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DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF KNOWLEDGE, ATTITUDE AND PRACTICES RELATED TO ENVIRONMENTAL POLLUTION AMONG SCHOOL GOING ADOLESCENTS

Preventive & Social Medicine

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ABSTRACT

Background: Environmental pollution is a major public health concern affecting human health and ecological sustainability. Adolescents, being future stakeholders, play a crucial role in environmental conservation through informed attitudes and practices.**Methods:** A mixed-method, cross-sectional study will be conducted among students of Kendriya Vidyalaya, O.N.G.C., Panvel, Navi Mumbai. The study will be carried out over a period of two months. Quantitative data will be collected using a pretested structured questionnaire assessing knowledge, attitudes, and practices related to environmental pollution. Qualitative information regarding perceptions, concerns, and suggested solutions will be gathered through focused group discussions. Descriptive and inferential statistical analyses will be performed, while qualitative data will be analyzed thematically. **Conclusion:** Findings will provide evidence for designing school-based environmental health education interventions aimed at promoting sustainable environmental practices among adolescents.

KEYWORDS

Environmental Pollution, Adolescents, School Health.

INTRODUCTON

Environmental pollution can be simply, if somewhat generally, defined as the presence in the environment of an agent which is potentially damaging to either the environment or human health. About 8–9% of the total disease burden may be attributed to pollution, but considerably more in developing countries[1].

Estimates indicate that the proportion of the global burden of disease associated with environmental pollution hazards ranges from 23 % to 30 % . These estimates include infectious diseases related to drinking water, sanitation, and food hygiene; respiratory diseases related to severe indoor air pollution from biomass burning; and vectorborne diseases with a major environmental component, such as malaria. These three types of diseases each contribute approximately 6 %to the updated estimate of the global burden of disease [2]. Environment is degrading at much faster rate than our imagination. Most of these degradations are caused by human activities. Damage to environment is both at global and local level.

Decrease in ozone layer and increase in emission of greenhouse gases are the example of the damage at global level and ground water pollution , soil erosion are some examples of regional impact of human activities on environment[2]. India's commitments and obligations to environmental conservation and protection within the ambit of the targeted goals on environmental sustainability under the Sustainable Development Goals (SDGs) is manifested in the fact that several administrative and regulatory measures, including a separate statute on air and water pollution are under implementation since long.

The Air (Prevention and Control of Pollution) Act, 1981, was enacted under Art. 253 of the Constitution to implement the decisions taken at the United Nations Conference on Human Environment held at Stockholm in June 1972, in which India participated. Sustainable development, in terms of enhancement of human well- being, is an integral part of India's development philosophy[3] .

The need for environmental education and awareness becomes paramount as an essential measure to curtail the situation to a greater extent. Environmental education is a way of creating knowledge, comprehension, values, attitudes, skills, abilities and awareness among individuals and social groups towards the environment protection. The Geographical Association`s Environmental Education Working Group (1980) defines Environmental Education (EE) as a multitude of processes and activities by which an understanding of environment is developed and through which caring and committed responses are evolved. It is concern with knowledge, emotions, feelings, attitudes, and values. Its aim is to produce informed and responsible citizens capable of playing an active role in all matters concerned with the environment in which we all inhabit. Environmental education and awareness as well as induced public participation in environmental protection become paramount to attaining environmental sustainability[4].

Attitude , awareness and activities practiced among the people are the most important factors for nature protection and caring for environment. School going students are the young and energetic citizens with varied ideas[2]. There is a curious naturalist in every child. School boards have to ensure that environmental education is a significant part of the curriculum for all classes, seminars, field trips, competitions and fairs on environmental themes help the students identify their interest in nature and choose a related career[5].

This paper attempted a micro study on environmental awareness, attitude and participation amongst students of Kendriya Vidyalaya ,Panvel. The school is diverse with a large number of students from different states of India,which provide the good avenue to study and investigate the students` environmental awareness, attitudes and participation[4].

OBJECTIVES

1. To assess the level of knowledge on environmental pollution among school going adolescents
2. To assess the attitude of adolescents towards environmental pollution problems.
3. To find the level of engagement and participation in environmental pollution control prevention activities among school going adolescents.

