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GENERATION Z TOURISTS' ENVIRONMENTAL AWARENESS AND ATTITUDES AS PREDICTORS OF RESPONSIBLE BEHAVIOUR IN TAMAN NEGARA PAHANG

Muhammad Zulhilmi Zulkurnain[1*], Nor Asmalina Mohd Anuar[2], Nurul Azniza Nadzari[3], Muhammad Saufi Anas[4]

[1] School of Tourism, Hospitality and Event Management, Universiti Utara Malaysia (UUM), Malaysia
Email: zulhilmizulkurnain@uum.edu.my
[2] Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Cawangan Selangor, Malaysia
Email: noras288@uitm.edu.my
[3] School of Tourism, Hospitality and Event Management, Universiti Utara Malaysia (UUM), Malaysia
Email: nurul.azniza@uum.edu.my
[4] School of Tourism, Hospitality and Event Management, Universiti Utara Malaysia (UUM), Malaysia
Email: saufi.anas@uum.edu.my
[*] Corresponding Author

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Abstract:

Understanding what motivates younger generation to adopt environmentally responsible behaviour (ERB) is key for sustainable tourism. Destination must balance visitor experiences with environmental protection. The Knowledge-Attitude-Behaviour (KAB) model and the Theory of Planned Behaviour (TPB) suggest that awareness affects behaviour both directly and through attitudes. Data from 285 Gen Z tourists were analysed using SPSS and SmartPLS 4.0 with PLS-SEM. Results indicate that environmental awareness directly influences ERB and shape pro-environmental attitudes, which in turn also drive ERB. Awareness indirectly affects behaviour through attitudes, emphasizing their moderating role. The expected moderating effect of awareness on the attitude-behaviour relationship was not supported, suggesting situational factors may play a role. These findings provide empirical evidence from a Southeast Asian Protected area and highlight the need for interventions that inform, inspire, and empower Gen Z visitors through clear messages, experiential conservation activities, and accessible low-impact opportunities.

Keywords:

Environmental Awareness, Tourist Attitude, Environmentally Responsible Behaviour

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Introduction

Environmentally preserved sites such as Taman Negara Pahang are associated with a delicate trade-off between the enjoyment of the visitors of the park and its nature protection. Sustainability in these destinations heavily depends on the responsibility of visitors to the natural environment by their actions that are environmentally responsible, which is commonly associated with awareness and attitudes to conservation (Butnaru et al., 2022). Generation Z consists of individuals born approximately at the end of 1990s to the beginning of 2010s and are proving to be a powerful group of travellers. This population has often been characterized as environmentally friendly and passionate about sustainability (Nowacki et al., 2023). The generation Z is also reported to be more social and environmentally conscious than the older ones and many people of the same age attribute green options as one of their identifiers (Nowacki et al., 2023). This generational change implies that young tourists may be more willing to adopt pro-environmental behaviors and hope that Gen Z ecotourists will become key contributors to the concept of making destinations like Taman Negara more sustainable.

Nevertheless, the introduction of environmental awareness into practice is not a simple task since the studies indicate that mere awareness of environmental problems cannot predetermine responsible tourism behaviour (Prayag et al., 2022). The disparity between the knowledge and acting is always present and the attitude of a traveller is the bridge between the two. Attitude towards the environment in tourism is a key predictor of a person adopting practices that are environmentally friendly (Nowacki et al., 2023). These attitudes can be formed by understanding environmental awareness, environmental issues, and human impacts. Indicatively, visitors tend to develop positive intentions when they understand that a park is vulnerable to environmental harm, or when they decide on engaging in low impact activities owing to environmental risks. The attitudes in question, in turn, increase the risk of responsible behavior such as proper waste disposal, compliance with the park rules, and encouragement of conservation efforts (Butnaru et al., 2022). Such a pattern of awareness, attitude, and behaviour is built and supported by the framework such as the Knowledge-Attitude-Behaviour model and the Theory of Planned Behaviour, which postulates that awareness will result in attitudes and that attitudes will result in behaviour (Butnaru et al., 2022). Understanding this chain is crucial for ecotourism management: if raising visitors' environmental awareness can foster favourable attitudes, park authorities and tour operators can use that strategy to encourage more responsible behaviour among tourists.

Although the three, awareness, attitudes, and behaviour have a rational relationship, a gap can be observed in the studies that investigate these dynamics in the context of Gen Z tourists in the environment of ecotourism. The majority of the research works on environment behaviour of tourists have been broad based or concentrated on older generations. Scholars only recently started to pay attention to the role played by Gen Z in sustainable tourism and emphasize how this cohort can potentially make travels more sustainable. Nonetheless, as Nowacki et al. (2023) indicate, the topic of pro-environmental tourist behaviour is gaining increasing interest, and the study of sustainability attitudes and behaviours of young tourists is not exhaustive yet, which means that additional research could be conducted. Some findings have even been contradictory: Cini and Passafaro (2017) found that while some young travellers show strong green values and interest in sustainability, others are ambivalent or more self-centred in their travel priorities. These inconsistencies imply that not all Gen Z travellers can be regarded as green tourists; we need more context-relevant information, in particular in the natural settings where their actions directly affect the environment.

