

Research Paper

A Comparative Study of Environmental Value and Energy Conservation Behaviour among Rural and Urban Adolescents

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ABSTRACT

The current environmental condition in India is unquestionably debatable. Global warming, climate change, increasing sea temperature, and loss of biodiversity have been extensively debated in recent years and are among the most pressing concerns of sustainable development. The concern for the environment has risen markedly over the past few decades, coinciding with a significant shift in people's perceptions of nature. The present study was undertaken keeping these conditions in mind. Hence, the environmental value, and energy conservation behavior and their relations in rural and urban adolescences were systematically measured and compared. For this, purpose 100 rural adolescences and 100 urban adolescences of Bihar were purposively selected and they were administered, Environmental Schwartz's value scale (E-SVS) and Pro-environmental behavior scale. The t- Test was applied to analyze the data. The results as follows: Obtained results show that a significant differences between rural and urban on mean scores of environmental value. Obtained results show that not significant differences between rural and urban on mean scores of energy conservation behavior was obtained. The study aims in making the adolescences aware of the energy conservation behavior and save environment.

Keywords: *Environmental Value, and Energy Conservation Behavior, Rural and Urban Adolescences*

During adolescence, expectations from peers, parents, relatives, and society are all present. The teen is challenged by the demands of society, parents, friends, and recently acquired psychological understanding. A research by Keniston (1970) suggests that the years between the ages of 12 and 20 may be divided into two separate sub-periods. The first sub-period starts at 11 or 12, while the second sub-period can start at 16 or 17. These phases are referred to as adolescent and youth by many. Teenagers between the ages of 11 and 18 are the focus of our study. Many decades of research on children's environmental attitudes and behaviour have been conducted to better understand the origins and evolution of both ecological sensibility and environmental behaviour (Otto et al., 2019). The goal of this study was to evaluate children's environmental behaviour and attitudes.

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Environmental Value:

Researchers investigating values have employed a variety of theories throughout the years, the most well-known being Schwartz's value theory. Schwartz (1992), a well-known exponent, classified the ten values into four categories: "openness to change" vs "conservation," "self-transcendence," and "self-enhancement." Within these two dimensions of values, eleven motivational categories have been identified. Universality, compassion, conformity, tradition, security, power, success, hedonism, excitement, and self-direction are some of the qualities listed. Essentially, he provides two parts of the human value system and differentiates between self-transcendent and self-enhancement values. The first dimension concerns individual values, which may be divided into two categories: self-enhancement and self-transcendence. "Self-enhancement" describes values like power, achievement, and hedonism that are linked to egoistic behaviour or self-interest. Conversely, "self-transcendence" embraces ideals like compassion and universalism and involves giving oneself up for the welfare of others or the environment. Therefore, items associated with self-transcendent ideals are frequently referred to as "altruized." On the other hand, the second aspect of values encompasses both conservation and preservation as well as openness to change. The difference between a person's propensity to behave independently and their reluctance to change is reflected in the contradiction between conservation and openness to change. "Openness to change" refers to the values that allow people to follow their intellectual and emotional passions in novel ways, such self-direction and stimulation. On the other hand, "conservation" concepts support building relationships with people, groups, and traditions in order to maintain safety, flexibility, and customs. In order to understand and clarify different types of environmental behaviour, both value dimensions are highly relevant (de Groot & Steg, 2009).

As a key idea in the context of environmental behaviour, value has been extensively studied. According to some study on the relationship between values and environmental concerns, universalist and altruistic values are more important than those of power, ambition, and hedonism (Dietz, Stern, & Guagnano, 1998). Eco-friendly behaviour was favourably connected with transcendence of self and openness to change (Karp, 1996). According to earlier research, people with self-transcendent values also exhibit stronger pro-environmental beliefs, norms, and behaviours (Cameron, Brown, and Chapman, 1998; Garling et al., 2003; Kalof et al., 1999; Karp, 1996; Nordlund and Garvill, 2002; Schultz et al., 2005; Stern, 2000; Stern, Dietz, and Guagnano, 1998).

Energy Conservation Behavior:

Typically, researchers have referred to actions that support environmental conservation by different names. Lee, Jan, and Yang (2013) state that the interaction between human activity and the environment is known by a number of distinct names. Environmentally essential behaviours, ecologically responsible behaviours, environmentally concerned behaviours, and environmentally responsible behaviours are a few of these terms. However, in this study, the term "pro-environmental behaviour" refers to actions taken in response to environmental concerns in order to lessen their negative effects and promote positive environmental behaviour with regard to waste management, environmental pollution, environmental conservation, and social concern for sustainable development. Let's look at some of the definitions provided by scholars to have a better grasp of this phrase.