METHODOLOGY

Study Design and Setting

A descriptive, cross-sectional study was conducted among adolescents studying in higher secondary classes at Kendriya Vidyalaya, O.N.G.C., Panvel, Navi Mumbai, Maharashtra, India. The study was carried out over a period of two months.

Study Population and Sampling

The study population comprised students from Science and Commerce streams of higher secondary classes. Universal sampling was adopted, and all eligible students present during the study period were included. The sample size was calculated taking prevalence 50% [2] & precision as 10%;

4(pq)/l2
=4(50)(50)/100
=100---180.
A total of 180 adolescents participated in the study.

Inclusion Criteria
Students studying in higher secondary classes (Science and Commerce streams) who were willing to participate in the study were included.

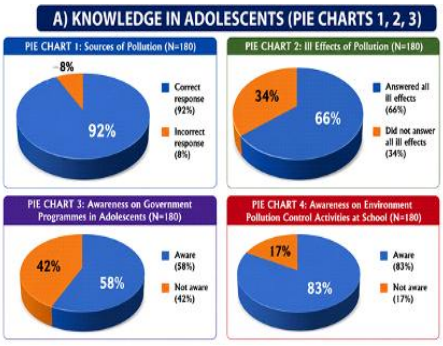
Data Collection
Prior permission was obtained from the Principal/Vice-Principal of the school. Data were collected using a predesigned and pretested questionnaire administered through Google Forms. The questionnaire included both close-ended and open-ended questions to obtain quantitative and qualitative information. The survey link was circulated among the students on a designated day.

Data Analysis
Data collected through Google Forms were exported to Microsoft Excel for cleaning and analysis. Quantitative data were analyzed using appropriate descriptive and inferential statistical methods and presented as frequencies, percentages, means, and standard deviations where applicable.

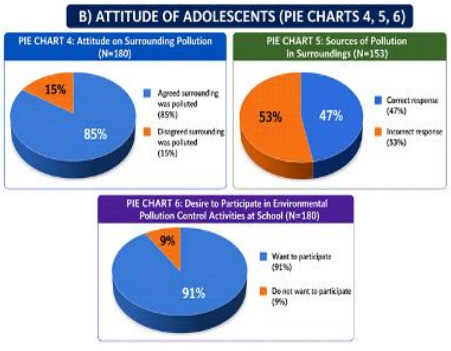
Ethical Considerations
Permission from principal/vice-principal to conduct the study in the selected school will be taken. Participation was voluntary, and confidentiality and anonymity of the respondents were maintained throughout the study.

RESULT

Out of 180 adolescent students 166(92%)had correct knowledge about sources of pollution, 119(66%)Could name all ill effects caused due to pollution &104(58%) were aware of govt programs on environmental pollution.(PIE CHARTS1,2&3)



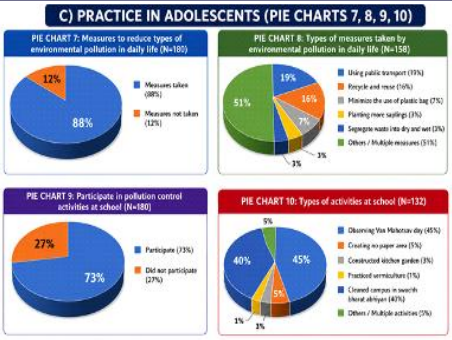
153(85%)of the adolescents felt that environment surrounding them was polluted. Out of those 153(85%) only 81(53%) could correctly enumerate source of surrounding pollution.(PIE CHARTS:5&6)



In there routine life 158(88%) took measures to reduce environmental pollution. In which 80(51%) used public transport,11(7%) recycled and reused waste,25(16%) minimized their use of plastics,4(3%)planted more saplings, 5(3%)segregated waste into dry and wet.(PIE CHARTS:8&9)

132(73%) students participated in environmental pollution control activities conducted at school. maximum involvement was seen in activities such as van Mohotsav day 60(45%) followed by cleaning the campus during swatch bharat abhiyan 53(40%).(PIE CHARTS:9&11)

150(83%) were aware about environmental pollution control activities conducted at school. 163(91%) had positive attitude and wanted to take part and 132(73%) students participated in activities conducted at school(PIE CHARTS:4,7& 10)