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In addition, most of the literature studying Gen Z and sustainable travel is from the west (Prayag et al., 2022). Not all ecotourism sites in Southeast Asia such as the Taman Negara have similar cultures, infrastructures and education backgrounds, and these factors may impact Gen Z tourists and their attitudes and behaviors. Results regarding the intention to adopt eco-behaviour by Gen Z in Western settings might not be as extensive to the developing countries, and this is why researchers have recommended more localised research (Prayag et al., 2022). Research on the impact of environmental attitudes in Malaysia on the country's national parks has typically lacked the study of age-specific groups and surveyed participants in general, who visit the parks (Ghazvini et al., 2018). There is currently virtually no published data on the Gen Z visitors to the Malaysian national parks to determine how their environmental awareness affects their attitudes and behaviour. Such lack gap and information is a major gap of knowledge and filling it is important in terms of academia as well as usefulness. To illustrate, the management of Taman Negara would be highly interested in knowing as to whether young visitors with high environmental awareness achieve better responsibility behavior or whether some attitudes or lack of knowledge are to be countered by education and outreach.

The relationships among the environmental awareness, attitudes, and responsible behaviour amid Gen Z ecotourists are still under-researched regarding the realm of Malaysian national parks. Despite the common terminology of Gen Z being environmental conscious, there is a paucity of empirical data on how their environmental awareness is impacted into action and attitudes of nature-based tourism. Indeed, a part of the research indicates that there is a disjuncture in attitudes and behaviour, meaning that the interest of the young people towards the environment does not always lead to uniform pro-environmental behaviour (Prayag et al., 2022). Indeed, such behaviour is sometimes seen to occur in less responsible travel behaviours as experienced by young travellers compared to their older counterparts as noted by Qiu et al. (2022). In the same fashion, a recent review claimed that there is still work to be done on Gen Z motivations and attitudes to sustainable tourism, since the results have been mixed to date. This understanding gap, in such destinations as Taman Negara, suggests that the park authorities and tour operators might be basing their decision-making on assumptions about Gen Z tourists and thus have a hard time crafting a successful environmental education programme or policy to target youthful tourists. Such a gap in knowledge is an indicator of the urgency to research the dynamics of awareness, attitude, and behaviour of Gen Z tourists within the ecotourism setting.

In order to fill this gap, the current research will seek to determine the relationship between environmental awareness, attitude of tourists, as well as environmentally responsible behaviour among Gen Z visitors to Taman Negara Pahang. On the one hand, targeting this particular group of consumers and destinations will help the study determine whether increased levels of environmental awareness translate into the increased prevalence of positive pro-environmental attitudes, and whether positive attitudes, in their turn, lead to the observed responsible behaviours manifested by proper waste disposal, respect toward wildlife, or empathy toward conservation activities among Gen Z ecotourists. The results will give an empirical data to inform the development of specific environmental education and management measures in ecotourism sites in Malaysia. By doing that, the research will contribute to bridging an important gap in sustainable tourism literature in terms of generational differences and geographic setting, as well as will provide much-needed insights which the Taman Negara Pahang and other natural parks can apply to turn their young audiences towards a more responsible approach to the environment.

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Literature Review

Environmentally Responsible Behaviour

Environmentally responsible behaviour (ERB) is a term that is given to tourists that do not harm ecologically and promote sustainability; this is reflected by being less wasteful and protecting the natural resources as well as by encouraging environmentally friendly projects. This has emerged as a fundamental issue in the study of tourism due to its potentials in ensuring long term sustainability of the destination (Fenitra et al., 2022). Empirical literature illustrates that environmental awareness, perceptions of behavioural control, individual norms are among the factors influencing ERB and tourists are more apt to take responsible behaviour when they have a moral obligation to protect a place like a national park or eco-lodge (Raza et al., 2024). In addition, sustainability attitudes which can be enhanced by the environmental education and destination marketing predictors are great predictors of ERB. The role of green trust in recent discoveries is also associated with tourists believing a destination, based on its sustainability claims, which are more likely to engage in pro-environmental behavior (Yu et al., 2024).

