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STUDENTS' PRO-ENVIRONMENTAL ATTITUDES AND BEHAVIORS

Andreea Claudia MARDACHE[1]

Abstract: *The relationship between individuals and the environment is an increasingly studied topic, from different perspectives and methodologies, in different geographical and cultural settings. The present study investigates students' lifestyles, their attitudes and behaviors that have an impact on the environment, their level of awareness and motivations for these behaviors, and their willingness to change them, to voluntarily reduce their personal carbon footprint. To answer these questions, we conducted a survey. Although students are concerned about environmental issues, they are not aware of the impact of their lifestyle on the environment, but they are willing to adopt pro-environmental behaviors.*

Key words: *pro-environmental behavior, consumption, students.*

1. Introduction

Human activity has a significant impact on the environment, producing a wide range of both short- and long-term effects that influence not only large-scale ecological systems but also the smallest aspects of daily life. It is essential to recognize the environmental impact of our individual actions to modify behaviors that contribute to environmental degradation.

Defining pro-environmental behaviors (PEBs) is not straightforward. In academic literature, such behaviors are referred to by various terms, including ecological behaviors, responsible environmental behaviors, environmental behaviors, pro-environmental behaviors, environmentally responsible behaviors, environmentally significant behaviors, environment-friendly behaviors, and general ecological behaviors.

Moreover, this class of behaviors has been studied under different labels across multiple disciplines within the behavioral sciences: behavior analysis, environmental psychology, environmental education, organizational psychology, and consumer research (Lange & Dewitte, 2019).

According to Kurisu (2015), behaviors that either contribute to environmental conservation or are perceived to do so are typically classified as pro-environmental behaviors. Kurisu (2015) also proposes a narcontributestion of pro-environmental behaviors (PEBs), describing them as actions driven by the motivation to protect the

[1] *Transilvania* University of Braşov, andreea.mardache@unitbv.ro, corresponding author

environment and that effectively contribute to environmental conservation. This conservation can take two forms: the reduction of negative environmental impacts and the enhancement of positive ones.

PEBs include both the performance of actions that benefit the natural environment (e.g., recycling) and the avoidance of actions that cause environmental harm (Lange & Dewitte, 2019). According to Axelrod and Lehman (1993, p. 153), PEBs are defined as actions that support the preservation and/or conservation of the environment.

Environmentally significant behavior refers to actions that positively influence the availability of materials or energy, and that beneficially affect the structure and dynamics of ecosystems or the biosphere. These behaviors include efforts to prevent environmental degradation or to restore environmental health. They may be undertaken individually or collectively and can have either direct or indirect impacts on the environment (Stern, 2000, p. 408).

Many classifications of PEBs distinguish between private-sphere and public-sphere behaviors. These can also be categorized based on locations such as home, workplace/school, or outdoor space or conceptual domains, such as personal, community, or public contexts. Additionally, PEBs may be classified according to their specific environmental targets, such as waste reduction or greenhouse gas emissions mitigation.

Behavior Type in Households:

Food, clothing, and housing:

Purchase: Choosing environmentally friendly products.

Usage: Reducing energy and water consumption, minimizing waste during cooking, washing, and other domestic tasks.

Disposal: Recycling or donating goods to reduce waste.

Another dimension of categorization is **repeatability**—whether the behavior is a one-time action or a recurring practice.

Lee et al. (2014) identify three broad categories of pro-environmental behavior:

1. **Green purchases**: Buying recycled products or non-toxic substances.
2. **Good citizenship**: Reducing energy and water usage, minimizing waste production, and promoting recycling.
3. **Environmental activism**: Participation in environmental groups or initiatives.

Methods for Investigating Pro-Environmental Behavior

Pro-environmental behaviors can be studied using various research methods, each with distinct advantages and limitations.

Observation offers a degree of objectivity and can take multiple forms depending on how it is conducted. However, observational methods also have notable disadvantages. They often require significant financial resources, time and preparatory work, making them more resource-intensive compared to self-report methods (Lange & Dewitte, 2019).

Experimental methods allow for greater control over variables. In such studies, participants are exposed to controlled scenarios, and the conditions under which

behaviors occur can be systematically manipulated by the researchers. However, experiments are conducted in controlled, artificial environments, and as a result, the outcomes may differ from those observed in naturalistic research settings.

