

Psychological Factors Affecting Young People's Environmental Responsibility: Evidence from Public University Students
(Faktor Psikologi yang Mempengaruhi Tanggungjawab Alam Sekitar Orang Muda: Bukti daripada Pelajar Universiti Awam)

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ABSTRACT

Young people are recognized for their role in achieving the Sustainable Development Goals. The main advantage these young people have is their ability to use new media, think creatively, and care for the environment. Most youth still need to learn about environmental issues and their effects, and lack of funds, support, and guidance can restrict their ability to leave a practical impact on environmental conservation. This study examines the level of pro-environmental behavior among university students in Universiti Teknologi MARA (UiTM), Malaysia. The research data was obtained quantitatively through a questionnaire. The questionnaire has been distributed to 300 respondents. This study employed a multistage random sampling technique by first clustering the sample into three branches, namely Negeri Sembilan, Shah Alam, and Puncak Alam. Second is a convenience sampling technique. Underlying the concept of dispositional attribution, this study investigated relationships between commitment, green lifestyle, environment consciousness, green self-efficacy, and pro-environmental behavior. Results found that pro-environmental behavior is at a high level. Next, findings show a significant correlation between enablers and pro-environmental behavior. Study regression results also show that environmental commitment is the most significant predictor of pro-environmental behavior. Theoretically, this study has contributed new insights to the current literature on environmental management and studies by highlighting internal and external attribution that could affect pro-environmental behavior. As an implication, the application of environmental commitment needs to be revealed in the early stage. The youth, who are also future heirs, must be exposed to green skills to increase their understanding of the importance of environmental conservation.

Keywords: environment commitment, green lifestyle, environment consciousness, green self-efficacy, pro-environmental behavior

ABSTRAK

Golongan muda diiktiraf atas peranan mereka dalam mencapai Matlamat Pembangunan Mampan. Kelebihan utama golongan muda ini ialah kebolehan mereka menggunakan media baharu, berfikir secara kreatif, dan menjaga alam sekitar. Kebanyakan belia masih perlu belajar tentang isu alam sekitar dan kesannya, dan kekurangan dana, sokongan, dan bimbingan boleh menyekat keupayaan mereka untuk meninggalkan kesan praktikal terhadap pemuliharaan alam sekitar. Kajian ini mengkaji tahap tingkah laku pro-alam sekitar dalam kalangan pelajar universiti di Universiti Teknologi MARA (UiTM), Malaysia. Data kajian diperoleh secara kuantitatif melalui soal selidik. Borang soal selidik telah diedarkan kepada 300 orang responden. Kajian ini menggunakan teknik persampelan rawak berbilang peringkat dengan mengelompokkan sampel terlebih dahulu kepada tiga cawangan iaitu Negeri Sembilan, Shah Alam, dan Puncak Alam. Kedua ialah teknik pensampelan kemudahan. Mendasari konsep atribusi disposisi, kajian ini menyiasat hubungan antara komitmen, gaya hidup hijau, kesedaran alam sekitar, efikasi sendiri hijau dan tingkah laku pro-alam sekitar. Keputusan mendapati bahawa tingkah laku pro-alam sekitar berada pada tahap yang tinggi. Seterusnya, dapatan menunjukkan korelasi yang signifikan antara pemboleh dan tingkah laku pro-alam sekitar. Keputusan regresi kajian juga menunjukkan bahawa komitmen alam sekitar adalah peramal yang paling ketara bagi tingkah laku pro-alam sekitar. Secara teorinya, kajian ini telah menyumbangkan pandangan baharu kepada literatur semasa tentang pengurusan dan kajian alam sekitar

dengan menyetujui atribusi dalaman dan luaran yang boleh menjejaskan tingkah laku pro-alam sekitar. Implikasinya, penerapan komitmen alam sekitar perlu didedahkan pada peringkat awal. Golongan belia yang juga bakal pewaris perlu didedahkan dengan kemahiran hijau bagi meningkatkan kefahaman mereka tentang kepentingan pemuliharaan alam sekitar.

Kata kunci: komitmen alam sekitar, gaya hidup hijau, kesedaran alam sekitar, efikasi sendiri hijau, tingkah laku pro-alam sekitar

INTRODUCTION

Environmental psychology analyzes social and psychological factors and how they could contribute to pro-environmental behavior. The environment and humans become one component that cannot be separated. Humans are not created in space; humans need the environment for survival. Therefore, humans, as rational beings, must carry out their obligations to be responsible for the sustainability of the environment (Rousseau & Deschacht, 2020). Maintaining the sustainability of the environment is a human duty, and preservation, supervision, and construction efforts should be the community's responsibility. Preserving the living environment's function is the community members' responsibility and role (Tjiptono et al., 2020).

Thaiger news site reported that Malaysia ranks third in the list of the top 10 countries that are the main contributors to plastic pollution in the ocean due to mismanaged waste (Fong, 2024). The list is a graphic display based on data from a research paper published in 2021 by a Dutch academic, Lourens JJ Meijer. More than 75 percent of the plastic accumulated in the oceans is reported to come from mismanaged waste in nine Asian countries. The only non-Asian country listed is Brazil. The research results emphasize the need for more action to tackle plastic pollution, including better waste management, stricter regulations, and increased public education. The top 10 list by rank is the Philippines, India, Malaysia, China, Indonesia, Myanmar, Brazil, Vietnam, Bangladesh, and Thailand in 10th place (Fong, 2024).

Rapid population growth is one of the main factors in the occurrence of environmental pollution (Chen et al., 2020). The more people there are, the more resources are used, and the more waste is produced. With the development of cities and increased human activity, the demand for food, water, and energy has increased (Shaddick et al., 2020). This causes excessive exploitation of natural resources and increases the risk of pollution. This pollution is mainly caused by greenhouse gas emissions, toxic chemicals, and improperly managed waste. Burning fossil fuels

produces air-polluting emissions, such as carbon dioxide and sulfur dioxide, contributing to climate change and air pollution (Zhao et al., 2021). In addition, oil spills and leaks from industry also damage marine ecosystems and water resources. Hazardous chemicals in industry, agriculture, and domestic use contribute to environmental pollution (Rahman & Alam, 2021).

Environmental pollution threatens biodiversity by destroying natural habitats and living species (Ukaogo et al., 2020). Failure to keep the environment clean can also significantly impact on our country's tourism sector. In addition, 50% of the rivers in Malaysia have also been polluted, and 5% are at a severe level (Ibrahim et al., 2020). To ensure our environment is safe, the public must care for and pay attention to cleanliness inside and outside their homes (Schwartz et al., 2020). Keeping the environment clean needs to be rooted in the home. Every community member needs to be highly aware of maintaining cleanliness; for example, they should not throw rubbish into drainage systems. Education is the key to success in changing the mindset of society (Geng & He, 2021). Through an effective education campaign, we can spread information about the importance of protecting the environment. Workshops, seminars, and educational programs in schools can be a practical first step. Changing lifestyle is a natural step in protecting the environment (Lee & Haley, 2022; Zeynalova & Namazova, 2022).