Other than tourism settings, the research in the field of consumer behaviour also reveals the fact that environmental concern and values are the motivating elements of ERB. As an example, people form personal principles due to pro-environmental beliefs and attitudes, which make them feel morally obligated to act in a sustainable way (Megha, 2024; Ghazali et al., 2019). This is explained by the Value-Belief-Norm (VBN) theory that proves that values in altruism and ecological worldviews are converted into a sense of responsibility to partake in environmentally conscious behaviour (Ghazali et al., 2019). On the same note, the Theory of Planned Behaviour (TPB) has been prevalently used as a green consumer research approach, providing evidence that positive attitudes to environmentally-friendly behaviours, perceived social expectations (subjective norms) and perceived behavioural control all are effective in affecting sustainable intentions and behaviours (Megha, 2024). These views combined serve to highlight the fact that ERB is not simply the product of awareness but the product of combined psychological, social and contextual factors.

Environmental Awareness

Studies have always shown that there is a strong and positive association between the environmental awareness of the tourists and their responsible behaviour towards the environment. Aman et al. (2021) emphasised that the level of environmental awareness has a positive and significant impact on the pro-environmental behaviour of tourists, which means that the more people are informed about environmental challenges, the more likely they engage into environmental-friendly behaviour during their travels. Equally, Tang et al. (2022) affirmed the fact that the influence of environmental knowledge in tourists has a strong positive impact on the pro-environmental behaviour, which indicates that knowledge and information about the environmental ramifications can be converted into actual behavioural alterations. The fact that their findings support the notion that knowledge does not just influence the attitude of the tourists, but also has a direct effect on the willingness of the tourists to adopt sustainable practices.

Considering the issue of sustainable tourism, Yildirim et al. (2025) stated that the environmental awareness of tourists is a crucial condition to develop environmentally responsible behaviors. According to them, the process of promoting sustainable behaviour may not be effective in the absence of proper knowledge and awareness because tourists do not have

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the cognitive background of appreciating the worth of such behaviour.. Taken together, these papers suggest a consistent body of evidence that a greater degree of environmental awareness is directly related to great involvement in environmental responsible behaviour. Therefore, these hypotheses were proposed:

H1: There is a significant relationship between tourist environmental awareness and tourist environmentally responsible behaviour.

In addition to that, it is strongly evidenced that environmental awareness of the tourists positively affects their treatment of the environment. Research on environmental education invariably demonstrates that the more individuals are aware of the environmental issues and knowledgeable on them, the more they develop a more positive attitude towards environmental protection. Dillon and Gayford, (1997) were the initial ones to reveal this relationship when they proved that the more an individual was knowledgeable about the environment, the more he or she developed positive attitudes towards conservation that was subsequently supported in broader situation (Yildirim et al., 2025).

The same trends have followed in the tourism field. Liu et al. (2020) found that more and stronger positive attitudes toward sustainability were demonstrated through the tourists with more elaborate environmental knowledge levels. These dispositions, in their turn, predisposed them to the pro-environmental behaviour, including, but not limited to, less waste, using environmentally friendly providers, and local ecosystems respect. Weng et al. (2022) also confirmed such an association by demonstrating that increasing the awareness of environmental issues in tourists is also instrumental in the development of pro-environmental attitudes It is in this sense that awareness does not enlarge knowledge only but helps to build and enhance emotional and moral commitments which affect the way the tourists think and feel about sustainability. Therefore, these hypotheses were proposed:

H2: There is a positive influence between tourist environmental awareness and tourist attitude.

Limited research indicates that environmental awareness could strengthen the relationship between attitudes and behaviour. Tourists who are environmentally aware are more likely to act on their positive attitudes, narrowing the traditional attitude-behavior gap. For instance, Rafiq et al. (2022) discovered that hotel visitors with high environmental consciousness were more likely to practise towel reuse, whereas guests with favourable views but poor awareness frequently failed to put their plans into action. This emphasises the function of awareness as a bridge between attitudes and behaviours.

Lack of proper awareness can make tourists underestimate the relevance of their doings or even fail to identify chances to act sustainably. In turn, awareness creates the knowledge and motivation of translating the positive attitudes into actual practices. Mkumbachi et al. (2020) found out that the youth who had positive attitudes and environmental awareness had a higher tendency to adopt conservation. Yildirim et al. (2025) also found that the relationship between awareness and the attitudes enhances the sustainable behavioural results, this also confirms a moderating action of the former. Therefore, these hypotheses were proposed:

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H5: ***Tourist Environmental Awareness moderates the relationship between tourist attitude and tourist environmentally responsible behaviour.***

Tourist Attitude

Previous research in the tourism industry has constantly shown that environmental attitudes of the tourists contribute substantially to their environmental responsible behaviour. The findings of Weng et al. (2023) demonstrated that visitors that had more positive attitudes towards the environment were significantly more prone to the responsible behaviour. This underscores the significance of attitudes as the motivation factor that converts environmental worry to a tangible action. Regarding the concept of nature-based tourism, Lee and Jan (2015) have noted that introducing pro-environmental attitudes to tourists via educational activities or experience affected positively their participation in engaging with environmental responsible behaviour.

