

Accessing Environmental Awareness and Pro-Environmental Behaviour among School-Going Adolescents in Dehradun, Uttarakhand: An Empirical Study

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Abstract

Adolescents are the next generation, so it's important to notice how they take part in social activities, as these actions reflect a healthy path of growing up. Thus, to deal with the big environmental problems the world is facing, people need to start acting in more eco-friendly ways. When adolescents act in eco-friendly ways, they help themselves, their community, and their surroundings, and this kind of behavior boosts their happiness and connection to their place. The present research work matters because it shows how eco-friendly actions can improve teens' personal and social well-being, possibly offering long-term benefits, which highlights the need to encourage and support these behaviors. Even though among school adolescents, they know a lot about environmental issues, irrespective they often don't show much commitment towards eco-friendly actions. This study aimed to understand and assess how aware adolescents in Dehradun, Uttarakhand are about the environment and how, often they act in eco-friendly ways, as well as explore the connection between their awareness and their behavior. The results showed that most students had strong environmental awareness and often acted in eco-friendly ways. Study survey was conducted among 229 young respondents and analyzed with mean and t-test.

Keywords: *Adolescents, Environmental problems, Eco-friendly, Long-term benefits, Next generation.*

Introduction

Today, more and more governments, environmentalists, researchers, and scientists around the world are showing interest and concern about how we take care of the environment. The growing concern for the environment worldwide comes from the rising damage to nature, which puts everyone at risk, including our health. Our interaction with the environment isn't only about meeting our needs, food and resources—it's also about how adolescents' actions impact the planet. Educated people usually have a better understanding of environmental problems, which motivates them to protect nature by acting responsibly. Handayani et.al. (2024), stated that—among school adolescents care for the environment and eco-friendly habits are closely linked to how much education they have. Environmental awareness means having the understanding, values, and skills needed to live in a way that protects the planet. Being aware of environmental issues helps build a community that is, informed and ready to take responsibility for caring for the environment. Environmental awareness can make a bigger difference when put into action in everyday life. Pro-environmental behavior, also known as friendly behavior, is when a person makes conscious choices to protect nature and reduce harm to the environment. PEB means doing things that tend to help protect nature, save resources, support healthy ecosystems, encourage sustainability, reduce harm to the environment, or avoid environmental dangers. Pro-environmental behavior involves students to be actively and responsibly participating in recycling both indoors and outdoors. According to Ruwali. (2018), having the knowledge to protect and preserve the environment on Dehradun and the variety of life on earth is crucial for the health and well-being of humanity. From the recent findings, it suggested that the latest report from the intergovernmental panel on Climate Change clearly shows, how

urgently it is to act now because of the real dangers caused by climate change. Many teenagers are worried about climate change, according to a survey across ten countries, it indicated that nearly 60% of 10,000 young people aged between 16 and 25 said they were “very” or “extremely” worried and over 45% said these worries were affecting their daily lives in a negative way. School-going teenagers are now speaking up and raising their voices more and more, urging the Uttarakhand government to take stronger and clearer steps to protect the environment. Today’s adolescents are the ones who will have to deal with the harmful effects of climate change and find ways to fix them. Adolescence is a key time for action because, unlike adults, young people haven’t fully settled into fixed habits. They are naturally curious, open to learning, and willing to try new things when they see why it matters. There is a rising interest in exploring how personality traits and emotional intelligence affect eco-friendly behavior among school-going teenagers in Dehradun. Environmental and ecological problems have grown more serious over time, becoming key concerns that impact people’s well-being and limit sustainable growth. Thomas et.al. (2024), discussed that Dehradun, Uttarakhand, school students are showing growing interest in nature-based environmental education. This type of learning involves spending time in natural environment, where students connect with the environment, learn about ecosystems, and build a stronger understanding and awareness of conservation. Among school students, it was also noticed that those living in urban suburbs who often spend time in nature are more likely to oppose tree cutting and similar actions. This shows that regular contact with nature can boost environmental awareness and encourage eco-friendly behavior. Having more chances to connect with nature is thought to improve adolescents’ understanding of it, and make them value it more, which in turn increases their desire to protect it thus, encouraging pro-environmental behaviors. Additionally, it was also found that people who often spend time in nature build a deeper emotional connection with it and are more likely to take part in actions that help the environment.

