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ENVIRONMENTAL AWARENESS IN RELATION TO ENVIRONMENTAL ETHICS OF SECONDARY SCHOOL CHILDREN

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Abstract
This qualitative study investigates the relationship between environmental awareness and environmental ethics among secondary school children. Based on semi-structured interviews and two focus groups with 12 students between 13 to 17 years from three secondary schools, it researched students' comprehension about the environment, moral reasoning employed when making decisions concerning the environment, and the influences that mould their attitudes and behaviours.
Thematic analysis identified four major themes…
Cognitive awareness of environmental problems, affective connection with and care for nature, development of environmental ethics-duty, responsibility, and stewardship barriers to ethical action.The findings underline the fact that awareness alone does not guarantee ethical conduct, and that ethical dispositions are strengthened when awareness is combined with value-based education, family modelling, and opportunities for meaningful action. Practical implications for curriculum design and school-based interventions are discussed.
Key Words: challenges, cognitive, curriculum, development, ethics, human behaviour

INTRODUCTION

The environmental challenges of climate change, biodiversity loss, pollution, deforestation, and the rapid depletion of natural resources, among many others, have now emerged as some of the most urgent concerns in the 21st century. Such issues pose ecological threats while simultaneously facing humanity with deeply entwined social, economic, and ethical dilemmas both for the present and future generations. This places increasingly greater importance on education as nations seek to resolve these environmental crises. Schools, especially within the secondary level, bear a great responsibility in shaping environmentally conscious individuals who are capable of making informed, ethical, and sustainable choices.

Pupils in secondary schools constitute an important age group in this regard. During adolescence, students go through important stages of both cognitive and emotional development. Their critical thinking capacity increases and enables them to appreciate the complexity of environmental problems, such as the interaction between human behavior and ecological effects. At the same time, their moral judgment is maturing, so that this is a formative phase for developing environmental ethics-the values and standards that dictate how people believe humans should treat the natural world. The combination of heightened awareness, abstract thinking, and emerging ethical frameworks creates an ideal foundation for cultivating responsible environmental behaviour.

Educators need to understand how awareness builds a foundation for the development of environmental ethics in secondary school children, while curriculum designers and policymakers must take into consideration the growth in awareness. Awareness encompasses knowledge on the problems at hand, their causes, and possible solutions. However, knowledge alone often proves to be inadequate in inspiring ethical behaviour and long-term commitment to environmental protection. Environmental ethics encompass a deeper moral perspective: the realization of the intrinsic value of nature, respect for biodiversity, and concern for the rights of future generations. When awareness strengthens ethics and vice versa, students have a more active role in the practice of sustainability, the protection of the environment, and responsible decisions about their everyday lives.

Research in environmental education suggests several factors shape this relationship. The school environment, including its teachers, co-curricular activities, and exposure to environmental programmes, will play an important role. Family practices, such as recycling, gardening, or conservation-oriented behaviour at home, often serve early as models for environmental responsibility. It is also at the stage of adolescence when peer influence becomes stronger and helps or dissuades pro-environmental behaviour. Furthermore, mass media, social media platforms, and digital content expose children to environmental campaigns, global movements, and real-time ecological events, thereby shaping both awareness and ethics.

Despite growing awareness, however, a great number of adolescents cannot translate knowledge into ethical action. Lack of facilities-for example, recycling systems-limited opportunities for actual environmental engagement, peer pressure, conflicting priorities like academic stress, and feelings of helplessness in regard to global issues may hinder sustained ethical behaviour. An exploration of these barriers is central to understanding how educational systems can better support students in becoming environmentally responsible citizens.

In this light, the present study investigates the complex interplay in which environmental awareness and environmental ethics are associated with each other among secondary school children. The following research questions guide the study:

1. **How do secondary school children describe and understand environmental issues?**

This question aims at analysing the levels of knowledge in students, the sources of awareness, and the ability to recognize the local and global environmental problems.

2. **How do they express environmental ethics or moral reasoning related to nature?**

This goes on to explain how students justify environmental actions, their sense of responsibility, and the moral principles they relate to care for the environment.