The same trends have been observed in more general environmental studies. An instance is Yildirim et al. (2025), who found that the attitude of the students towards environmental management was one of the key predictors of their willingness to participate in conservation efforts. This strengthens the argument that attitudes act as a very significant point of contact between awareness and action so that knowledge and values are demonstrated through responsible behaviours. The collective impression of these results is that in the quest to enhance sustainability in tourism, it is important to develop positive attitudes towards the environment. Therefore, these hypotheses were proposed:

H3: ***There is a positive influence between tourist attitude and tourist environmentally responsible behaviour.***

The idea that environmental awareness is moderated by tourist attitudes on the behaviour has been supported by a number of theoretical models and empirical researches. The traditional model of knowledge, attitude and behaviour (KAB) by Kallgren and Woods (1986) is the theory that states that knowledge is acquired by a person and that influences their attitudes and in turn, these attitudes form the cornerstone through which they direct their behaviour. Tourism research presents evidence that is in line with this model. An example is that, the environmental knowledge of tourists was shown to increase the emotional affinity of tourists to nature as shown by Kim et al. (2018) and this is a key motivator to pro-environmental behaviours.

This it implies that awareness would trigger the feeling of concern, attachment, or appreciation which would reinforce attitudes that promote responsible. These procedures are still enhanced with the help of cognitive, affective and conative framework, which postulates that cognitive evaluations which eventually result into conative responses i.e. behaviour. This and the above sequence can be described with regards to tourism whereby awareness develops the cognitive foundation, attitudes develop the motivational bridge and behaviour develops as the culminating manifestation of the psychological processes. Combined, these facts demonstrate the mediating significance of attitudes in making the change of environmental awareness into practice. Therefore, these hypotheses were proposed:

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H4: ***Tourist attitude mediates the relationship between tourist environmental awareness and tourist environmentally responsible behaviour.***

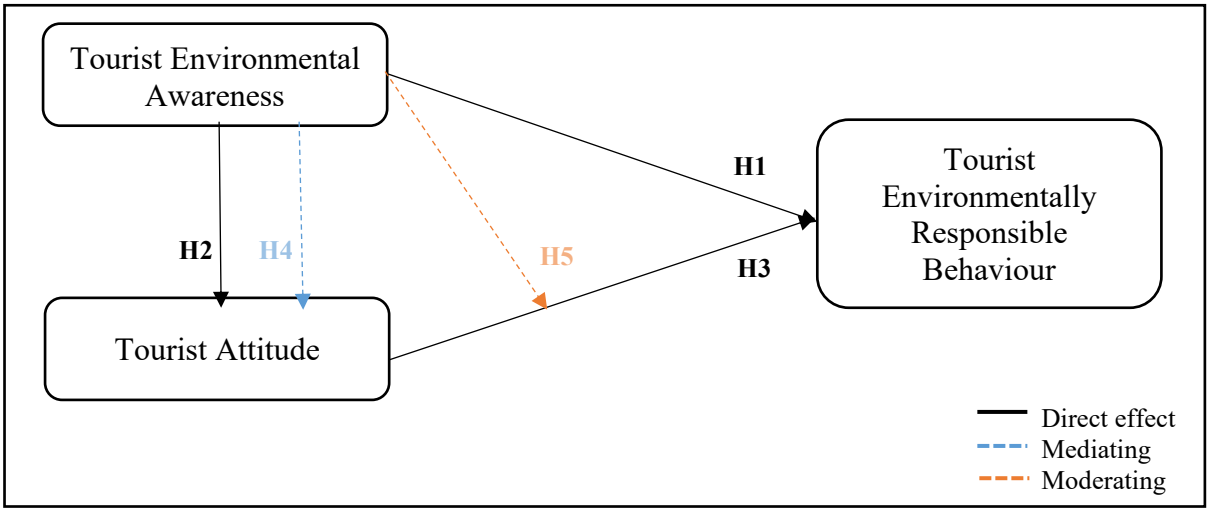

Figure 1: Proposed Conceptual Framework

Sources Adapted: Aman et al., 2021; Liu et al., 2021

Research Methodology

The research is based on a positivist paradigm and uses the techniques of quantitative research to prove the associations of the hypothesized variables. Quantitative approach was used as it helps the researcher to investigate causal correlations in a natural non-interventive environment (Creswell, 2010). The sampling method was a cross-sectional design that was done in a number of weeks. The focus of the purposive sampling was that of Generation Z tourists (age 18 and above) who had previously visited Taman Negara Pahang in Malaysia (Fikree and Zerihun, 2019). The minimum needed sample size was calculated through the use of G*Power software and meant 107 respondents; hence, there was no formal sampling frame and using this software was deemed necessary. This research was able to achieve an adequate number of valid data, which fulfilled this condition and granted sufficient statistical influence to test the hypothesis (Hair et al., 2017).

