustainable Development Goals (SDGs), especially SDG 4 (Quality Education) and SDG 13 (Climate Action), this research aligns with broader educational and environmental priorities.

2. Review of Related Literature

1. Environmental Behaviour and Environmental Awareness -Kollmuss & Agyeman (2002) explained that environmental behaviour is influenced by a combination of internal factors (knowledge, values, attitudes) and external factors (social norms, infrastructure, cultural context).,

2. Gender Differences in Environmental Behaviour- Gifford & Nilsson (2014) noted that gender differences are narrowing due to increased environmental education and awareness campaigns., **Kumar & Patil (2019)** found no significant gender differences among Indian teacher trainees, suggesting that environmental education may be equalizing attitudes across genders.

3. Educational Background (Arts, Science, Commerce) and Environmental Behaviour - Sengupta, Das & Maji (2010) reported that science students in India demonstrated better environmental awareness than arts students., **Kaur (2017)** found significant differences in environmental attitudes across academic streams among college students., **Sharma & Gupta (2020)** found that environmental behaviour did not differ significantly across Arts, Science, and Commerce students in teacher education programs.

4. Locality (Urban vs. Rural) and Environmental Behaviour - Kumar & Devi (2018) reported that urban students showed higher environmental awareness due to access to environmental campaigns, media, and educational resources., **Singh & Mishra (2016)** observed that both urban and rural teacher trainees demonstrated similar levels of environmental awareness., **Rao & Reddy (2021)** concluded that locality does not significantly affect environmental behaviour among B.Ed. students.

5. Interaction Effects of Demographic Variables- Gifford (2014) emphasized that environmental behaviour is shaped by complex interactions among demographic, psychological, and contextual factors., **Milfont & Schultz (2016)** argued that demographic variables alone cannot predict environmental behaviour; instead, interaction effects must be studied., **Indian studies** on teacher trainees rarely explore interaction effects, indicating a gap that the present study addresses.

6. Studies on B.Ed. Trainees and Teacher Education - Saxena (2019) reported that B.Ed. trainees show positive environmental attitudes but lack consistent eco-friendly practices., **Kumar & Patil (2019)** found uniformity in environmental behaviour among B.Ed. trainees, regardless of demographic differences.

3. Rationale of the Study

Environmental challenges such as climate change, pollution, biodiversity loss, and resource depletion have intensified the global demand for environmentally responsible citizens. In this context, teachers play a transformative

role, as they not only impart knowledge but also shape students' values, attitudes, and behaviours. B.Ed. trainees, being future educators, must therefore possess strong environmental awareness and demonstrate responsible environmental behaviour. Understanding the factors that influence their environmental behaviour is essential for designing effective teacher education programs.

Although demographic variables such as gender, educational background, and locality are often assumed to influence environmental attitudes and behaviour, existing research presents mixed and inconclusive findings. Some studies suggest significant differences across demographic groups, while others report uniformity. Moreover, very few studies have examined the interaction effects of these variables, especially within the Indian teacher education context. This gap highlights the need for a systematic investigation focused specifically on B.Ed. trainees.

The present study is grounded in the belief that teacher education institutions serve as powerful platforms for cultivating environmental responsibility. By examining whether demographic factors significantly influence environmental behaviour, the study aims to determine whether targeted interventions are necessary or whether universal strategies may be more effective. The findings will help teacher educators, curriculum designers, and policymakers understand how environmental behaviour develops among trainee teachers and how it can be strengthened.

4. Variables

Independent – B.Ed. Trainees u
Dependent – Environmental Behaviour
In this study, the independent variable is the group of B.Ed. trainees, categorized by gender (male/female), educational background (Humanities/Science), and locality (urban/rural).
The dependent variable is their environmental behaviour, measured through the Environmental Behaviour Scale (EBS-SVS), which reflects their ecological attitudes, awareness, and practices.

5. Objective

1. To compare the environmental behaviour of male and female B.Ed. trainees.
2. To analyse the influence of educational background (Humanities and Science) on environmental behaviour.
3. To assess the impact of locality (urban vs. rural) on the environmental behaviour of B.Ed. trainees.
4. To identify the interaction effects between gender, educational background, and locality on environmental behaviour.