3. **What factors (family, school, peers, media) shape the relationship between awareness and ethics?**

It seeks to identify influences that act either to strengthen or weaken the links between what students learn and how they behave.

4. **What barriers prevent awareness from translating into ethical action?**

Understanding these barriers is very crucial to the design of educational interventions that can bridge the gap between knowledge and practice.

Braun and Clarke (2006) published a seminal methodological article in introducing thematic analysis as an approach to analyzing qualitative data that is both flexible and independent of theory. The aims were to define the concept of thematic analysis clearly, outline its procedure, and debate its value for psychological research. They identified a six-phase approach that includes familiarization, coding, theme development, review, definition, and reporting. They showed just how themes capture patterned meanings across datasets. Results brought out how thematic analysis is accessible, adaptable, and appropriate across epistemological frameworks. They concluded that when carried out systematically and reflexively, thematic analysis will provide an approach that is rigorous yet flexible for the creation of meaningful qualitative insights.

Chawla and Cushing (2007) conducted a qualitative and conceptual review that focused on how environmental education promotes strategic environmental behaviour-things people do to effectively help solve environmental problems. This study aims at identifying the educational conditions and experiences that impel individuals to take continued and meaningful action concerning the environment. Based on empirical studies, case examples, and theoretical models, the authors explored influences including personal motivation, social support, and opportunities for participation. Their findings indicated that hands-on involvement, mentorship, and community-based learning indeed go a long way in fostering strategic behaviour. They concluded that environmental education must transcend beyond awareness to enable learners with skills, motivation, and supportive contexts for acting effectively.

Creswell and Poth (2018) wrote a methodological textbook synthesizing and assessing five key qualitative approaches: narrative, phenomenology, grounded theory, ethnography, and case study. This aims to assist researchers in the choice of qualitative designs by describing the philosophical underpinnings, processes, and specifications that vary among them. Using an integrative literature-based methodology, the authors discussed ways in which methods of data collection, analytic strategies, ethical issues, and validation techniques vary across the approaches. This leads the authors to indicate that there is a need for research questions, theoretical assumptions, and methodological choices to fall together. They concluded that a sound qualitative study requires reflexivity, transparency, and coherence of method to produce credible, meaningful interpretations.

METHODOLOGY

Research design

This is a small-scale qualitative study, using semi-structured interviews and focus groups in order to gauge the students' perceptions and moral reasoning. Qualitative methods have been selected as being more appropriate to access the complexity of beliefs, meanings, and contextual influences which shape ethical orientations.

Participants and sampling

A purposive sample of 12 secondary school students, comprising 6 females and 6 males aged between 13-17 years was recruited from three schools, an urban public school, a suburban community school, and a small private school. Selection aimed at securing a range of socio-economic backgrounds with varied exposures to environmental programmes. Participation was entirely voluntary, supported by informed parental consent.

Data collection

Data were collected through:

- **Semi-structured interviews** (n = 8) of approximately 25–40 minutes each;

- **Two focus groups** (n = 4 in each) lasting 45–60 minutes.

The interview and focus group guides covered knowledge of environmental issues, personal practices (recycling, transportation choices), ethical beliefs about human-nature relationships, influences (family, school, media), and perceived barriers to action. The interviews were audio-recorded and transcribed verbatim.

Ethical considerations

Participants' identities were anonymised; pseudonyms are used for illustrative quotes. Care was taken to avoid leading questions. The study complied with standard ethical practices for research with minors.

Data analysis

Analysis: The transcripts were iteratively coded with the help of a thematic analysis approach Braun & Clarke 2006. First came an open-coding process that created a code set, which then grouped into higher-level themes. Representative quotes were picked to illustrate each theme. To add a simple descriptive layer, the demographic data of participants and some frequencies that have been coded feature below (note: with small qualitative samples, these frequencies are descriptive rather than inferential).