Awareness of environmental issues should be a priority for today's youth (Shutaleva et al., 2021). Youth have a solid connection to this phenomenon because they are the generation that will inherit the world's climate. Currently, Greta Thunberg's name is well known. Although she has been an environmental activist for several years, this teenager became increasingly popular when she loudly criticized the careless and lethargic attitude of world leaders at the UN Climate Action Summit in dealing with the issue of global climate change (Sabherwal et al., 2021). Greta proved that the younger generation could play a significant role in environmental conservation. Many other young people have been "together" with her for a long time. Their names are Louise Mobulo (Philippines), Adjany Costa (Angola), Anna Luisa

Beserra (Brazil), Marianna Muntianu (Russia), and Molly Burhans (USA). These young figures obtained the award because of their persistent efforts to deal with various environmental issues such as deforestation, protection of wild animals, empowerment of religious communities, reduction of fabric waste, and green energy. In addition, Malaysia also has young people who are determined to deal with various environmental problems. Among the names worth mentioning are Masbudi Malek (KAWA Inspiration), Liyana Yamin (Malaysian Youth Delegation), Hafizudin Nasarudin (KUASA), and many others. The determination of these young people to fight for environmental conservation proves that young age is not a barrier to change.

However, Calculli et al. (2021) stated that most youth still need to learn about environmental issues and their effects. In this country, every day, the environment suffers pollution of various forms, from air, water, and noise pollution to garbage pollution, which seems to have no end (Praveena, 2024). Even though there have been many environmental education and awareness campaigns in various forms, such as reading materials, printed media, and social media, and millions of ringgits were invested in the campaign, the noble efforts cannot solve the overall pollution problems in Malaysia. Public and youth awareness of the importance of caring for the environment still needs to be higher (Ehigiamusoe et al., 2022). Continuous education is a critical method of providing knowledge and awareness to youth. Grilli and Curtis (2021) state that expressing an individual's culture or attitude can promote a person's understanding of environmental issues. The involvement of the public, especially the students, in environment-based education is necessary. Young people are creative and innovative and can produce solutions to current environmental problems (Shutaleva et al., 2021). Their gift of "young energy" allows efforts and various plans to be implemented quickly.

Though, at such a young age, they do not have everything. Lack of funds, support, and guidance are among the causes that can restrict their ability to leave a practical impact on environmental conservation (Balundé et al., 2020). They still need help through money, advice, or guidance. Early exposure like this brings them closer to what is happening in their local environment (Shutaleva et al., 2021). Therefore, this study aimed to examine the influence of environmental commitment, green lifestyle, environment consciousness, and green self-efficacy on the pro-environmental behavior of public university students. The study will help understand the determinants of youth pro-environmental behavior. Although research

on understanding factors influencing pro-environmental behavior has grown in recent years, there has been a minimal attempt to examine the potential roles of psychological factors in the context of environmentally relevant behaviors. Human behavior is one of the main objects of psychological studies. The primary purpose of psychology is to know the pattern of human behavior, not just to generalize, but more than that, namely, to know the extent to which a person is different from others. In this case, it is pro-environmental behavior.

LITERATURE REVIEW & THEORETICAL FRAMEWORK

Underlying the concept of dispositional attribution, this study examined relationships between commitment, green lifestyle, environment consciousness, green self-efficacy, and pro-environmental behavior. Attribution theory is referred to as the leading underlying theory because it explains that the attitude and characteristics of individuals can predict a person's behavior in facing certain situations in the future. The researchers believe that internal attribution, such as willingness and motivation, is the most potent predictor compared to external influences. This concept overlaps with locus of control, where individuals feel responsible for everything that happens to them. This could explain why various policies, acts, and awareness programs being carried out cannot solve environmental issues and problems. To improve those efforts, the focus must be on understanding the environmental mindset, values, attitude, and internal dimensions.

Attribution Theory

Behavior is a product of the situation (e.g., cultural influences, social roles, and the presence of bystanders) and the person (e.g., personality characteristics). Social psychologists have tended to take the situationist perspective, whereas personality psychologists have promoted the dispositions perspective (Malle, 2022). Humans are motivated to determine the causes of their social actions and behavior in everyday life, which cannot be separated from attribution (Li et al., 2020; Weiner, 2014). In social psychology, attribution is a process where individuals explain the causes of behavior and events. The model to explain this process is called attribution theory. Psychological research on attribution began with the work of Fritz Heider in the early 20th century, and the theory was further developed by Harold Kelley and Bernard Weiner (Martinko & Mackey, 2019). An Austrian psychologist, Fritz Heider,

proposed that behavior is caused by a combination of situational attributes, such as luck, task difficulty, and time, and dispositional attributes, such as attitude and ability (Spitzberg & Manusov, 2021). Dispositional attributions refer to internal characteristics of individuals (Reeder et al., 2004).

On the other hand, the attribution of the situation is related to factors beyond the individual's control. Dispositional attribution assigns the cause of behavior to internal characteristics such as personality traits, efforts, moods, judgments, abilities, motives, or beliefs (Reeder et al., 2004). In this study, the researchers have focused on the importance of dispositional attributions in influencing students' pro-environmental behavior. For instance, consciousness is an open heart over a mind. Discipline will be easier to enforce when it arises from each person's awareness to always do according to the rules without external coercion. Based on the statement, motivation is a driver or desire that causes someone to do a particular act to achieve a specific goal (Wang et al., 2020). When a person's interest and motivation to be environmentally responsible is extreme, they naturally behave without outside encouragement (Hosta & Zabkar, 2021). When a person gets psychological motivation and encouragement, of course, they will have more enthusiasm to protect the environment (Wang et al., 2020). On the other hand, when a person's confidence is minimal, they will not have the strength to perform the behavior. A person's thoughts and attention will focus more on negative things and become unenthusiastic in carrying out environmental responsibility tasks (Li et al., 2020).

Pro-Environmental Behaviour

Sustainability generally means the maintenance of something or a situation. Sustainability involves maintaining and preserving authenticity (Grilli & Curtis, 2021). In addition to the environment, sustainability also includes other fields such as education, economy, business, science, and others. Although it is essential to understand the concept of sustainability, the fact is that only a few people know or are aware of it (Guerra & Leite, 2021). Failure to ensure sustainability will directly affect our lives. The well-being, tranquility, safety, health, and enjoyment of human life will be disrupted if sustainability continues to be neglected (Udall et al., 2021). The behavior of extremism disrupts sustainability. Extremism includes extreme or excessive attitudes or actions. In this context, extreme attitudes toward using natural resources, extremes in development, and excessive consumerism are shown in the modern consumer culture (Schwartz et al., 2020).

To achieve sustainability, various parties need to make efforts. Laws, regulations, and public policies are necessary to support sustainability; however, efforts to make it a reality require large-scale changes in the public's attitudes, behaviors, and lifestyles (Puteh et al., 2024). Human beings must care for the environment to keep it healthy and sustainable. Environmental damage can occur due to human activities that are not environmentally friendly, such as burning garbage, using dangerous chemicals, and others (Schwartz et al., 2020). If environmental damage continues, it will hurt human life and other living beings. One of the ways to maintain the balance of the ecosystem is to protect natural habitats of living things such as forests, rivers, and seas. Clean air, clear water, and fertile soil will make people healthier. Taking care of the environment can also improve the quality of human life (Afsar & Umrani, 2020; Nasir et al., 2023). For example, a green and clean garden will make people feel more relaxed and happier.