Kollmuss and Agyemen (2002) define "pro-environmental behaviour" as any intentional effort to lessen the detrimental effects of human activity on the built and natural

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surroundings. This entails employing non-toxic chemicals, cutting back on waste production, and consuming less energy and resources. These two researchers looked at the variables that have been demonstrated to have both positive and negative effects on environmentally conscious behaviour. The equation included demographics, external components (such institutions, economies, societies, and cultures), and internal elements (including intrinsic drive, knowledge of one's environment, values, attitudes, emotions, feeling of agency, obligations, and priorities).

Steg and Vlek (2009) define pro-environmental behaviour as behaviours that reduce environmental harm or even improve it. A methodical approach increases the efficacy of encouraging behavioural transformation. This means carefully selecting the behaviours that need to change in order to improve the quality of the environment. Investigating the factors that contribute to these behaviours and putting certain solutions into practice are also essential to bringing about the desired change. A systematic evaluation of these interventions' effects on the behaviours in issue, their antecedents, the environment's quality, and people's well-being is crucial.

According to Krajhanzl (2010), pro-environmental behaviour is defined as actions that are generally viewed as a means of preserving the environment or demonstrating respect for a healthy environment, based on knowledge of environmental science and social norms.

Rational of the study:

According to the literature assessment, the VBN model of pro-environmental behaviour is a crucial framework for identifying such behaviour and its consequences. It is crucial to research the values that Indian adolescents hold dear and how these values influence their attitudes toward energy-saving practices. Therefore, it is essential to investigate different psycho-social factors of values and teenagers' attitudes toward energy-saving behaviour. Residential area disparities also play a significant part in defining the relationship of the aforementioned variables, as geographic location is a crucial element in determining the relationship of these variables. As a result, this study also looks at how these constructs change in rural and urban areas.

Objectives of The Study:

1. To examine the residential differences in values.
2. To examine the residential differences in energy conservation behavior.

Hypotheses:

The following hypotheses were formulated to empirically validate the above objectives:

- H1: There would be a significant difference among rural and urban adolescents in values
- H2: There would be a significant difference among rural and urban adolescents in energy conservation behavior.

Sample:

Data were collected on a total of 200 adolescents from different rural and urban school of Bihar. Out of which 100 were rural adolescences and 100 urban adolescences. Further the age group of the participants was 12 to `18 years of age. The respondents of the research were selected using a purposive sampling method.

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Research Design

In the current research, a two group designs was used. When a researcher splits up all the participants into two groups (rural and urban), they are using a two-group design. The outcomes are then compared. In this research, differences in values between "rural and urban" adolescents as well as differences in energy conservation behaviors between these groups of adolescents were investigated.

Tools Used for Data Collection:

There were three tools used in this research for data collection.

- 1. Demographic Information Sheet (DIS)** - A demographic profile (age, gender, education and family type etc.) was used in the present study, along with Consent form and four scales to measure different variables.
- 2. Environmental Schwartz's value scale (E-SVS)** – E-SVS was created by De Groot and Steg (2008). The current scale had 16 values. According to Schwartz (1992), respondents ranked the significance of 16 values "as guiding principles in their lives" on a 9-point scale ranging from -1 (opposed to my ideals), 0 (not important), and 7 (very essential). Respondents were encouraged to vary their rankings and to identify just a few variables as particularly essential.
- 3. Pro-environmental behavior scale (Markle, 2013):** This scale was developed by Markle, 2013 to assess pro-environmental behavior. 7 items of this scale (conservation sub scale) has been selected for this study to assess energy conservation behavior. Out of 7 items, 6 items are required to be rated on five point scale and one item is required to be rated on 3 point scale. Reliability of the present subscale was found to be 0.74.

RESULTS & DISCUSSION

In this study, a range of statistical methods were used to examine the collected data with the aid of SPSS 24. The table displayed the analysis's findings as well as a discussion and an interpretation of the data. The data were examined and tabulated with the objectives in mind.

Hypothesis 1: There would be significant differences in Environmental value of rural and urban adolescents.

Table no. 1: Means, SDs, and SED and results of t-ratio of urban and rural groups of adolescences on values.

Variables	Group	N	Mean	SD	SED	t	P
Values	Urban	150	60.33	7.105	.861	2.053	<.05
	Rural	150	62.09	7.784			

First hypothesis of the study presuming difference in the level of values in the residential area (rural and urban) of adolescents tested with the help of mean scores computed separately for each of the two different groups (rural and urban) of adolescents and obtained results were presented in table- 1 and figure 1 of the previous chapter. From the results shows that mean values score of rural adolescents and urban adolescents were 60.33 and 62.09 respectively and their respective SDs was 7.105 and 7.784. The SEDs for the two groups was .861. The t- ratio between mean value scores of the two groups were obtained as 2.053 which was not significant at level of .001. These finding suggest that rural adolescents had significantly greater amount of values than urban adolescents. Hence, the hypothesis-1

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which states that “there would be significant differences in values of rural and urban adolescents” was accepted by the finding of the study.