Participant data (Tabular presentation)

Participant ID	Age	Gender	School Type	Environmental Program Experience
P1	13	F	Urban Public	None
P2	14	M	Suburban Community	School recycling club (1 year)
P3	15	F	Private	Nature camp (summer)
P4	16	M	Urban Public	None
P5	17	F	Suburban Community	Volunteer clean-ups (occasional)
P6	14	M	Private	Environmental science class (current)
P7	15	F	Urban Public	School garden participation
P8	16	M	Suburban Community	None
P9	13	F	Private	Family camping/outdoors
P10	17	M	Urban Public	Peer-led climate club
P11	15	F	Suburban Community	None
P12	16	M	Private	Environmental summer internship

Simple descriptive counts:

- Had some prior organised environmental experience: 7/12
- Reported regular recycling at home: 8/12
- Expressed a clear personal duty to act for the environment: 6/12

Findings

Theme 1 — Cognitive awareness of environmental problems

Most of the participants were able to identify a few environmental issues: pollution, litter, climate change, and deforestation. More often than not, such awareness was couched in terms of visible problems-litter, air quality-rather than the systemic causes thereof. For instance, P2 (14M) said: "I know pollution is bad — smoke from factories and too much plastic in the streets."

While facts differed, students often confused proximal issues-trash-with more general ones-climate change-and demonstrated a lack of understanding about complex cause-effect relationships, such as greenhouse gas emission → global warming → socio-ecological effects.

Theme 2 — Affective connection and empathy for nature

Several students described emotional responses to nature — delight, tranquility, and a sense of awe. Those with direct outdoor experiences (camping, garden projects) expressed stronger affective connections. P9 (13F) described hiking with family: "When I see mountains and rivers I feel like they're part of me — I don't want them hurt."

Affective connection often translated into protective instincts: students who cared emotionally were more likely to voice moral claims about protecting nature.

Theme 3 — Development of environmental ethics: duty, stewardship, and fairness

Responses showed three converging ethical framing:

• ***Duty/responsibility:*** Many participants also stated it was the duty/responsibility of people — particularly adults — to take care of the environment. P5 (17F): "We have to take care of the world for kids after us."

• ***Stewardship:*** Some understood humans as stewards or guardians with a moral responsibility. P7 (15F): "It's our job to look after the garden — if we don't, who will?"
• ***Fairness/intergenerational justice:*** Older students also sometimes articulated concerns about fairness across generations and the fair distribution of environmental harms.
However, the ethics reasoning was not consistently complex; many respondents combined instrumental reasoning-nature is helpful to humans-with intrinsic value claims.

Theme 4 — Barriers that prevent ethical action

Students identified several barriers that prevent translating awareness into sustained ethical action:

- **Practical constraints:** There is a lack of facilitation of resources-no recycling bins, poor public transport. P4 (16M): "I want to recycle but there's no place to put different bins at my apartment."
- **Social norms and peer behaviour:**Teens said peers were indifferent; engaging in solo pro-environmental activities is socially awkward.
- **Perceived inefficacy:** Some students doubted whether individual actions matter. P6 (14M): "What I do won't stop climate change — only big companies can."
- **Conflicting priorities:**Academic pressure and lack of time lessened students' ability to volunteer or participate in environmental campaigns.

DISCUSSION

This study gives credence to the notion that environmental awareness is a necessary yet not sufficient condition for ethical environmental behaviour. Cognitive understanding provides the base, while affective bonds and ethical frames-duty, stewardship, and fairness-drive moral commitments. In cases where students come into direct contact with nature or significant action camp garden projects, their affective and ethical orientations grow stronger; in contrast, structural barriers and social contexts constrain awareness to transform into action.
These findings are consistent with previous research identifying multi-dimensional drivers of pro-environmental behaviour (Kollmuss & Agyeman, 2002; Chawla & Cushing, 2007). The presence of affective connection and opportunities for agency seemed especially important in the development of ethical orientations for teenagers.

Implications for educators and policymakers

1. **Integrate values-focused environmental education:** Curricula should intentionally teach ethical reasoning-approach stewardship, intergenerational justice-not just facts.
2. **Provide meaningful action opportunities:** School gardens, community clean-ups, and service-learning projects give students age.

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