In addition, a healthy environment can also be a source of income for humans, such as tourism and agriculture. Recycling is critical to modern waste management (Mwanza, 2021). Recycling is to reduce waste by turning it into a new product or material that can be reused. Moreover, planting trees can provide benefits for the environment. As is known, trees have many benefits, including storing water reserves, preventing floods and landslides, reducing the impact of climate change, maintaining ecosystem balance, and improving air quality (Noor et al., 2023). Through education and awareness, we can understand the impact of our actions on nature (van Langen et al., 2021). Preserving and conserving the environment is a shared responsibility to care for the earth we live on (Noor et al., 2023). From ecosystem balance to air quality protection, every effort has an essential environmental impact (Afsar & Umrani, 2020; Nasir et al., 2023).

Determinants of Pro-Environmental Behaviour

The physical environment and various forms of life, including humans, naturally exist in a harmonious and balanced state, interacting with each other and not destroying each other. Humans and the environment need each other for daily life. The existence of the environment as a balanced ecosystem is the core of universal prosperity. To ensure the sustainability of the environment and the community's well-being, the power to save our environment lies in our own hands. In addition to external factors, humans are responsible for protecting and preserving natural resources, and they need to spread awareness of the importance of

protecting the natural environment to the community.

Environment Commitment

Self-commitment can occur in relationships, organizations, families, and work relationships. Commitment is generally when people establish an attachment within themselves and others (Ryan & Vansteenkiste, 2023). The occurrence of this commitment can also be divided into two sources, namely internal and external sources (Saleem et al., 2021). Internal commitment is a source of commitment that comes from within a person. Examples of these internal sources include responsibility, motivation, and others. With this commitment, one can determine the path that will be chosen later (Ryan & Vansteenkiste, 2023). The external source is a commitment that comes from the outside. Past studies have proved that environmental commitment significantly affects pro-environmental behavior (Afsar & Umrani, 2020; Nasir et al., 2023). For some families, the cost of electricity is a huge burden, especially if they have an air conditioner that must be installed for the family's comfort. Therefore, to save money, some homeowners have installed solar panels for home use. Moreover, many non-governmental organizations (NGOs) were created over the past 20 years. Some people are committed to protecting the environment by establishing and volunteering in environmental NGOs. Research by Sari et al. (2021) indicates that the expression of values effectively formed the intention to volunteer in the NGO. Values also help the decision-maker to prioritize and strive for improvement. Environmental commitment could also occur at the organizational level. For example, Ajinomoto Malaysia's commitment to environmental sustainability is demonstrated at its new Bandar Enstek factory. They are dedicated to reducing CO₂ emissions by incorporating solar panels into renewable energy generation. This environmentally conscious approach has enabled their factory to achieve the Silver Standard for the Green Building Index and ISO 14001 certification, thus reflecting their commitment to environmentally friendly practices.

Green Lifestyle

The meaning of a green lifestyle is a lifestyle that pays attention to the environment by reducing the use of things that cause waste and the use of energy-saving products (Zeynalova & Namazova, 2022). The purpose of applying this lifestyle is to protect the environment from the dangers of pollution (Lee & Haley, 2022). The green lifestyle emphasizes energy

saving and zero waste products or using items with minimal waste (Noor & Nordin, 2023). Examples of green lifestyles are reducing plastic waste in shopping centers by replacing plastic bags with reusable shopping bags or using electric bicycles for short-distance transportation instead of using gasoline-fueled motorcycles to reduce pollution and save fuel and using stainless straws that can be used repeatedly instead of single-use plastic straws (Nguyen & Zhang, 2020). This lifestyle is believed to be able to balance human needs and the sustainability of nature (Dimitrova et al., 2021). The presence of a zero-waste shop is one form of green lifestyle that is beginning to be applied by the urban community today. The concept of zero-waste shops is almost the same as e-commerce in general. It is just that the items sold are zero-waste products, and the seller does not use plastic to pack the order but recycled paper. Humans should return to a green lifestyle (van Langen et al., 2021).

Environment Consciousness

In psychology, consciousness usually refers to temporarily being in the present moment without judging one's thoughts and emotions. Consciousness is often practiced in meditation and some forms of therapy, and many findings from psychological research suggest that practicing mindfulness can lead to many benefits, including stress reduction and increased psychological well-being. Increased environmental awareness is one of the essential elements in the construction of sustainable development (Noor & Nordin, 2023). Today's society is only concerned with economic development and ignores environmental quality. Many studies examine society's awareness of the environment, especially among students in educational institutions. Previous studies show that knowledge, attitude, and awareness of the environment among students at higher education institutions in Malaysia are good (Gök & Kiliç, 2021).

However, many studies found that the level of involvement is average and low (Knupfer et al., 2023). This means that even though the level of awareness of the environment is high, the readiness to be equally involved in solving problems with the environment needs to be higher. Üzülmez et al. (2023) stated that society lacks a priority attitude to take care of nature. Therefore, human habits and ways of life must change. Providing environmental awareness at every level of society is crucial to cultivating a sense of responsibility among the community to act and take care of the shared environment (Noor et al., 2024; van Langen et al., 2021). Activities to raise awareness include environmental innovation, environmental debate, sustainable summer

camps, environmental seminars, lectures, and fairs. Through involvement in these activities, the youth can access educational content digitally and face-to-face through interactive, fun, and attention-grabbing sessions. It also encourages the public to reflect and rethink their sustainability habits and practices and the impact of their actions on the environment's well-being. This effort aims to spark discussion and change thinking toward awareness of the importance of environmental protection.

Green Self-Efficacy

The ability to believe that one is capable of change and achieving success is very subjective but very important. Accordingly, self-efficacy is one of the various factors that are important for a person to act in achieving success and self-advancement (Farmer et al., 2022). Self-efficacy is closely related to a person's confidence to achieve something desired or to succeed in life (Schunk & DiBenedetto, 2021). A person needs to have high and robust self-efficacy because this level of self-efficacy will influence a person's actions in achieving something desired (Sh. Ahmad et al., 2022). There are two different levels of self-efficacy: high and low. Individuals with high self-efficacy are highly motivated to carry out any action that leads to self-development and brings good to themselves. They are also confident, optimistic, and have clear ambitions to achieve their wishes.

All energy and behavior will be done towards

the success they want. Contradiction, low-level self-efficacy is a group that is not confident in themselves and is not competitive (Farmer et al., 2022). With this lack of competitiveness, they will not try to do extraordinary actions out of the routine to advance themselves. A study conducted by Akhtar et al. (2021) shows that self-efficacy is an important variable affecting the attitudes and behavior of teenagers toward environmental advocacy. Thus, the self-efficacy factor needs to be considered essential and given priority in implementing environmental education to form positive behavior toward the environment (Faraz et al., 2021; Sh. Ahmad et al., 2022). Based on the above reasoning, the following hypotheses are developed:

H1: Environment commitment significantly influences pro-environmental behavior in Malaysian public university students.

H2: Green lifestyle significantly influencing Malaysian public university students pro-environmental behavior.

H3: Environment consciousness significantly influences pro-environmental behavior in Malaysian public university students.

H4: Green self-efficacy significantly influencing Malaysian public university students pro-environmental behavior.

As shown in Figure 1 summarises the research model of the study.