According to this study, people who live in rural areas tend to behave more ethically and have a stronger sense of moral responsibility to protect the environment. These findings are particularly significant when we consider each sample's score on the Environmental Schwartz's value scale and the fact that, as several studies demonstrate, access to knowledge and educational attainment are higher in urban settings. Recall that environmental behaviour has frequently been predicted using Environmental Schwartz's value scale. Therefore, our findings support the idea that moral duty and pro-environmental behaviour are more prevalent in rural settings than in urban ones, which runs counter to what is typically implied in the literature. Therefore, the particular attitudes and behaviours are more important in villages, whilst the values are more prominent in cities. Additionally, our findings confirm that a person's area of residence has a stronger correlation with their impression of the severity of particular environmental issues than do environmental values or broad measures of concern.

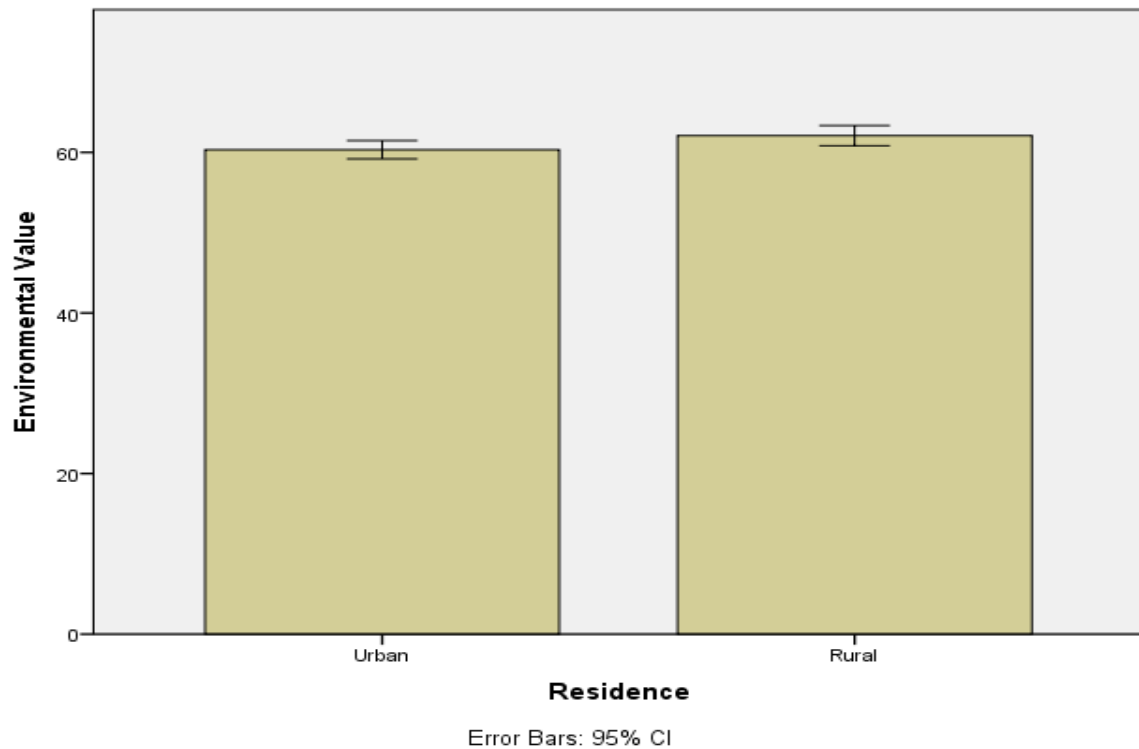


Figure 1: Graphic representation of mean value of two (urban and rural) groups of adolescences.

Hypothesis 2: There would be significant differences in energy conservation behavior of rural and urban adolescents.

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Table no. 2: Means, SDs, and SED and results of t-ratio of urban and rural groups of adolescences on energy conservation behavior.