To analyze the data, SPSS had been utilized to conduct descriptive and preliminary tests and SmartPLS 4.0 with Partial Least Squares Structural Equation Modelling (PLS-SEM) to measure the measurement and structural models. The choice of PLS-SEM was determined by its high predictive power and high appropriateness to studies that have a comparatively small sample size (Dash and Paul, 2021). It was a questionnaire created due to a thorough literature analysis of what other researchers have claimed about the topic and adapted to a five-point Likert scale to increase clarity and convenience of answering. The content validity was determined by the use of the expertise of the review and reliability decided by the Cronbach alpha values which were above the recommended values (Sekaran and Bougie, 2016).

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Result

Table 1: Demographic Profile

Demographic	Frequency	Percentage (%)
Gender		
Male	170	59.6
Female	115	40.4
Race		
Malay	151	53
Chinese	56	19.6
Indian	17	6
Others	61	21.4
Status		
Single	232	81.4
Married	53	18.6
Level of Education		
SPM	17	6
Diploma	41	14.4
Bachelor's degree	227	79.6
Occupation		
Student	127	44.6
Employed	158	55.4
Unemployed	-	-
Level of Income		
Below RM2000	147	51.6
RM2001 to RM4000	108	37.9
RM4001 and above	30	10.5

Demographic profile of the respondents indicates that males (59.6%) are slightly more than the females (40.4%). To 53 percent to 19.6 percent within the Malays, Chinese, Indians, and others represented the majority and minority demographics within the country respectively, as Malaysia is multicultural but still retains the majority in the demographics. The majority of respondents were single (81.4%), which is consistent with the researched generation (Generation Z), as the younger generation is often younger, being still in the adulthood age. The education level was also very high and almost four out of five respondents had attained a bachelors degree, which indicated that the respondents are highly educated people who are most likely to be more concerned with issues related to the environment. Occupational status was occupationally balanced with 55.4% taking up employment and 44.6% being at school indicating that the mix of occupational status consisted of both young graduates and undergraduates. The level of income was also low with over fifty percent getting less than RM2000 income and only 10.5 percent earning over RM4000 a year that showed the financial situation of this generation. All in all, the sample was comprised of young, unmarried, and well-educated Malaysians with a low level of disposable income which are representative of the Gen Z tourists advertised to in this research. This profile has been specifically pertinent in cases of examining an environmentally responsible behaviour and because Gen Z are mostly more digitally connected, socially conscious, and sensitive to sustainability messages, but because they often have a lower income level and it can negatively affect their capability to continuously translate positive attitudes into pro-environmental behaviours.

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Reliability and Validity

The measurement model was critically evaluated in order to determine reliability and validity of the research instruments. Table 2 shows that all constructs had a Cronbach alpha of above the acceptable level of 0.60 indicating satisfactory to high internal consistency among the items in the research. Moreover, the composite reliability (CR) scores of both structures were greater than the norm of 0.70 that validates the stability and strength of the measuring scales. The values of the extracted average variance AVE too exceeded 0.50, thus showing that over half of the variance of the indicators were accounted by their specific constructs. Together, the results have a great compass of convergent validity that confirms that the indicators adequately represented the theoretical concepts that it was meant to measure (Hair et al., 2017).

Table 2: Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Environmental Awareness	0.794	0.856	0.600
Tourist Attitude	0.869	0.906	0.661
Environmentally Responsible Behaviour	0.845	0.906	0.764

Hypotheses Testing

The direct path hypothesis testing results are provided in Figure 2, and a bootstrapping, with 5000 resamples, and a 95 percent confidence interval were viewed as the correct approach to this test. This was done so as to enhance the reliability and invariance of the parameter estimates so that the results were not affected by the sampling error. Consequent to the suggestions of Hair et al. (2017), a path was thought to be statistically significant when the p-value was below 0.05 and the t-value was over 1.96 on a two-tailed t-test. The application of these thresholds gave a stringent and open standard of the evaluation of the proposed relationships between constructs. Consequently, the analysis provided strong data used in the framework of estimating the predictive validity of the model, as well as a stable estimation of the strength and significance of the identified effects.