Interviews involve asking individuals to provide information about the characteristics of behaviors they perform in everyday life. Self-report data is generally inexpensive to gather and is particularly well-suited for large sample sizes. Nevertheless, the validity of self-reported measures of pro-environmental behavior is frequently questioned, particularly regarding their accuracy in capturing actual behavioral patterns (Lange & Dewitte, 2019).

2. Research Questions and Design

The present study is exploratory and descriptive in nature. Its aim is to investigate students' awareness of environmental issues, their pro-environmental behaviors (including practices, choices, and intentions), their level of environmental concern, and their willingness to engage in actions that benefit the environment, such as volunteering.

To address these questions, a survey was conducted, incorporating a selection of pro-environmental behaviors considered most representative of the student lifestyle.

The sample consisted of 278 students from the Faculty of Sociology and Communication at Transilvania University of Brașov, Romania. The sampling method was non-probabilistic and based on convenience.

The questionnaire was grounded in the operationalization of pro-environmental behavior proposed by Lee et al. (2014), which encompasses three key dimensions: green purchases, good citizenship, and environmental activism.

PEBs. Dimensions and sub-dimensions Table 1

PEBs	**Dimensions**	**Sub-dimensions**
Green purchases (the purchase of recycled goods or non-toxic substances)	Food	Purchase / Usage / Disposal
	Clothing	Purchase / Usage / Disposal
	Housing	Purchase / Usage / Disposal
Good citizenship (the minimisation of energy consumption, water conservation, along with the reduction of waste production and promotion of recycling)	The minimisation of energy consumption	
	Water conservation	
	Reduction of waste production	
	Recycling	
	Transport	
Environmental activism (environmental group membership)		

3. Results

Socio-Demographic Characteristics of the Respondents

The participants were students from Transilvania University of Brașov, Romania. Of the total sample, 87.1% identified as female and 12.9% as male. Approximately 29.5% of

the respondents reported having a job (either full-time or part-time). In terms of academic standing, 40% were in their first year of study, while 60% were in their second or third year. Additionally, 43.9% of the students reported commuting to the university.

General Environmental Concern

Nearly half of the students (48.9%) considered themselves to be environmentalists to a moderate degree, neither strongly identifying with the label nor rejecting it. A significant portion (45.3%) reported identifying as environmentalists to a great or very great extent, while only 5.7% indicated a low or very low level of identification with the term:

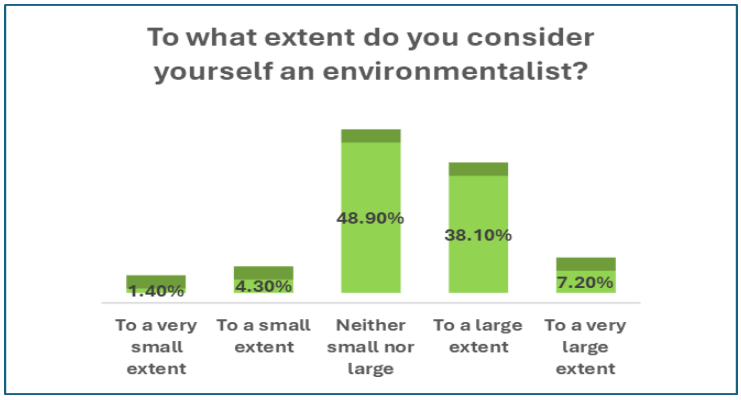

Fig. 1. *To what extent do you consider yourself an environmentalist?*

In general, students expressed a high level of concern about environmental issues: 57.5% reported being concerned to a great or very great extent, while 38.8% were moderately concerned. Only 3.5% indicated a low or very low level of concern. Moreover, a large majority of students expressed alarm over environmental problems: 88.1% viewed global environmental issues as serious or very serious, and 83.8% held the same perception regarding environmental issues in Romania:

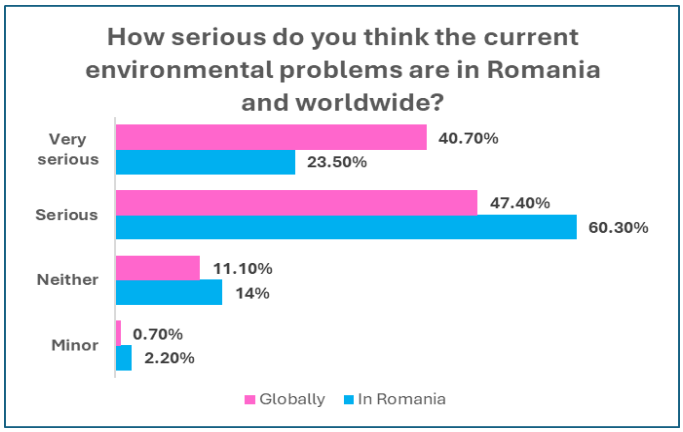

Fig.2. *How serious do you think the current environmental problems are in Romania and worldwide?*

Green purchases – Food

A notable proportion of students (41.6%) reported frequently or very frequently purchasing organic, local, and environmentally friendly food products. Conversely, 20.4% indicated doing so rarely or very rarely, while 38% fell into the moderate category.

Interestingly, a large majority (73.4%) expressed a strong or very strong desire to obtain fruits and vegetables from their own garden or orchard in the future.

While most students currently consume meat frequently or very frequently (63%), there is an observable intention to reduce meat consumption moving forward: only 41.5% expressed the desire to continue eating meat frequently or very frequently in the future.

Food Waste

According to students' self-reports, food waste does not appear to be a major issue among the sample. Almost half (48.2%) stated that they rarely or very rarely buy more food than they can consume, resulting in waste. About 27.3% reported doing so occasionally, while 24.4% acknowledged doing so frequently or very frequently.

In general, most students (75.2%) estimated that they throw away less than one-quarter of the food they purchase. This behavior was attributed both to financial concerns and to environmental awareness, with 77.6% of respondents citing one or both reasons for minimizing waste.

Green purchases – Clothing

Clothing purchases emerged as a sensitive issue among students. Many showed a preference for buying new clothes, with 41.3% stating they did so frequently or very frequently. In comparison, 24.8% reported frequently or very frequently purchasing second-hand clothing.

Among those who chose second-hand clothing, motivations varied: 58% cited both environmental concerns and the desire to save money, while 40% indicated cost savings as the sole motivation.

Green purchases – Housing

More than half of the students (55.8%) reported purchasing products that are durable, easy to repair, and environmentally friendly in both production and use. However, second-hand purchases—such as furniture, electronics, appliances, and tools—were less common, with only 34.8% making such purchases frequently or very frequently, and 46.4% doing so rarely or very rarely.

Regarding the purchase of environmentally friendly personal care and cleaning products (e.g., soap, shampoo, detergents for laundry and dishes), 43.1% of students reported buying these products frequently or very frequently, while 28.5% did so rarely or very rarely. The main barrier cited was cost: 45% of respondents indicated that such products are too expensive. Additionally, one-quarter of the respondents expressed skepticism about the effectiveness of these products in reducing pollution.

Student participation in alternative economic practices such as informal exchange systems (e.g., Free Stuff Bazaar, Beyond Money) remains low, with only 22.6% reporting involvement.

Good Citizenship. The Minimisation of Energy Consumption

Approximately half of the students (53.6%) reported owning some energy-efficient electronics and appliances, with 29.7% owning most of such devices and 16.7% only to a limited extent. Furthermore, 65.5% expressed an interest in generating their own electricity.

Good Citizenship. The Minimisation of Energy Consumption, Water Conservation

When it comes to reducing the consumption of electricity, gas, wood, and water, only 41.6% reported doing so to a large or very large extent. However, the motivation behind these efforts was often dual: both financial savings and environmental concern were cited, with 62.9% acknowledging both as key drivers.

Good Citizenship. Reduction in Waste Production

In terms of waste reduction, 44.6% of students reported making neither major nor minor efforts to avoid purchasing plastic or plastic-packaged products. Nonetheless, interest in composting was relatively high, with 64.5% expressing interest in adopting this practice.

Good Citizenship. Recycling

When it comes to recycling, 61.6% of students reported concern for recycling issues involving materials such as metal, glass, and paper. Plastic recycling was the most common, with 79.8% engaging in it frequently or very frequently. In contrast, the recycling of electronics, light bulbs, and batteries was considerably less frequent.