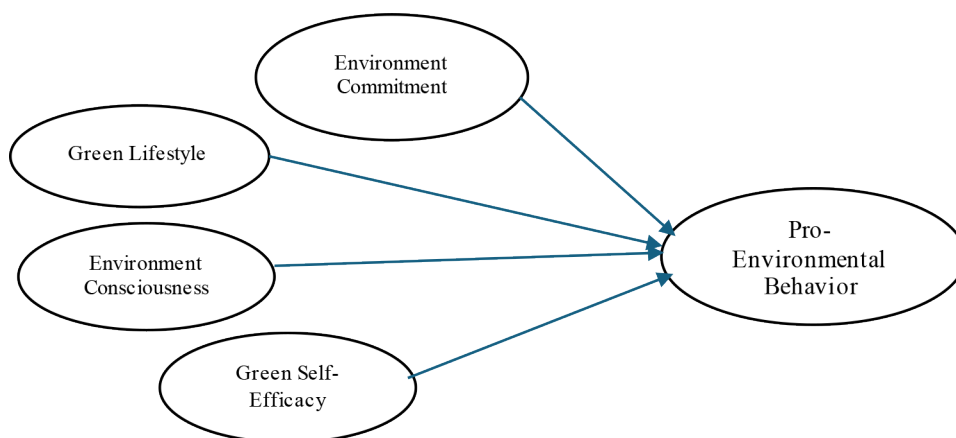


FIGURE 1. Conceptual Model

METHODOLOGY

In this study, the researchers looked at the determinants of environmentally friendly behavior. Environmentally friendly behavior includes reducing waste, conserving natural resources, acting in care using legal channels, and increasing knowledge to protect the environment. This study was conducted quantitatively using a survey method for data collection. The dependent variable studied is pro-environmental behavior, while the independent variables include environment commitment, green lifestyle, environment consciousness, and green

self-efficacy. The study population is aimed at public university students at Universiti Teknologi MARA (UiTM), Shah Alam, Puncak Alam, and Negeri Sembilan, Malaysia. All respondents are students in their respective faculties. A t-test was performed using GPower software to determine the sample size of this study. Among the elements that are considered to carry out this test are size effect (f), alpha value (α), and power value ($1-\beta$). Each value selected is guided by Cohen (1988), namely, effect size (f):0.3, alpha value (α):0.05, and power value ($1-\beta$):0.95 (as cited in Kang, 2021). After filling in the required information in the

TABLE 1. Measurement of the Variables

Variable	Items
Environment Commitment	1. I care about the environmental concerns of my university.
	2. I would feel guilty about not supporting the environmental efforts of my university.
	3. I strongly value the environmental efforts of my university.
	4. The environmental concern of my university means a lot to me.
	5. I feel a sense of duty to support the environmental efforts of my university.
	6. My university's environmental problems are my own.
	7. I am attached to the environmental concerns of my university.
	8. I am obligated to support the environmental efforts of my university.
Green Lifestyle	1. I will recycle bottles, cans, glass, or newspapers.
	2. I will compost garden waste.
	3. I will take my bags to the supermarket.
	4. I am willing to cut down on car use.
	5. I like to contribute money to environmental causes.
	6. I am willing to volunteer for an environmental group.
Environment Consciousness	1. The university has clear and detailed environmental policies.
	2. The university managers oversee environmental policies.
	3. I understand the environmental policies and environmental regulations at this university.
	4. I noticed that this university implements regular environmental audits.
Green Self-Efficacy	1. We can succeed in accomplishing environmental ideas.
	2. We can achieve most environmental goals.
	3. We feel competent to deal effectively with environmental tasks.
	4. We can perform effectively on environmental missions.
	5. We can overcome environmental problems.
	6. We could find creative solutions to environmental problems.
Pro-Environmental Behaviour	1. I need to make sure that air-conditioning is off after the class.
	2. I need to get as much as possible to print on both pages on one A4 sheet.
	3. I need a double-sided copy of one A4 sheet.
	4. I must take a new plastic or carton cup each time I drink.
	5. I need to use stainless steel straws when drinking.
	6. I need to reduce the use of straws when drinking.
	7. I need to choose bio food when offered in a campus cafeteria.
	8. When I need to purchase goods or services, I pay attention to sustainability.
	9. I need to switch off my computer or laptop when I leave the class for a considerable period.
	10. I must switch off my computer or laptop at home or hostel.
	11. I need to turn on the lights when I come to class and turn them off after class.
	12. If there is no one else in the class, I need to switch off the lights when I leave my class for a considerable period.

GPower software, the minimum sample size required for the study is 111 respondents. Thus, three hundred respondents are selected as the sample size.

Two hundred fifty respondents have responded to the survey, which is considered better and has successfully demonstrated higher consistency for this study. This study employed a multistage random sampling technique. In short, multistage sampling is using several random sampling methods simultaneously in research that are effective and efficient. The study first clustered the sample into three branches, namely UiTM Negeri Sembilan (n=100), UiTM Shah Alam (n=100), and UiTM Puncak Alam (n=100). Second, this study used a convenience sampling technique.

The questionnaire used in this study is constructed by adaptations to past researchers' questionnaires. The questionnaire contains three parts. Part A asks students to give personal information. Part B measures the independent variables. Environmental commitment was measured by items adapted from Raineri and Paille (2016). Green lifestyle was measured by items adapted from Sony and Ferguson (2017). Then, environmental consciousness was measured by items adapted from Yusliza et al.'s (2020) study. Green self-efficacy was measured by items adapted from Chen et al. (2015). Section C tests the practice of environmentally friendly behavior among students with 12 items. Pro-environmental behavior was measured

by items adapted from Blok et al. (2005). The data obtained was analyzed using descriptive statistics and inferential statistics. Multiple regression was used to test the hypotheses. Several statistical tests were conducted using the Statistical Package for the Social Sciences (SPSS) Version-23. The first test is Cronbach's Alpha Test, which measures reliability. Cronbach's alpha exceeds or is equal to 0.70, which is considered reliable, indicating the reliability strength (Hair et al., 2010). The assumption of normality of the data affects the model being fitted. The Skewness value should fall within the range of -3 to +3. Moreover, for kurtosis, the range of -10 to +10 needs to be assumed (Kline, 2005). Table 1 summarizes the survey items used.

FINDINGS AND DISCUSSION

Table 2 shows the profile of the respondents. Usable questionnaires were received from 250 respondents. From the data, most of the respondents are female (n=140, 56.0%), and the rest are male respondents (n=110, 44.0%). Next, most respondents are from the 21 to 25-year-old group (n=139, 55.6%). Meanwhile, most respondents have bachelor's degrees (n=149, 59.6%). Finally, most respondents live in urban areas (n=98, 39.2%).

TABLE 2. Demographic Profile

No.	Profile	Frequency (n)	Percentage (%)
1	Gender		
	Male	110	44.0
	Female	140	56.0
2	Age		
	18-20	54	21.6
	21-25	139	55.6
	26-30	57	22.8
3	Current Level of Education		
	Diploma	58	23.2
	Bachelor's degree	149	59.6
	Master	43	17.2
	PhD	0	0
4	Living Area		
	Urban	98	39.2
	Semi-urban	95	38.0
	Rural	57	22.8

In interpreting the level of items, the range of mean between 1.00 – 2.50 is considered a low level, 2.51 – 3.50 is a medium level, and 3.51 – 5.00 is considered a high level. Table 4 shows that the respondents' environmental commitment, green lifestyle, environment consciousness, green self-efficacy, and pro-environmental behavior are high, with

a mean value of more than 4. The variables used are acceptable and reliable and can be used in the following study (Hair et al., 2010). For Skewness and Kurtosis, the variables used are normally distributed (Kline, 2005). Cronbach's alpha also exceeds 0.70, which is considered reliable, indicating the reliability strength (Hair et al., 2010).