Literature Review

The study titled “Environmental awareness and pro-environmental behavior amongst school going students highlighted that environmental education promotes understanding of the social, economic, political, and ecological connections we all share. Kumari & Biswas. (2023), argued that school going adolescents were able to gain knowledge, build strong values, shape positive attitudes, and develop the necessary skills to safeguard and enhance the environment. One of the most effective ways to protect our environment is by raising awareness within the school going teenagers, since they are the upcoming future leaders who will shape tomorrow. Environmental awareness is a combination of two key ideas which are: environment and awareness. The environment refers to the set of external factors and conditions that impact living organisms. Awareness, on the other hand, means being conscious or mindful of a situation or object, even if you’re not focusing on it directly or don’t have full knowledge about it. Thus, awareness involves a deeper understanding or a clear, conscious recognition of something on a personal level. The environment has always been a significant concern for the people of Dehradun and beyond. During recent years, both technological and economic advances have taken place, so people must understand just how much the environment offers us. Goswami. (2024), findings stated that humans have often overused and exploited the natural resources around them, in the pursuit of progress and development to enjoy a more comfortable and luxurious lifestyle. The relentless drive for growth and power has put both the environment and humanity at serious risk each day. The natural surroundings of places like Dehradun, Uttarakhand face threats from human actions. People of such places, especially the upcoming generations school going adolescents must understand that protecting and restoring the environment can only happen when every member of the community come together, working hand in hand to safeguard our planet. School going students in Dehradun strive to develop qualities that go beyond selfishness and greed. They can embrace habits that are eco-friendly and sustainable, learning to live in harmony with nature without harming it. According to Dhyani & Dhyani. (2016), several environmental programs have been introduced in schools of Dehradun, that help reduce and manage damage to nature. Along with these programs, there are many laws in place to ensure the protection and

preservation of our environment. Dehradun, Uttarakhand, deals with many environmental problems like air pollution caused by vehicles and dust, along with the challenges in managing plastic waste. Many groups, projects and programs are working in the area to spread awareness and encourage eco-friendly habits. Tree-planting activities are being organized in school amongst the students, awareness campaigns are also run by making sure that such environmental education must be a part of what adolescents learn in schools. Goel et.al. (2023), asserted that in many schools across Dehradun, especially those following the CBSE curriculum, environmental studies have become an important part of everyday learning. School-going adolescents can explore key issues like climate change, pollution, and the loss of forests. Through hands-on activities like group discussions, creative projects, and real-life case studies, such teenagers can gain a stronger sense of responsibility and discover how their small actions can lead to big changes for a healthier planet. CBSE schools in Dehradun actively help to motivate students to take part in quizzes, competitions, and events centered around environmental themes. These activities not only make learning fun, but also keep students informed and connected to important environmental issues. Majority of educational institutions in Dehradun regularly host tree plantation drives, where students can team-up with their teachers to plant saplings in and around the school grounds. These meaningful, hands-on experiences help students build a stronger bond with nature while understanding why planting trees matters-especially in the fight against climate change and global warming. Several well-known education institutions and CBSE schools in Dehradun have set up special "green zones" within their campuses where such teens care for gardens and look after plants as part of their everyday activities. Many schools have set-up environmental clubs that give students a chance to actively care for the planet. These clubs lead exciting activities like campus clean-up drives, eco-friendly art and craft workshops, and awareness campaigns that inspire positive change. School going students also get an opportunity to join national and international environmental projects, helping them understand global sustainability issues and see how their actions can have a world-wide impact. Sharma & Kanaujia. (2020), studied that various number of CBSE schools in Dehradun do collaborate with NGOs and environmental groups to provide students real-life exposure to today's environmental challenges and the efforts being made to solve them. Such partnerships do encourage school students to step beyond the classroom and learn directly from experts and community initiatives, by making their learning more meaningful and impactful. Everyday traffic jams and pollution from vehicles in busy areas like Dehradun are also some of the major environmental problems. Though, to help reduce such issues, many schools encourage adolescents to choose greener ways of getting to school-like carpooling with friends, riding bicycles, or taking the school bus. The above-mentioned steps not only cut down on air pollution but also teach students the value of making smart, eco-friendly choices in their daily lives. Digital tools for both teaching and communication are being used in many schools of Dehradun, to help cut down on use of paper. From using e-books and submitting assignments online to checking updates on digital notice boards, these steps are making a big difference in reducing paper waste. Institutions are also adopting smart classroom technology- not only to make lessons more interactive and fun but also to support eco-friendly learning. These tech-savvy approaches are helping students learn in smarter, greener ways. Water conservation is also one of the serious concerns, though schools in Dehradun are taking active steps to teach students how to use water wisely. Through hands-on-workshops, interactive sessions, and real-life demonstrations, students can learn practical methods like rainwater harvesting and simple ways to avoid wasting water in everyday life. Dehradun's natural beauty offers a wonderful opportunity for outdoor learning. Schools in the city take advantage of this by organizing nature walks, where students get to explore the local plants and wildlife up close. These outings do more than just teach-they spark curiosity and help students develop a genuine sense of responsibility toward protecting the environment. CBSE schools also arrange educational trips for students to nearby places like-Rajaji National Park. These visits allow students to connect and give them with a firsthand look at ecosystems and biodiversity, to understand what they learn inside four walls of room with the real world around them. Environmental education should be a life-long journey amongst adolescents, starting as early as pre-school and continuing throughout all stages of learning-both inside and outside the classroom. Kala & Chaubey.