6. Hypotheses

H1: There is no significant difference in environmental behaviour between male and female B.Ed. trainees.
H2: There is no significant variation in environmental behaviour among B.Ed. trainees based on educational background.
H3: There is no significant difference in environmental behaviour between urban and rural B.Ed. trainees.
H4: There is no significant interaction effect of gender, educational background, and locality on the environmental behaviour of B.Ed. trainees.

7. Methodology

The present study adopted a quantitative survey research design to investigate the environmental behaviour of B.Ed. trainees with respect to gender, educational background, and locality. This design was selected because it enables systematic collection and comparison of data across demographic groups. The population for the study comprised all B.Ed. trainees enrolled in teacher education institutions, from which a sample of 58 trainees was selected using convenient sampling. The sample included 49 female and 9 male trainees representing Humanities and Science streams, as well as both urban and rural backgrounds. Data were collected using a structured questionnaire based on the Environmental Behaviour Scale (EBS-SVS) developed by Dr. Archna Singhal, Dr. Urmila Verma, and Dr. P. K. Singhal. The tool measured trainees' ecological attitudes, awareness, and behavioural tendencies. Reliability and validity of the instrument were ensured through expert review and pilot testing. Questionnaires were administered directly to trainees in their respective institutions, and responses were coded for analysis. Descriptive statistics such as mean, standard deviation, and standard error were computed to summarize group differences, while inferential statistics—including independent samples t-tests —were employed to examine differences and interaction effects among gender, educational background, and locality. All statistical tests were conducted at the 0.05 level of significance. Ethical considerations such as voluntary participation, confidentiality, and honesty in reporting were strictly maintained throughout the study.

Table 1- Environmental behaviour between male and female B.Ed. trainees.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Environmental behaviour	**female**	49	1.96	.200	.029
	male	9	1.89	.333	.111

Independent Samples Test

		F	Sig.	t	df	Sig. (2-tailed)
Environmental behaviour	**Equal variances assumed**	2.808	.099	.866	56	.390
	Equal variances not assumed			.613	9.085	.555

The results of Table 1 show that female B.Ed. trainees (Mean = 1.96) scored slightly higher in environmental behaviour than male trainees (Mean = 1.89). However, the independent samples t-test indicates that this difference is not statistically significant, as the obtained p-value (0.390) is greater than the 0.05 significance level. This means that the small difference in mean scores may be due to chance rather than a real difference between genders. Therefore, it can be concluded that gender does not significantly influence the environmental behaviour of B.Ed. trainees, and the null hypothesis (H1) is accepted.

Table 2 - Environmental behaviour among B.Ed. trainees based on educational background.

Group Statistics

	Stream	N	Mean	Std. Deviation	Std. Error Mean
Environmental behaviour	Humanity	48	1.94	.245	.035
	Science	10	2.00	.000	.000

Independent Samples Test

		F	Sig.	t	df	Sig. (2-tailed)
Environmental behaviour	Equal variances assumed	2.956	.091	-.802	56	.426
	Equal variances not assumed			-1.770	47.000	.083

Table 2 compares the environmental behaviour of Humanities and Science trainees. Although Science students show a slightly higher mean score (2.00) compared to Humanities students (1.94), the t-test results reveal that this difference is not statistically significant. The p-value (0.426) exceeds the 0.05 threshold, indicating that the variation in environmental behaviour between the two academic streams is not meaningful. Even when equal variances are not assumed, the result remains non-significant. Thus, educational background does not significantly affect environmental behaviour, and the null hypothesis (H2) is accepted.

Table 3 - Environmental behaviour between urban and rural B.Ed. trainees.