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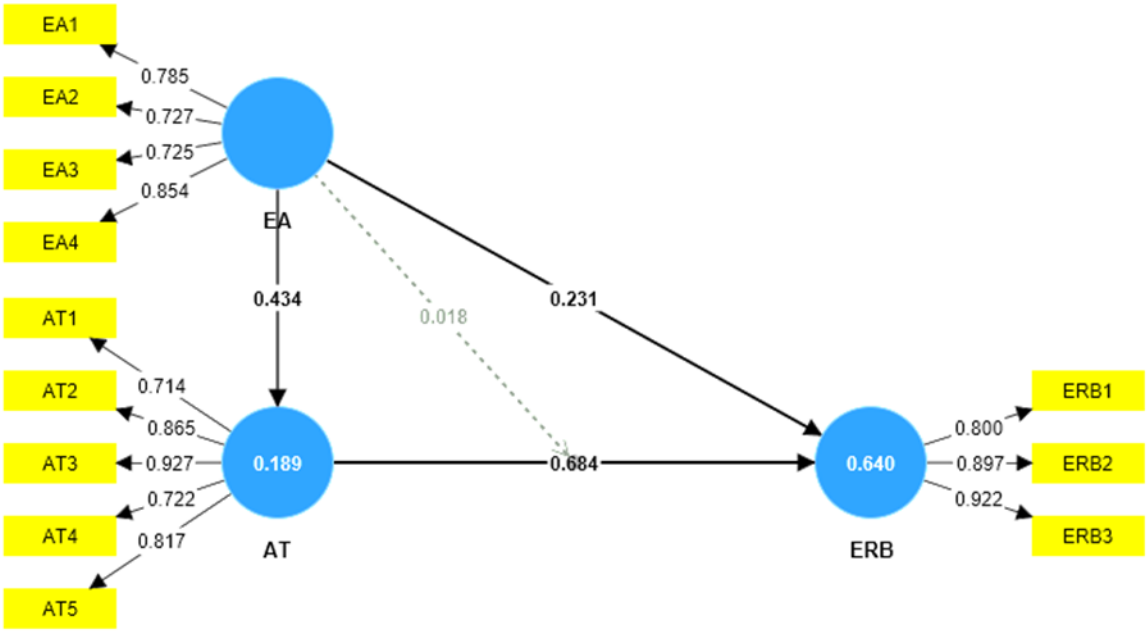

Figure 2: Structural Equation Modelling Analysis

Table 3 indicates that four out of the five hypotheses suggested were accepted which is good evidence that the environmental awareness and attitudes were relevant in the formation of environmental responsible behaviour (ERB). The fact that H1 was significant ($\beta = 0.434$, $t = 11.242$, $p < 0.001$) supports the argument that environmental awareness is a direct predictor of environmentally responsible behaviour (ERB). This implies that knowledge tourists have higher chances of being responsible in terms of resource conservation, minimizing waste and also respecting local ecosystems. These findings can be attributed to the findings of Aman et al. (2021) and Tang et al. (2022), who said that the knowledge of the environment is always relevant to real, sustainable practices. Yildirim et al. (2025) also added that in the absence of proper awareness, there is a likelihood that sustainability initiatives will fail to make any significant behavioural change.

H2 was also found to be supported ($\beta = 0.232$, $t = 5.437$, $p < 0.001$), as the more informed tourists have the more positive attitudes to sustainability they develop. This result is aligned with the previous studies in environmental education (Dillon and Gayford, 1997; Yildirim et al., 2025) that show that the higher the level of awareness, the higher the level of conservation attitude. Similar findings were recorded in the tourism context, where Liu et al. (2020) and Weng et al. (2022) find that tourists who are better informed about environmental problems are more favourable in their attitudes, and awareness is the key to sustainability.

H3 ($\beta = 0.684$, $t = 12.783$, $p < 0.001$) was the strongest relationship, as it showed the important role of attitudes in predicting ERB. The result supports the role of attitudes as a motivational factor, which is in line with the Theory of Planned Behavior (Ajzen, 1991) and the knowledge-attitude-behaviour model (Kallgren and Woods, 1986). The empirical researches conducted by Weng et al. (2023) and Lee and Jan (2015) also reveal that positive ecological concern and appreciation of natural environments positively affect the adoption of alternative practices by tourists, who tend to recycle and conserve their use of energy. These findings support the idea that attitudes are core in the economic integration of the gap in awareness and behaviour.

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H4 also contributed to this relationship (β = 0.299, t = 8.223, p < 0.001), thus proving that there is a correlation between environmental awareness and ERB, but indirectly, via attitudes. This meditating effect is depicted to be models like cognitive-affective-conative model where, awareness is the cognitive base; attitudes are the affective response; and behaviour is the outcome of behaviour. Similar conclusions were made by Kim et al. (2018), who concluded that awareness results in emotional attachment to nature that subsequently results in sustainable practices. These results emphasize that awareness is not a direct relationship with behaviour and at the same time, it reinforces the attitudinal processes that promote responsible behaviours. Nonetheless, H5 could not be supported (β = 0.015, t = 0.510, p = 0.610), which means that the mediating attitude expected to exist between awareness and behaviour was not significant in this research. This is an indication that both awareness and attitudes are significant predictors of ERB but the indirect route might not necessarily be clear. This effect may be diluted by contextual issues including situational barriers, financial constraints, or social rules. Awareness may also serve as moderator as suggested by Rafiq et al. (2022) increases the magnitude to which positive attitudes are turned into behaviour, as opposed to mediating the relationship between the two. This observation underscores the importance of additional studies that should undertake to examine other possible mechanisms of interaction between awareness and attitudes to affect environmentally responsible behaviour among tourists.