TABLE 3. Normality & Reliability Results

Variable	Mean	SD	Skewness	Kurtosis	Cronbach's Alpha
Environment Commitment	4.231	0.491	-1.611	7.148	0.817
Green Lifestyle	4.208	0.597	-1.555	3.928	0.846
Environment Consciousness	4.194	0.547	-1.277	4.016	0.657
Green Self-Efficacy	4.276	0.542	-1.607	5.588	0.827
Pro-Environmental Behaviour	4.148	0.530	-1.131	2.314	0.851

TABLE 4. Pearson Correlation Results

	Pro-Environmental Behaviour	
Environment Commitment	Pearson Correlation	0.737***
	Sig. (1-tailed)	0.000
	N	250
Green Lifestyle	Pearson Correlation	0.698***
	Sig. (1-tailed)	0.000
	N	250
Environment Consciousness	Pearson Correlation	0.772**
	Sig. (1-tailed)	0.000
	N	250
Green Self-Efficacy	Pearson Correlation	0.726**
	Sig. (1-tailed)	0.000
	N	250

Based on Table 4, there is a significant positive relationship between Environment Commitment ($r=0.737; p < 0.050$), Green Lifestyle ($r=0.449; p < 0.050$), Environment Consciousness ($r=0.447; p < 0.050$), and Green Self-Efficacy ($r=0.381; p < 0.050$) towards Pro-Environmental Behaviour.

TABLE 5. Regression Results

Variables	Beta (β)	Sig. (p)	Tolerance	VIF
Environment Commitment	0.279	0.000	0.372	2.691
Green Lifestyle	0.147	0.023	0.329	3.043
Environment Consciousness	0.266	0.002	0.191	5.231
Green Self-Efficacy	0.211	0.001	0.315	3.175
R ²	0.668			
Adjusted R ²	0.662			
F Change	123.081			
Sig.	0.000			

Based on Table 5, the study first examined multicollinearity, which refers to the occurrence of a linear relationship between independent variables in a multiple linear regression model. The value of variance inflation factor (VIF) and tolerance (TOL) can be used to detect the existence of multicollinearity in the regression model. If the VIF value exceeds four or the tolerance is less than 0.2, multicollinearity is problematic (Hair et al., 2010). The results revealed that there is no problem with multicollinearity. Then, the R-Square value of 0.668 shows that the 66.8% of independent variable influence from Environment Commitment, Green Lifestyle, Environment Consciousness, and Green Self-Efficacy on Pro-Environmental Behaviour is 66.8%. That means all independent variables have a proportion of influence on Pro-Environmental Behaviour, amounting to 66.8%. The remaining variables are influenced by other variables, not the linear regression model. Next, the regression results can be defined as follows: 1) Environment Commitment ($\beta = 0.279$,

$p=0.000$), 2) Green Lifestyle ($\beta =0.147$, $p=0.067$), 3) Environment Consciousness ($\beta =0.266$, $p=0.637$), and 4) Green Self-Efficacy ($\beta =0.211$, $p=0.234$). Therefore, the study accepts H1, H2, H3, and H4.

Theoretically, this study has contributed new insights to the current literature on environmental management and studies by highlighting internal and external attribution that could affect pro-environmental behavior. Attribution theory tries to explain how people judge and determine the causes of other people's behavior (Li et al., 2020). Attribution theory typically focuses on the process of determining whether the behavior is due to a situation (i.e., external factors) or due to a disposition (i.e., internal characteristics) (Martinko & Mackey, 2019). The result shows there are significant relationships between enablers and pro-environmental behavior. Study regression results also show that the internal factor of environmental commitment is the most significant predictor of pro-environmental behavior. These findings have been supported by previous studies such as Afsar and Umrani (2020), Nasir et al. (2023), Ryan and Vansteenkiste (2023), and Saleem et al. (2021). Young people have a significant environmental commitment, and a study led by Caroline Hickman from the University of Bath, United Kingdom (UK), on 10,000 young people between the ages of 16 and 25 in 10 countries such as Australia, Brazil, Finland, France, India, Nigeria, Philippines, Portugal, United Kingdom, and the United States shows that eco-anxiety is more common among the younger generation (Hickman et al., 2021).

Among the interesting findings of this study is that 59 percent of respondents expressed great concern about the current climate change problem. At the same time, 45 percent of respondents stated that their feelings toward the issue of climate change hurt their daily lives. This situation may occur because they are more exposed to environmental issues (Hickman et al., 2021). They must also be convinced that a concrete solution exists to overcome the environmental problem. Thus, individuals facing eco-anxiety need support from various parties. In this regard, they are encouraged to participate in various voluntary work, especially environmental-related ones (Coffey et al., 2021). In addition, it is also appropriate to establish a platform for channeling ideas and views from young people on environmental issues and their solutions. In addition, more green spaces, such as parks or forests in the city, must be created to allow all groups to enjoy them.

As implications, some recommendations are provided. Since the results of this study show that commitment to the environment can predict environmentally friendly behavior, efforts through

the formal curriculum and co-curriculum need to be made early. One of the most appropriate methods for delivering environmental education topics is through direct experience outside the classroom. In addition, non-formal and informal education such as visits, camping, mountain climbing, and kayaking, which are based on experience, also form long-lasting behavior changes through lifelong experiences. Many containers must be provided in the campus area to prevent students from throwing garbage. In addition, the campus or hostel should provide a recycling room that allows waste materials to be collected and reused. Boxes and unused paper can be reused for activities with students to realize the green university project. Reducing the use of natural resources can save the environment, while the practice of excessive use can negatively impact nature. Thus, it must be accepted that sustainable use needs to be practiced by all parties to ensure that resources and the quality of the environment can meet the needs of the present and do not affect the needs of the future generation.

Next, universities must educate students to create environmental awareness (Ribeiro et al., 2021). Education is essential for changing society towards sustainable development. In addition, in Agenda 21, chapter 36 (promoting education, public awareness, and training) discusses aspects of education, that is, redirecting education towards sustainable development, improving public awareness, and encouraging training. This shows that real education has the potential to promote sustainable development as well as cultivate an attitude toward the environment. The sustainable project will give positive feedback and make educators and students more sensitive to environmental sustainability (Anthony Jnr, 2021). By practicing this sustainable lifestyle, we can preserve, conserve, and save the environment.

The Bin Less Give More programs could be implemented on the campus as a donation collection program for used items such as clothes, bags, and books. This program could increase awareness among students and the community about recycling and donating used goods to reduce the amount of waste dumped in existing landfills in Malaysia. Moreover, campus management policies need to be oriented towards environmental management. To achieve the ideal proportion of green open space, there should be an effort to save water, paper, electricity, and greening. Moreover, environmentally friendly buildings or construction should be available, and the university can create a campus free of cigarette smoke and pollution (Ribeiro et al., 2021). Moreover, the faculty's star rating must recognize the faculties implementing

green initiatives. Other approaches are 1) a car-free zone to reduce the release of carbon dioxide gas, 2) rainwater harvesting projects, especially in college buildings, 3) the green car parking project, which is the exchange of normal parking for hybrid vehicle parking, 4) a project to recycle used cooking oil into biodiesel, 5) campaigns such as recycling, polystyrene-free campuses, cycling campuses, and others through posters, bunting, competitions and public lectures, and 6) the implementation of conventions, seminars or discourses related to green sustainability.