Variables	Group	N	Mean	SD	SED	t	P
Energy conservation behaviour	Urban	150	26.04	4.135	.454	.587	>.05
	Rural	150	26.31	3.718			

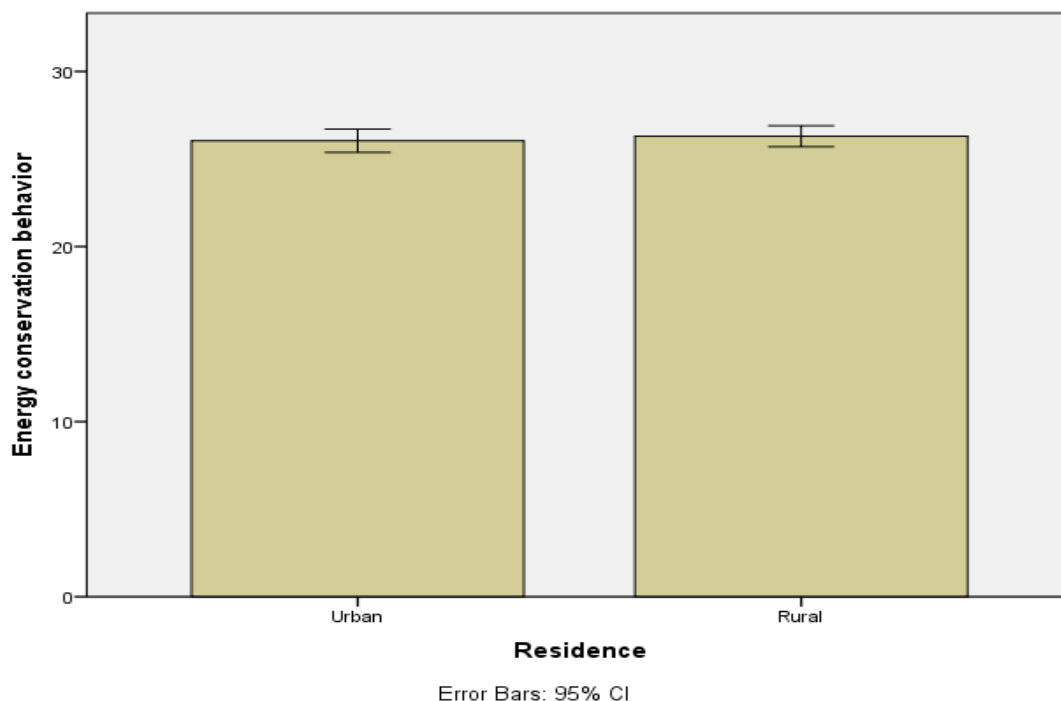


Figure 2: Graphic representation of mean energy conservation behavior of two (urban and rural) groups of adolescences.

Second hypothesis of the study presuming difference in the energy conservation behavior in the residential area (rural and urban) of adolescents tested with the help of mean scores computed separately for each of the two different groups (rural and urban) of adolescents and obtained results were presented in table- 2 & figure 2 of the previous chapter. From the results shows that mean energy conservation behavior score of rural adolescents and urban adolescents were 26.04 and 26.31 respectively their respective SDs was 4.135 and 3.718. The t- ratio between mean energy conservation behavior scores of the two groups were obtained as .587 which was not significant at level of .05. The table shows that there seems a difference between the mean energy conservation behavior score of urban and rural adolescences but these differences may be due to chance factors. These finding suggest that rural adolescents had not significantly greater amount of energy conservation behavior than urban adolescents. Hence, the hypothesis-2 which states that “there would be significant differences in energy conservation behavior of rural and urban adolescents” was not accepted by the finding of the study.

Surprisingly, both urban and rural residents have demonstrated greater readiness to save energy. This could be because they are more aware of greenhouse gases and their effects on the environment, because energy-efficient home appliances are readily available, and because urban consumers prefer to buy energy-efficient devices regardless of cost. Because

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they cannot purchase the energy-efficient gadgets, rural customers prefer to reduce their energy use.

Rural customers are more adept than urban consumers at turning off lights, TVs, and fans when no one is around. They also worry about energy costs, so they turn off the TV and set-top box at night. Additionally, they attempt to avoid using bikes and prefer to walk small distances. When it comes to energy-saving habits, urban consumers are more willing to cut back on their consumption of non-vegetarian foods, remove their mobile chargers after they are fully charged, and turn off their printers when they leave the office. In contrast, rural consumers prefer solar and biogas.

CONCLUSION

Adolescents from rural and urban areas were compared in the current study using a two-group approach. Participants in this kind of design are split into two groups, and their outcomes are then compared. The study looked at how teenagers from rural and urban areas differed in their values and energy-saving habits. The following results were obtained:

1. The t- ratio between mean value scores of the two groups were obtained as 2.053 which was not significant at level of .001. These finding suggest that rural adolescents had significantly greater amount of values than urban adolescents.
2. The t-ratio between the two groups' mean energy saving behaviour scores was .587, which was not significant at the 0.05 level. These findings imply that rural teenagers did not exhibit significantly more energy saving behaviour than urban adolescents.

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Conflict of Interest

The author(s) declared no conflict of interest.

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