Table 3: Results of Hypotheses Testing

Hypotheses	Path Coefficient	STDEV	*t*-value	*p*-value	Decision
H1	0.232	0.042	5.437	0.000	Supported
H2	0.434	0.039	11.242	0.000	Supported
H3	0.684	0.053	12.783	0.000	Supported
H4	0.299	0.036	8.223	0.000	Supported
H5	0.015	0.036	0.510	0.610	Not Supported

As revealed in Table 4, the R2s reveal that the model has a moderate to a strong capacity of explanation (Hair et al., 2017). Environmental awareness explained 18.6% of tourism attitude, which was reflected in the R 2 of 0.186. It implies that though awareness is a considerable factor in the formation of how tourists brainstem sustainability, other influences are also likely to impact the development of the attitudes, including personal values, culture, or social expectations. On the contrary, environmentally responsible behaviour (ERB) exhibited far much better explanatory power with R 2 of 0.636. The fact that the environmental awareness and tourist attitude explain 63.6% of the variation in ERB is an indication that the two variables go together. This value is high and can be regarded as an indication of a high effectiveness of the model in forecasting pro-environmental behaviours amongst tourists. It also brings into focus the role of cognition and psychological factors, which indicate that the combination of awareness and attitudes is effective driving forces of sustainable behaviour. Generally, these results indicate that the framework is very strong in narrating the dynamics of ERB especially amongst the Generation Z tourists. Although awareness did not influence the attitudinal aspects much, the combination of the positive attitudes and awareness had a great effect on increasing the chances of responsible behaviour. This substantiates the imperatives of the tourism managers and policymakers in addressing the issue of developing awareness-raising activities, as well as the approaches of developing positive attitudes towards sustainability.

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Table 4: R^2 values

Construct	R^2
Tourist Attitude	0.186
Environmentally Responsible Behaviour	0.636

Discussion

It has revealed that environmental awareness contributes to more favourable attitudinal direction to the environment among Gen Z who have visited Taman Negara Pahang and that awareness and attitude are both significant predictors of environmentally responsible behaviour (ERB). The awareness also acts indirectly by reinforcing the attitudes which can then be translated to actions in the day-to-day life. Practically, on realizing the ecological sensitivities of the park and the effects of their decisions, young visitors will be more interested in sustainability and the kind of values they will possess will be projected on what they practice on the ground. These trends are in line with the current theory and previous evidence. Both the Theory of Planned Behaviour and the Knowledge-Attitude-Behaviour model find attitudes as the closest source of action, making the attitudinal changes so powerful in the case of ERB (Ajzen, 1991; Kallgren and Woods, 1986). Tourism and environmental education research also find that awareness can reinforce attitudes and promote responsible behaviours, and in an environmental context with cause and effect clearly visible in nature, it does so (Dillon and Gayford, 1997; Lee and Jan, 2015; Liu et al., 2020; Aman et al., 2021; Tang et al., 2022; Weng et al., 2022). In terms of Value Belief Norm (VBN), personal norms and a sense of moral obligation can also become activated with the help of awareness to provide a motivational impulse into these cognitive and attitudinal directions (Ghazali et al., 2019; Fenitra et al., 2022). The anticipated moderating effect of the attitude and behaviour relationship strengthening with the creation of awareness was, however, not supported. This may be explained by a number of contextual issues. The awareness level in well-educated Gen Z sample can already be high, which means that it has minimal capacity to increase the effect of attitudes. Good intentions can be blunted by situational frictions such as the lack of recycling facilities, access to refill location, insufficient and vague signage, and poorly-imposed rules at the point of choice. Decisions in favor of convenience can also be pushed by budget and time limitations common to this cohort even with good intentions (Prayag et al., 2022). Even though the attitude-behaviour gap in certain environments can be reduced due to awareness, the same cannot be assured (Rafiq et al., 2022). These inconsistent findings among young travellers indicate that you can act in the easiest, cheapest, and socially acceptable way when the conditions of favourable attitudes are enabled, and these actions are likely to take place (Qiu et al., 2022). These insights can be compared to the demographic profile of the study, which the existence of young, predominantly single, and highly educated Malaysians is a segment that is both best connected and receptive to sustainability messages, but sensitive to price and convenience.