For example, Universiti Sultan Zainal Abidin (UniSZA) Sustainable Secretariat has launched a 'Bring Your Own Bottle' campaign to reduce the use of single-use plastic bottles in meetings and workshops at all faculties. Campus residents are welcome to support this campaign by bringing their water bottles and reducing the use of single-use plastic bottles. On the other hand, Universiti Teknologi Mara (UiTM) made an impressive innovation when it introduced the UiTM Shah Alam Solar Powered Bus Stop Project to benefit over 1,000 UiTM students. Eight selected UiTM Shah Alam main campus bus stops were upgraded through the project, equipped with solar energy supplies for lighting and USB charging facilities capable of operating for 24 hours. This solar-powered bus stop can add value and increase the community's awareness of carbon footprint reduction using green technology.

The government should play an essential role by strengthening the existing policy and policy framework, as well as financial support and mechanisms to create an ecosystem that allows green jobs to grow in the country. In short, industry players need encouragement, while the Malaysian community, especially the youth, needs an attraction towards the empowerment of this green economy. In the modern era, young people should also be aware that green skills are a necessity of life for every human being, no matter how small our efforts to ensure the survival of this earth continue to be preserved. One of the ways we can hone our green skills is by participating in training or apprenticeship programs with organizations committed to sustainable practices. Next, the young generation should support existing green enterprises such as zero waste stores, sustainable fashion brands, and environmentally friendly technologies or start green enterprises by producing innovative ideas to solve environmental issues.

Participating in or organizing tree planting campaigns, cleaning campaigns, and composting or energy conservation workshops in the local community can also foster a sense of responsibility in oneself and invite more people to be more aware and concerned

about the environment. In addition, educational institutions, significantly higher education, have an essential role in forming green leaders who are informed and concerned about environmental sustainability. Environmental awareness can be nurtured by preparing them with these green skills (Naphorn, 2022). By offering specific courses that emphasize green skills, such as sustainable architecture or renewable energy engineering, educational institutions not only equip students with the 'tools' to combat climate challenges but also equip them with additional skills to position them in a rapidly changing, dynamic, and increasingly competitive job market (Sern et al., 2018). The result is a generation of graduates who have the knowledge and skills ready to face the world of work and skilled workers who are aware of environmental protection.

CONCLUSION

The responsibility of keeping the environment clean lies entirely in our hands. The time has come for every member of society to throw away their ignorant attitude to protect the world from the continuous destruction of the environment. Our moral duty and obligation is to look after and preserve our environment, as it has given us various benefits for centuries. Every member of society needs to be aware that conservation efforts should be at the core of everyone because awareness within everyone is critical. If all members of society are responsible for playing their respective roles and working together to save the environment, surely our environment will be able to be saved and fully preserved. The study has delivered new insights into the current literature of environmental studies. Every research has certain limitations. The study is a cross-sectional survey designed to provide correlated data to be used to conclude. Suppose there is a casual relationship in the population. In that case, the cross-sectional study cannot provide any information about the relationship but can only make the researchers see that the relationship exists for several reasons. Future research will use a longitudinal approach to view behavioral changes over time. The research sample was also limited to public university students in Universiti Teknologi MARA (UiTM). The results cannot accurately describe the general population if the research is based on a small sample. Conclusions from a small sample will also not be reliable and cannot be generalized. Thus, future studies need to expand the data collection to other larger samples. One of the weaknesses that often appears in survey research is bias. For example, the respondent's self-evaluation could lead to false statements that can

make the results inaccurate. Future research is also expected to adopt the interview or multiple methods to examine the research model. In addition, other factors influence pro-environmental behavior that have yet to be researched in this research. Further research is expected to add other variables that can influence pro-environmental behavior. If the research does not consider or control other variables that can affect the results, it can make the conclusions unreliable.

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REFERENCES

- Afsar, B., & Umrani, W. A. (2020). Corporate social responsibility and pro-environmental behavior at the workplace: The role of moral reflectiveness, coworker advocacy, and environmental commitment. *Corporate Social Responsibility and Environmental Management*, 27(1), 109-125. <https://doi.org/10.1002/csr.1777>
- Ahmad, W., Kim, W. G., Anwer, Z., & Zhuang, W. (2020). Schwartz personal values, theory of planned behavior and environmental consciousness: How tourists' visiting intentions towards eco-friendly destinations are shaped? *Journal of Business Research*, 110, 228-236. <https://doi.org/10.1016/j.jbusres.2020.01.040>
- Akhtar, S., Martins, J. M., Mata, P. N., Tian, H., Naz, S., Dâmaso, M., & Santos, R. S. (2021). Assessing the relationship between market orientation and green product innovation: The intervening role of green self-efficacy and moderating role of resource bricolage. *Sustainability*, 13(20), 11494. <https://doi.org/10.3390/su132011494>
- Anthony Jnr, B. (2021). Green campus paradigms for sustainability attainment in higher education institutions—a comparative study. *Journal of Science and Technology Policy Management*, 12(1), 117-148. <https://doi.org/10.1108/JSTPM-02-2019-0008>
- Balundė, A., Perlaviciute, G., & Truskauskaitė-Kunevičienė, I. (2020). Sustainability in youth: Environmental considerations in adolescence and their relationship to pro-environmental behavior. *Frontiers in Psychology*, 11, 582920. <https://doi.org/10.3389/fpsyg.2020.582920>
- Blok, V., Wesselink, R., Studynka, O., & Kemp, R. (2015). Encouraging sustainability in the workplace: A survey on the pro-environmental behavior of university employees. *Journal of Cleaner Production*, 106, 55-67. <https://doi.org/10.1016/j.jclepro.2014.07.063>
- Calculi, C., D'Uggento, A. M., Labarile, A., & Ribecco, N. (2021). Evaluating people's awareness about climate changes and environmental issues: A case study. *Journal of Cleaner Production*, 324, 129244. <https://doi.org/10.1016/j.jclepro.2021.129244>
- Chen, Y. S., Chang, C. H., Yeh, S. L., & Cheng, H. I. (2015). Green shared vision and green creativity: The mediation roles of green mindfulness and green self-efficacy. *Quality & Quantity*, 49, 1169–1184. <https://doi.org/10.1007/s11135-014-0041-8>
- Chen, J., Wang, B., Huang, S., & Song, M. (2020). The influence of increased population density in China on air pollution. *Science of the Total Environment*, 735, 139456. <https://doi.org/10.1016/j.scitotenv.2020.139456>
- Coffey, Y., Bhullar, N., Durkin, J., Islam, M. S., & Usher, K. (2021). Understanding eco-anxiety: A systematic scoping review of current literature and identified knowledge gaps. *The Journal of Climate Change and Health*, 3, 100047. <https://doi.org/10.1016/j.joclim.2021.100047>
- Dimitrova, A., Vaishar, A., & Štastná, M. (2021). Preparedness of young people for a sustainable lifestyle: Awareness and willingness. *Sustainability*, 13(13), 7204. <https://doi.org/10.3390/su13137204>
- Ehigiamusoe, K. U., Lean, H. H., & Somasundram, S. (2022). Unveiling the non-linear impact of sectoral output on environmental pollution in Malaysia. *Environmental Science and Pollution Research*, 29(5), 7465-7488. <https://doi.org/10.1007/s11356-021-16114-4>
- Faraz, N. A., Ahmed, F., Ying, M., & Mehmood, S. A. (2021). The interplay of green servant leadership, self-efficacy, and intrinsic motivation in predicting employees' pro-environmental behavior. *Corporate Social Responsibility and Environmental Management*, 28(4), 1171–1184. <https://doi.org/10.1002/csr.2115>
- Farmer, H., Xu, H., & Dupre, M. E. (2022). Self-efficacy. In *Encyclopedia of Gerontology and Population Aging* (pp. 4410–4413). Cham: Springer International Publishing.
- Fong, F. (2024). *Malaysia ranks third in ocean pollution: A rising tide of plastic peril*. Retrieved from <https://www.therakyatpost.com/news/malaysia/2024/02/24/malaysia-ranks-third-in-ocean-pollution-a-rising-tide-of-plastic-peril/>
- Geng, M. M., & He, L. Y. (2021). Environmental