(2024), stated that for students in Dehradun, this means that understanding and caring for the environment should be a part of every subject, not just science. Whether it's through stories, pro-environmental activities, field trips or discussions, awareness about the environment should be woven into all areas of school going students to truly make a lasting impact. Every year, millions of tourists- both from India and abroad-visit places like Rishikesh and Mussoorie in the Dehradun district for holidays, spiritual trips, or just to enjoy nature. While tourism brings energy and income to the region, it also puts a strain on the environment. For making space for hotels and other facilities, trees are often cut down, and modern comforts like air-conditioners and heaters are installed, which can harm the natural balance. This kind of human interference doesn't just affect the beauty of these places-it also leads to serious environmental problems like air, water, soil, and noise pollution. Thus, it is important for students in Dehradun to understand how even small actions can impact eco-systems, and why caring for our natural surroundings matters now more than ever. Semwal & Dani. (2022), analyzed step by step that, several hotels especially in tourist areas like Dehradun, Mussoorie and Rishikesh have started adopting eco-friendly practices to help reduce their impact on nature. Simple changes like usage of energy-efficient lighting, reducing plastic use, and saving water are becoming more common. Nowadays, tourists are beginning to care more about the environment and many people have now started to prefer staying in places that respect natural resources and follow green practices. According to Dey et.al. (2018), this shift among students of Dehradun and tourists shows how awareness and small actions can lead to big changes, even in industries like tourism and hospitality. Today's students are the future caretakers of our society and nation, so it is very important for every citizen, especially young learner in Dehradun- to take an active role towards protecting the environment. By learning about nature through environmental education, students can build the knowledge and awareness needed to create a cleaner, greener tomorrow. (Shutaleva et.al. (2021), acknowledged that eco-friendly habits can be influenced by many different things amongst school adolescents- both from within themselves, like their values and awareness, and from outside, like their school environment, family, and community activities. These combined factors help shape young people think and act when it comes to protecting the environment.

Objective

To study Environmental Awareness and Pro-Environmental Behaviour Among School-Going Adolescents.

Methodology

Study survey was conducted among 229 people from different regions. "Random sampling method" along with "T-test" were used to collect and analyse the data.

Data Analysis

In the total population of study survey males are 55.02% and females are 44.98%. 29.26% of them are 13 to 15 years of age, 36.24% are between 15 to 17 years, and 34.50% are between 17 to 19 years. Looking at the regions, 336.62% are from rural regions, 30.13% are from semi-urban regions and 36.25% are from urban region.