The manner in which environmental awareness and attitudes are being formed is a crucial element in a vulnerable ecosystem like Taman Negara and in this case, it can be enhanced by place-specific application of communication, as opposed to generic communication. Moreover, a highly immersive and emotional interpretation can contribute to attitude stickiness, and open sustainability contributes to credibility and supports ERB (Butnaru et al., 2022; Yu et al., 2024). The intentions can be increasingly converted into regular behaviour by social-norm nudges as well as eliminating small frictions. Combined, the results enhance the knowledge of the ERB of Gen Z in a Taman Negara reserved park. They demonstrate how awareness and attitudes are trustworthy, mutually supportive prognosticators of responsible behavior, though attitudes

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have a more significant role to play. The findings reveal that there is a direct as well as an indirect effect of awareness and the results should not be probed that awareness will always strengthen the attitude behaviour relationship. For managers and policymakers, the key actions are to provide clear and tailored information throughout the visitor experience, create inspiring and emotionally engaging opportunities that connect personal values with conservation goals, and facilitate sustainable choices by designing environments where low-impact options are obvious, easy to choose, and affordable. (Ajzen, 1991; Lee & Jan, 2015; Weng et al., 2022; Butnaru et al., 2022).

Implication, Limitation, And Future Research

The paper has both scholarly and clinical implications. Academically, it enhances the richness of sustainability tourism research by revealing how the combination of environmental awareness and attitude would help in the formation of environmentally responsible behaviour (ERB) in the case of tourists who are part of Generation Z and in Malaysia. It offers data that backs up the existing models, like the Knowledge-Attitude-Behaviour (KAB) model and the Theory of Planned Behaviour (TPB), and also emphasizes the complementary abilities of attitudes and awareness to one another when it comes to ecotourism matters. In a practical sense, the results imply that park managers and policymakers must develop initiatives that are not merely educative to the visitors. Interactive interpretation, immersive eco-activities and visible practices in sustainability are some of the efforts that can be used to stimulate positive attitudes and translate awareness into real behaviour change in order to make sure that in doing so, young visitors are actively involved in conservation.

Concurrently, there are weaknesses to the study. Since the study was done on a single location, that is, Taman Negara Pahang, the findings cannot be expected to be applicable in other locations with a different cultural or infrastructural background. Self-reported survey is also associated with the problem of social desirability effect, in which respondents can exaggerate their eco-friendly behavior. Moreover, young well-educated Malaysians were mainly included in the sample, and it whereas suitable to investigate Gen Z, might fail to gauge the views of visiting international tourists or other age groups. These constraints imply that the findings will be useful, but should be perceived with a certain level of caution and perceived as context-derived.

Conclusively, future research can be done in a number of ways. There is the possibility that such awareness-attitude-behaviour patterns are more generally applicable when comparative studies are done on generations, cultures or destinations. The longitudinal studies would also come in handy to monitor the change of environmental attitudes and behaviours during repeated visits or intervention of specific nature. The possibility to combine survey with other qualitative methods like interview or face to face observation can provide deeper information into the attitude-behaviour gap between intentions and reality. Lastly, the enabling conditions like affordability, infrastructure and social norms should also be included in the future works to get a picture of how they assist or delay tourists in converting intention to regular sustainable behaviors.

Conclusion

This research paper will add to the existing literature on sustainable tourism by showing the role of environmental awareness and attitudes in every behaviour of the technically referred to as environmentally responsible behaviour (ERB) of the generation z tourist visiting Taman

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Negara Pahang. The results have indicated awareness is a direct predictor of ERB and indirectly contributes to behaviour via attitudes highlighting the role of both cognitive and attitudinal routes. The strongest predictor was found to be attitudes which indicates that knowledge is not enough but must be translated into positive evaluations that would lead to action.

Interestingly, there was no support on the predicted moderating effect of awareness between attitude and behaviour, and this implies that structural or situational constraints might constrain the level of influence by which awareness influences responsible conduct. This underscores the need to use enabling factors like affordability, convenient travel, and infrastructure of the destination when stipulating sustainable practices among the younger travellers.

On the whole, the study contributes to the development of theoretical views, that is, the Theory of Planned Behaviour, the Knowledge-Attitude-Behaviour model and the Value-Belief-Norm framework seeks to validate the central role of attitudes, but also pinpoints the boundaries of knowledge as either a limitation or moderating variable on the information and attitudes. In practice, the research offers insights into the fact that sustainable tourism approaches must extend beyond creating awareness in order to emphasise the development of pro-environmental attitude and provision of enabling environments that ensure responsible behaviour is the preferable choice among Gen Z ecotourists.

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