- regulation, environmental awareness, and environmental governance satisfaction. *Sustainability*, 13(7), 3960. <https://doi.org/10.3390/su13073960>
- Gök, N. D., & Kiliç, H. F. (2021). Environmental awareness and sensitivity of nursing students. *Nurse Education Today*, 101, 104882. <https://doi.org/10.1016/j.nedt.2021.104882>
- Grilli, G., & Curtis, J. (2021). Encouraging pro-environmental behaviors: A review of methods and approaches. *Renewable and Sustainable Energy Reviews*, 135, 110039. <https://doi.org/10.1016/j.rser.2020.110039>
- Guerra, B. C., & Leite, F. (2021). Circular economy in the construction industry: An overview of United States stakeholders' awareness, major challenges, and enablers. *Resources, Conservation, and Recycling*, 170, 105617. <https://doi.org/10.1016/j.resconrec.2021.105617>
- Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective* (Vol. 7).
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., ... & Van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey. *The Lancet Planetary Health*, 5(12), e863-e873. [https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)
- Hosta, M., & Zabkar, V. (2021). Antecedents of environmentally and socially responsible sustainable consumer behavior. *Journal of Business Ethics*, 171(2), 273-293. <https://doi.org/10.1007/s10551-019-04416-0>
- Ibrahim, T. N. B. T., Othman, F., & Mahmood, N. Z. (2020). Baseline study of heavy metal pollution in a tropical river in a developing country. *Sains Malaysiana*, 49(4), 729-742. <http://dx.doi.org/10.17576/jsm-2020-4904-02>
- Kang, H. (2021). Sample size determination and power analysis using the G* Power software. *Journal of Educational Evaluation for Health Professions*, 18.
- Kline, T. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage.
- Knupfer, H., Neureiter, A., & Matthes, J. (2023). From social media diet to public riot? Engagement with "greenfluencers" and young social media users' environmental activism. *Computers in Human Behavior*, 139, 107527. <https://doi.org/10.1016/j.chb.2022.107527>
- Lee, J., & Haley, E. (2022). Green consumer segmentation: consumer motivations for purchasing pro-environmental products. *International Journal of Advertising*, 41(8), 1477-1501. <https://doi.org/10.1080/02650487.2022.2038431>
- Li, Z., Xue, J., Li, R., Chen, H., & Wang, T. (2020). Environmentally specific transformational leadership and employee's pro-environmental behavior: The mediating roles of environmental passion and autonomous motivation. *Frontiers in Psychology*, 11, 1408. <https://doi.org/10.3389/fpsyg.2020.01408>
- Malle, B. F. (2022). Attribution theories: How people make sense of behavior. *Theories in Social Psychology*, Second Edition, 93-120. <https://doi.org/10.1002/9781394266616.ch4>
- Martinko, M. J., & Mackey, J. D. (2019). Attribution theory: An introduction to the special issue. *Journal of Organizational Behavior*, 40(5), 523-527. <https://doi.org/10.1002/job.2397>
- Mwanza, B. G. (2021). Introduction to recycling. *Recent Developments in Plastic Recycling*, 1-13. https://doi.org/10.1007/978-981-16-3627-1_1
- Napathorn, C. (2022). The development of green skills across firms in the institutional context of Thailand. *Asia-Pacific Journal of Business Administration*, 14(4), 539-572. <https://doi.org/10.1108/APJBA-10-2020-0370>
- Nasir, M., Asad, N., Hashmi, H. B. A., Fu, H., & Abbass, K. (2023). Analyzing the pro-environmental behavior of pharmaceutical employees through Green HRM practices: The mediating role of green commitment. *Environmental Science and Pollution Research*, 30(3), 7886-7903. <https://doi.org/10.1007/s11356-022-22672-y>
- Nguyen, T. H., & Zhang, H. (2020). *Green lifestyle, where to go?: How social media influencers moderate the intention-behavior gap within the ecological lifestyle context* [Master dissertation, Jönköping University, Sweden]. Retrieved from <https://www.diva-portal.org/smash/get/diva2:1430761/FULLTEXT01.pdf>
- Noor, N. H. M., & Nordin, N. B. (2023). Reassuring Pro-Environmental Behaviour: A Goal-Framing Theory Perspective. *Bioresources and Environment*, 1(3), 14-26. <https://bioenvuitm.com/index.php/en/article/view/36>
- Noor, N. H. M., Soleman, N. A. F., & Azuan, A. S. K. (2023). To recycle or not to recycle? Factors affecting Malaysian residents' intention for recycling e-waste. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 8(2), e002102-e002102. <https://doi.org/10.47405/mjssh.v8i2.2102>