DISCUSSION

The present study assessed the knowledge, attitude and practices regarding environmental pollution among school-going adolescents. The findings revealed that a majority of adolescents possessed good knowledge regarding environmental pollution and exhibited a positive attitude towards environmental conservation. However, a noticeable gap was observed between knowledge and actual practices.[7]

In the present study, 92% of adolescents were aware of the sources of pollution and 66% could correctly identify its harmful effects. Similar findings were reported by Usha Shri G. et al., who observed satisfactory levels of environmental literacy among students, highlighting the increasing awareness among adolescents regarding environmental issues.[6]

The high level of awareness observed in the present study may be attributed to environmental education incorporated in the school curriculum and the influence of mass media.[8]

About 85% of participants perceived their surroundings to be polluted, although only 53% could correctly identify the major sources of pollution in their locality. This indicates that while adolescents are conscious of environmental degradation, their understanding of local environmental problems remains limited.

A positive attitude towards environmental protection was observed in 91% of students, and 83% were aware of pollution control activities conducted in schools. These findings suggest that adolescents are receptive to environmental conservation initiatives and willing to participate in activities aimed at reducing environmental pollution. Similar observations have been reported in studies emphasizing the role of environmental education in developing favourable attitudes among adolescents.[1]

Regarding practices, 88% of adolescents reported adopting measures to reduce pollution. However, only a small proportion engaged in specific activities such as recycling, waste segregation and plantation drives. Participation in school-based environmental activities was reported by 73% of students, with Van Mahotsav and Swachh Bharat Abhiyan being the most common activities. These findings emphasize that despite adequate knowledge and favourable attitudes, translation into sustained environmentally responsible practices is comparatively lower.(9)

Overall, the study demonstrates that school-going adolescents possess satisfactory knowledge and positive attitudes towards environmental pollution; however, strengthening practical environmental education and encouraging active participation through school and community-based interventions are essential to bridge the gap between knowledge and practice. Environmental awareness programmes, regular campaigns and incorporation of experiential learning activities can help develop environmentally responsible behaviour among adolescents.

LIMITATIONS

The present study had certain limitations. First, the study was conducted in a single school, which limits the generalizability of the findings to adolescents from other educational settings. Second, information was collected using a self-administered questionnaire, making the results susceptible to recall and social desirability bias. Third, owing to the cross-sectional design, causal relationships between knowledge, attitude, and practices could not be established. Finally, although a majority of students demonstrated adequate knowledge and positive attitudes, actual practices were assessed

through self-report and not by direct observation, which may have resulted in overestimation of environmentally responsible behaviours. Similar methodological limitations have been reported in studies assessing environmental awareness among adolescents and young adults.

CONCLUSION

The study revealed that school-going adolescents possessed satisfactory knowledge regarding environmental pollution and exhibited a positive attitude towards environmental conservation. However, a noticeable gap existed between awareness and actual environmentally responsible practices. Although a majority of students were aware of pollution-related issues and expressed willingness to participate in environmental protection activities, comparatively fewer adolescents adopted sustainable practices such as waste segregation, recycling, and plantation activities. These findings emphasize the need for strengthening practical and experiential environmental education to translate knowledge and favourable attitudes into sustained behavioural change. School-based interventions can play a pivotal role in developing environmentally responsible citizens and contributing to environmental sustainability.

RECOMMENDATIONS

1. Environmental education should be strengthened through activity-based and experiential learning approaches to promote sustainable behaviour among adolescents.

2. Schools should organize regular awareness programmes, eco-club activities, plantation drives, waste segregation campaigns, and participation in national initiatives such as Swachh Bharat Abhiyan and Van Mahotsav.

3. Community-based environmental activities involving parents, teachers, and local authorities should be encouraged to reinforce environmentally responsible practices among adolescents.

4. Information regarding governmental policies and programmes related to environmental protection should be incorporated into school curricula to improve awareness and participation.(10)

5. Multi-centric longitudinal studies with larger sample sizes should be undertaken to better understand the relationship between knowledge, attitudes, and practices and to evaluate the effectiveness of environmental education interventions.

Declaration: None
Conflict of interest: None

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