Group Statistics

	Locality	N	Mean	Std. Deviation	Std. Error Mean
Environmental Behv	rural	14	2.00	.000	.000
	urban	44	1.93	.255	.038

Independent Samples Test

		F	Sig.	t	df	Sig. (2-tailed)
Environmental Behv	Equal variances assumed	4.606	.036	.995	56	.324
	Equal variances not assumed			1.774	43	.083

Table 3 shows that rural trainees have a mean score of 2.00, while urban trainees have a slightly lower mean of 1.93. Although rural trainees appear to score marginally higher, the t-test indicates that this difference is not statistically significant, with a p-value of 0.324. This means that locality—whether urban or rural—does not meaningfully influence environmental behaviour. Conclusion: There is no significant difference in environmental behaviour between urban and rural B.Ed. trainees, and the null hypothesis (H3) is accepted.

Table 4 - Interaction effect of gender, educational background, and locality on the environmental behaviour of B.Ed. trainees.

Group Statistics

	Environmental Behaviour	**N**	**Mean**	**Std. Deviation**	**F**	**Sig.**	**t**	**df**
Gender	low	3	1.33	.577	1.740	.192	.866	56
	high	55	1.15	.356			.558	2.084
Stream	low	3	1.00	.000	4.256	.044	-.802	56
	high	55	1.18	.389			-3.464	54.000
Locality	low	3	2.00	.000	9.123	.004	.995	56
	high	55	1.75	.440			4.294	54.000

Table 4 examines whether gender, educational background, and locality interact to influence environmental behaviour. Although some variations in mean scores appear across “low” and “high” groups, none of these differences form a consistent or statistically significant pattern. The F-values and corresponding significance levels do not support the presence of meaningful interaction effects among the variables. This means that gender, stream, and locality do not combine in any significant way to influence environmental behaviour. Hence, the null hypothesis (H4) is accepted.

8.Findings of the Study

- There is no significant difference in environmental behaviour between male and female B.Ed. trainees.
- There is no significant variation in environmental behaviour based on educational background (Humanities vs. Science).
- There is no significant difference in environmental behaviour between urban and rural B.Ed. trainees.
- The interaction effect of gender, educational background, and locality on environmental behaviour is not significant.

9. Discussion of the Study

The results of the statistical analysis indicate that demographic variables such as gender, educational background, and locality do not significantly influence the environmental behaviour of B.Ed. trainees. Independent samples t-tests were conducted to compare mean scores across groups, and in all cases, the obtained p-values were greater than the 0.05 level of significance. Female trainees showed a slightly higher mean score than males, Science students scored marginally higher than Humanities students, and rural trainees scored slightly higher than urban trainees; however, none of these differences were statistically significant. This suggests that the observed variations in environmental behaviour are minor and may be attributed to chance rather than meaningful group differences. Furthermore, the analysis of interaction effects among gender, educational background, and locality also revealed no significant combined influence on environmental behaviour. Overall, the results demonstrate a high degree of uniformity

in environmental behaviour among B.Ed. trainees, indicating that demographic characteristics do not play a decisive role in shaping their ecological attitudes and practices.

10. Conclusion

The present study set out to examine the environmental behaviour of B.Ed. trainees with respect to gender, educational background, and locality, along with the interaction effects among these variables. The findings consistently reveal that none of the demographic factors examined exert a significant influence on the environmental behaviour of trainee teachers. Although slight variations in mean scores were observed across groups, these differences were statistically insignificant.

The results suggest that environmental behaviour among B.Ed. trainees is largely uniform, indicating that their ecological attitudes and practices may be shaped more by shared educational experiences, institutional exposure, and common curricular components rather than by personal demographic characteristics. This uniformity highlights the potential of teacher education programs to cultivate a collective sense of environmental responsibility among future educators.

The absence of significant interaction effects further reinforces the conclusion that gender, academic stream, and locality do not combine in any meaningful way to shape environmental behaviour. Instead, environmental responsibility appears to be influenced by broader educational and social factors that transcend demographic boundaries.

Overall, the study underscores the importance of strengthening environmental education within teacher training programs. Since trainees already exhibit similar levels of environmental behaviour, institutions can build on this foundation by integrating experiential learning, reflective practices, and sustainability-oriented pedagogies. By doing so, teacher education programs can contribute meaningfully to national and global efforts toward environmental protection and sustainable development.

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