- Noor, N. H. M., Zaini, S. M., Pudir, S., & Sidek, S. J. (2024). Encouraging pro-environmental behavior: The function of environmental connectedness, environmental ethics, & environmental knowledge. *Muallim Journal of Social Sciences and Humanities*, 8(2), 17-32. <https://doi.org/10.33306/mjssh/272>
- Pickett-Baker, J., & Ozaki, R. (2008). Pro-environmental products: Marketing influence on consumer purchase decision. *Journal of Consumer Marketing*, 25(5), 281–293. <https://doi.org/10.1108/07363760810890516>
- Praveena, S. M. (2024). Exploring public awareness, influencing factors and policy implications towards microplastic pollution: Perspectives from Malaysia. *Marine Policy*, 161, 106042. <https://doi.org/10.1016/j.marpol.2024.106042>
- Puteh, K. N. A. K., Nordin, N. B., Amri, M. A. H. S., & Noor, N. H. M. (2024). Keperluan kawalan pencemaran udara di Malaysia: Kesan pembakaran terbuka, pelepasan industri, pengangkutan, pertanian, dan asap rokok. *Perspektif Jurnal Sains Sosial dan Kemanusiaan*, 16(1), 19-31. <https://doi.org/10.37134/perspektif.vol16.1.3.2024>
- Raineri, N., & Paillé, P. (2016). Linking corporate policy and supervisory support with environmental citizenship behaviors: The role of employee environmental beliefs and commitment. *Journal of Business Ethics*, 137, 129-148. <https://doi.org/10.1007/s10551-015-2548-x>
- Rahman, M. M., & Alam, K. (2021). Clean energy, population density, urbanization, and environmental pollution nexus: Evidence from Bangladesh. *Renewable Energy*, 172, 1063-1072. <https://doi.org/10.1016/j.renene.2021.03.103>
- Reeder, G. D., Vonk, R., Ronk, M. J., Ham, J., & Lawrence, M. (2004). Dispositional attribution: multiple inferences about motive-related traits. *Journal of Personality and Social Psychology*, 86(4), 530. <https://psycnet.apa.org/doi/10.1037/0022-3514.86.4.530>
- Ribeiro, J. M. P., Hoeckesfeld, L., Dal Magro, C. B., Favretto, J., Barichello, R., Lenzi, F. C., ... & De Andrade, J. B. S. O. (2021). Green Campus Initiatives as sustainable development dissemination at higher education institutions: Students' perceptions. *Journal of Cleaner Production*, 312, 127671. <https://doi.org/10.1016/j.jclepro.2021.127671>
- Rousseau, S., & Deschacht, N. (2020). Public awareness of nature and the environment during the COVID-19 crisis. *Environmental and Resource Economics*, 76, 1149-1159. <https://doi.org/10.1007/s10640-020-00445-w>
- Ryan, R. M., & Vansteenkiste, M. (2023). Self-determination theory. In *The Oxford Handbook of Self-Determination Theory* (pp. 3-30). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780197600047.013.2>
- Sabherwal, A., Ballew, M. T., van Der Linden, S., Gustafson, A., Goldberg, M. H., Maibach, E. W., ... & Leiserowitz, A. (2021). The Greta Thunberg Effect: Familiarity with Greta Thunberg predicts intentions to engage in climate activism in the United States. *Journal of Applied Social Psychology*, 51(4), 321-333. <https://doi.org/10.1111/jasp.12737>
- Saleem, F., Qureshi, S. S., & Malik, M. I. (2021). Impact of environmental orientation on proactive and reactive environmental strategies: Mediating role of business environmental commitment. *Sustainability*, 13(15), 8361. <https://doi.org/10.3390/su13158361>
- Sari, D. P., Masruroh, N. A., & Asih, A. M. S. (2021). Consumer intention to participate in e-waste collection programs: A study of smartphone waste in Indonesia. *Sustainability*, 13(5), 2759. <https://doi.org/10.3390/su13052759>
- Schunk, D. H., & DiBenedetto, M. K. (2021). Self-efficacy and human motivation. In *Advances in motivation science* (Vol. 8, pp. 153-179). Elsevier. <https://doi.org/10.1016/bs.adms.2020.10.001>
- Schwartz, D., Loewenstein, G., & Agüero-Gaete, L. (2020). Encouraging pro-environmental behaviour through green identity labelling. *Nature Sustainability*, 3(9), 746-752. <https://doi.org/10.1038/s41893-020-0543-4>
- Sern, L. C., Zaime, A. F., & Foong, L. M. (2018, June). Green skills for green industry: A review of the literature. In *Journal of Physics: Conference Series* (Vol. 1019, No. 1, p. 012030). IOP Publishing.
- Sh. Ahmad, F., Rosli, N. T., & Quoquab, F. (2022). Environmental quality awareness, green trust, green self-efficacy, and environmental attitude in influencing green purchase behavior. *International Journal of Ethics and Systems*, 38(1), 68-90. <https://doi.org/10.1108/IJOES-05-2020-0072>
- Shaddick, G., Thomas, M. L., Mudu, P., Ruggeri, G., & Gumy, S. (2020). Half the world's population are exposed to increasing air pollution. *NPJ Climate and Atmospheric Science*, 3(1), 1–5. <https://doi.org/10.1038/s41612-020-0124-2>
- Shutaleva, A., Martyushev, N., Nikonova, Z., Savchenko, I., Abramova, S., Lubimova, V., & Novgorodtseva, A. (2021). Environmental behavior of youth and sustainable development.

- Sustainability*, 14(1), 250. <https://doi.org/10.3390/su14010250>
- Sony, A., & Ferguson, D. (2017). Unlocking consumers' environmental value orientations and green lifestyle behaviors: A key for developing green offerings in Thailand. *Asia-Pacific Journal of Business Administration*, 9(1), 37–53. <https://doi.org/10.1108/APJBA-03-2016-0030>
- Spitzberg, B. H., & Manusov, V. (2021). Attribution theory: Finding good cause in the search for theory. In *Engaging theories in interpersonal communication* (pp. 39-51). Routledge.
- Tjiptono, F., Khan, G., Yeong, E. S., & Kunchambo, V. (2020). Generation Z in Malaysia: The four 'E' generation. In *The new Generation Z in Asia: Dynamics, differences, digitalization* (pp. 149–163). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80043-220-820201015>
- Udall, A. M., De Groot, J. I., De Jong, S. B., & Shankar, A. (2021). How I see me—A meta-analysis investigating the association between identities and pro-environmental behavior. *Frontiers in Psychology*, 12, 582421. <https://doi.org/10.3389/fpsyg.2021.582421>
- Ukaogo, P. O., Ewuzie, U., & Onwuka, C. V. (2020). Environmental pollution: Causes, effects, and the remedies. In *Microorganisms for sustainable environment and health* (pp. 419-429). Elsevier. <https://doi.org/10.1016/B978-0-12-819001-2.00021-8>
- Üzülmez, M., Ercan İştin, A., & Barakazi, E. (2023). Environmental awareness, ecotourism awareness, and ecotourism perception of tourist guides. *Sustainability*, 15(16), 12616. <https://doi.org/10.3390/su151612616>
- van Langen, S. K., Vassillo, C., Ghisellini, P., Restaino, D., Passaro, R., & Ulgiati, S. (2021). Promoting circular economy transition: A study about perceptions and awareness by different stakeholders groups. *Journal of Cleaner Production*, 316, 128166. <https://doi.org/10.1016/j.jclepro.2021.128166>
- Wang, S., Wang, J., Li, J., & Yang, F. (2020). Do motivations contribute to local residents' engagement in pro-environmental behaviors? Resident-destination relationship and pro-environmental climate perspective. *Journal of Sustainable Tourism*, 28(6), 834-852. <https://doi.org/10.1080/09669582.2019.1707215>
- Weiner, B. (2014). Searching for the roots of applied attribution theory. In *Attribution Theory* (pp. 1–13). Psychology Press.
- Yusliza, M. Y., Amirudin, A., Rahadi, R. A., Nik Sarah Athirah, N. A., Ramayah, T., Muhammad, Z., ... & Mokhlis, S. (2020). An investigation of pro-environmental behavior and sustainable development in Malaysia. *Sustainability*, 12(17), 7083. <https://doi.org/10.3390/su12177083>
- Zeynalova, Z., & Namazova, N. (2022). Revealing consumer behavior toward green consumption. *Sustainability*, 14(10), 5806. <https://doi.org/10.3390/su14105806>
- Zhao, Z., Lao, X., Gu, H., Yu, H., & Lei, P. (2021). How does air pollution affect urban settlement of the floating population in China? New evidence from a push-pull migration analysis. *BMC Public Health*, 21, 1–15. <https://doi.org/10.1186/s12889-021-11711-x>

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