"Table 1 General Details"

"Variables"	"Respondents"	"Percentage"
Male	126	55.02
Female	103	44.98
Total	229	100

Age (years)		
13 to 15	67	29.26
15 to 17	83	36.24
17 to 19	79	34.50
Total	229	100
Regions		
Rural region	77	33.62
Semi-urban region	69	30.13
Urban region	83	36.25
Total	229	100

Table 2 Environmental Awareness and Pro-Environmental Behaviour Among School-Going Adolescents

“S. No.”	“Statements”	“Mean Value”	“t value”	“Sig.”
1.	Older adolescents likely to have high level of awareness due to greater exposure to environmental topics	4.21	18.633	0.000
2.	Cognitive maturity enables better understanding of complicated environmental issues	4.13	17.511	0.000
3.	Urban students may have greater exposure to formal environmental education and campaigns	4.30	20.466	0.000
4.	Rural students may engage in more sustainable practices because of traditional lifestyles, even if awareness is lower	4.00	15.426	0.000
5.	Including environment related topics in academics directly enhances knowledge	4.17	18.344	0.000
6.	Schools emphasizing project-based and experiential learning give better behavioural results	4.20	18.497	0.000
7.	Schools fostering environmental consciousness culture can positively impact individual behaviour	4.10	17.116	0.000
8.	Those with strong moral values, and empathy for nature show higher environmental commitment	3.17	2.657	0.004
9.	Involvement in school-based programs like eco-clubs, clean-up drives, and tree-plantation promotes learning	4.09	16.831	0.000
10.	Cultural beliefs about nature and spiritual connections with environment may influence behaviour	4.03	16.183	0.000

Table 2 shows the Environmental Awareness and Pro-Environmental Behaviour Among School-Going Adolescents where respondent says that older adolescents likely to have high level of awareness due to greater exposure to environmental topics (4.21), Cognitive maturity enables better understanding of complicated environmental issues (4.13), Urban students may have greater exposure to formal environmental education and campaigns (4.30), Rural students may engage in more sustainable

practices because of traditional lifestyles, even if awareness is lower (4.00), Including environment related topics in academics directly enhances knowledge (4.17), Schools emphasizing project-based and experiential learning give better behavioural results (4.20), Schools fostering environmental consciousness culture can positively impact individual behaviour (4.10), Those with strong moral values, and empathy for nature show higher environmental commitment (3.17), Involvement in school-based programs like eco-clubs, clean-up drives, and tree-plantation promotes learning (4.09), and Cultural beliefs about nature and spiritual connections with environment may influence behaviour (4.03). All statements pertaining to the Environmental Awareness and Pro-Environmental Behaviour Among School-Going Adolescents are found to be significance, with p-values below 0.05 following the application of a t-test.

Conclusion

School students in the Dehradun district of Uttarakhand show an impressive level of environmental awareness. They are not only well-informed about environmental issues but also actively take part in activities that promote sustainability and care for nature. Environmental awareness and pro-environmental behavior amongst them are very important, as today's adolescents will grow into tomorrow's leaders and decision-makers. Chaubey et.al. (2011), concludes by stating that for students in Dehradun, building such habits at an earlier age means they will be better prepared to shape a future where the environment is protected, and sustainability remains a top priority. When the young generation, like school going students, actively take part in environmental activities, it helps build a strong sense of connection and responsibility toward nature. Factors like using public transport, making small lifestyle changes amongst school teenagers, and whether such changes feel easy or challenging can all shape their willingness to adopt sustainable habits. Regular awareness campaigns and motivational activities must be organized in schools to help students better understand the impact of transportation and other environmental challenges. Efforts like- interactive sessions, eco-club events, and community clean-ups can inspire deeper understanding and encourage them to make greener, more thoughtful choices in their daily lives. All statements pertaining to the Environmental Awareness and Pro-Environmental Behaviour Among School-Going Adolescents are found to be significance, with p-values below 0.05 following the application of a t-test.

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