Good Citizenship. Transport

Generally, students expressed a desire to own personal vehicles, especially given that a significant portion of commute to university. Currently, 41.3% of students own a car, while 48.6% do not but wish to in the future. Only 10.1% stated they have no interest in car ownership. Despite this, just 39.1% expressed interest in purchasing an electric or hybrid vehicle, and 31.2% were undecided. The mode of transportation most used among students is the bus, with 63.2% reporting frequent or very frequent usage.

Environmental Activism

A substantial proportion of students (65.5%) reported that they would like to volunteer with environmental protection organizations. In contrast, 33.1% were not interested, and only 1.4% were already involved as volunteers. Regarding financial contributions, 69.8% of students stated they would probably be willing to donate money to support environmental causes, while 14.4% said they would. Meanwhile, 15.8% indicated that they probably would not donate.

PEBs scale

A scale measuring pro-environmental behaviors (PEBs) was developed using 18 items, achieving a Cronbach's alpha coefficient of 0.779, indicating acceptable internal consistency. Most students (59.2%) scored in the medium range for PEBs, 34.16% scored low, and only 6.2% achieved a high PEB score.

Reliability Statistics	
Cronbach's Alpha	N of Items
.779	18

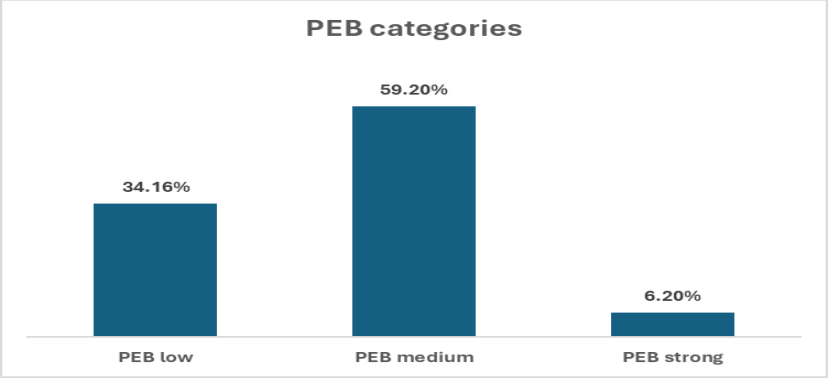

Fig. 3. *PEB categories*

4. Conclusions

Although students express concern about environmental issues, they are not fully aware of the impact their lifestyles have on the environment. However, they demonstrate a willingness to adopt pro-environmental behaviors. Students show interest in reducing pollution through practices such as recycling, minimizing food waste, conserving natural resources, and purchasing environmentally friendly products. While financial savings remain a significant motivating factor, this is closely intertwined with genuine concern for environmental protection.

Areas of vulnerability include clothing consumption and the preference for owning personal vehicles, particularly the limited inclination toward choosing electric or hybrid alternatives. Nevertheless, many students express a willingness to become involved in environmental protection organizations and even to contribute financially to addressing environmental challenges.

Continued research on pro-environmental behaviors is essential, along with the implementation of intervention programs aimed at raising awareness of environmental issues, the ecological impact of our daily lifestyles, and the potential changes everyone can make. Students represent a crucial demographic segment with significant potential to drive positive change, as they are the future's professionals and decision-makers,

…developing a more thorough understanding of what motivates pro-environmental behavior (PEB) among young people is an important area of concern that has practical applications for creating a sustainable future. Developing this kind of knowledge is crucial for creating sound educational interventions that aim to foster PEB (de Leeuw et al, 2015).

Further research steps

- Further development of the PEBs scale is recommended, alongside the use and comparison of other standardized instruments, such as the New Ecological Paradigm (NEP) Scale.
- Explanatory research is needed to investigate the underlying reasons for engaging or not engaging in pro-environmental behaviors. Such research should consider both intrapersonal factors (e.g., knowledge, perceived costs and benefits, personal norms, attitudes, habits) and contextual factors.
- Identifying and evaluating various interventions aimed at promoting pro-environmental behavior. A key question to address is: what types of strategies are most effective in encouraging sustainable behavior?

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