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Gen Z and the flight shame movement: examining the intersection of emotions, biospheric values, and environmental travel behaviour in an Eastern society

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ABSTRACT

Using the norm activation model (NAM), our research delves into the impact of environmental concerns, and environmental self-assets on environmentally responsible travel behaviour (ENVRB), and the role of affective constructs (love for nature [LNA], respect for nature and flight shame) on travelling behaviour among Generation Z in India. Through a prediction-oriented and exploratory approach using partial least squares–structural equation modeling (PLS-SEM), our study reveals strong effects of environmental concerns and self-assets on responsible travel behaviour, and the mediating role of LNA in these relationships; the mediating role of respect for nature was insignificant. Furthermore, flight shame emerges as a strong predictor of responsible travel behaviour, mediating the transition from love and respect for nature to responsible travel behaviour. Our findings underscore the importance of emotional factors such as love and respect for nature in promoting sustainable consumer behaviour. We emphasise the need for tailored sustainable tourism initiatives to overcome emerging economies' cultural patterns and psychological barriers. The findings suggested that nurturing a deep love and respect for nature and promoting environmental self-assets and concerns are crucial for successful sustainable tourism initiatives among Gen Z. Avenues for future research are also discussed.

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Gen Z; travel behaviour; flight shame; affective drivers; biospheric values; eastern society

Introduction

Climate change is a critical challenge of the twenty-first century, and the aviation industry significantly contributes to greenhouse gas emissions (Lenzen et al., 2018). Despite this, the industry is expected to grow considerably by 2030 (IATA, 2018), making it challenging to achieve carbon reduction goals. To address this, the aviation industry is committing to technological solutions for radical transformation (Peeters et al., 2019). However, government, industry, and individual actions are also necessary, including changes in behaviour and attitudes towards the environmental impacts of travel (Aasen et al., 2022; Becken & Coghlan, 2022; Cocolas et al., 2020; Fang et al., 2022; Higham et al., 2022).

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Becken and Coghlan (2022), Davison et al. (2014), and Gössling et al. (2015) have argued that changes in tourist behaviour and lifestyle are a prerequisite to addressing and reducing the environmental impacts caused by air travel. In recent years, flight shame, the personal shame associated with flying on commercial aircraft, has gained attention in academia and media, particularly in Europe (Flaherty & Holmes, 2020). Acknowledged by the International Air Transport Association (IATA), the notion of flight shame has prompted European governments to undertake action to reduce carbon footprints caused by the aviation industry (Cocolas et al., 2020), such as charging additional taxes.

While previous empirical studies dealing with environmentally conscious air travel behaviour have focused on alternative modes of transport (Dickinson et al., 2010), factors affecting flying decisions (Hares et al., 2010; Jacobson et al., 2020), pro-environmental values and norms (Büchs, 2017; Gossling et al., 2020) and environmental knowledge (Chiambaretto et al., 2021), few have investigated the affective aspect of air travel decision-making involving positive emotions such as love and respect for nature (Kals & Maes, 2002; Shepherd et al., 2009), and negative emotions such as eco-anxiety (Mkono, 2020) and flight shame (Chiambaretto et al., 2021; Doran et al., 2022; Gössling et al., 2019; Helm et al., 2018; Mkono, 2022; Mkono et al., 2020; Wang & Wu, 2016). Furthermore, these studies have conceptualised these concepts' normative, value, and emotional foundations but have limited capacity to explain how, for example, a mixture of negative emotions and biospheric values constituting flight shame could inspire pro-environmental travel behaviour.

Studies have explored sustainable travel behaviour among Generation Z (Gen Z) (born between 1995 and 2010), but the factors driving their environmentally responsible behaviour and travel attitudes remain inconclusive (Stylos et al., 2021). Contradictory findings exist across various studies (Amadeus, 2020; European Travel Commission, 2020; Haddouche & Salomone, 2018), with personal norms identified as the primary predictor of pro-environmental behaviour by D'Arco et al. (2023) and eudaimonic environmental motivations influencing green travel choices by Lin et al. (2022). Mandić et al. (2023), Ribeiro et al. (2023), and Salinero et al. (2022) found that personal values affected pro-environmental travel behaviour, and Prayag et al. (2022) reported inter and intra-generational differences in environmental attitudes and travel behaviour. Social media exposure was also found to influence the specific behaviour of Gen Z (Seyfi et al., 2023).

The attitudes of Gen Z towards environmentally responsible travel behaviour (ENVRB) merit further investigation due to several critical reasons. First, Gen Z represents the future consumer base and decision-makers whose actions will have a significant impact on the environment. Understanding their attitudes and behaviours related to travel is essential for developing sustainable practices and mitigating the environmental impacts of the aviation industry (Becken & Coghlan, 2022; Büchs, 2017). Second, Gen Z is often recognised as the most environmentally educated and concerned cohort (Deloitte, 2021; Heo & Muralidharan, 2019) with a heightened awareness of climate change and its implications, and their consumption patterns will significantly impact the environment (Heo & Muralidharan, 2019). As such, investigating their attitudes towards ENVRB is imperative as it can provide valuable insight into the factors driving sustainable choices and inform strategies to promote pro-environmental actions. Lastly, Gen Z's preferences and values differ from previous generations (Stylos et al., 2021), making it necessary to investigate their unique perspectives and motivations. By exploring how they conceptualise and engage with environmentally responsible travel, this research contributes to the comprehensive understanding of sustainable tourism and enables policymakers, activists, and industry stakeholders to tailor interventions and policies that resonate with this influential demographic. This study fills the gap in empirical research by investigating the role of emotions as predictors of pro-environmental behaviour among Gen Z.

In addition, our research aims to investigate how affective constructs mediate the connection between environmental concerns, environmental self-assessment, and ENVRB. Specifically, we

investigate how love for nature (LNA), respect for nature, and flight shame impact the connection between environmental concerns, environmental self-assessment, and ENVRB. We focus our empirical analysis on India, the world's third-largest aviation market (Investindia 2022), where Gen Z accounts for 27% of the population.

The following research questions will be addressed in this study:

- How do environmental concerns and self-evaluations impact individuals' inclinations towards ENVRB?
- How do the affective constructs (love and respect for nature) influence the connection between environmental concerns, environmental self-assets, and ENVRB?
- What is flight shame's effect on ENVRB and the connection between environmental concerns, environmental self-assets, and ENVRB?

The study focuses on the norm activation model (NAM) (Schwartz, 1977), which is a social psychological theory that explains the connection between personal norms ["one's own internal moral compass" (de Groot et al., 2021)] and pro-environmental behaviour. The NAM posits that environmental concerns and environmental self-evaluation, such as love and respect for nature, activate personal norms, which in turn motivate individuals to engage in pro-environmental behaviour (Degenhardt, 2002; Kals & Maes, 2002; Saari et al., 2020; Schwartz, 1977; Shepherd et al., 2009; Wang & Wu, 2016; Wu & Zhu, 2021). Feelings of guilt or shame, such as flight shame, can also activate personal norms, leading individuals to reduce environmentally harmful behaviour (Chiambaretto et al., 2021; Gössling et al., 2019; Mkono, 2022; Mkono et al., 2020; Wang & Wu, 2016). For instance, an LNA and respect for the environment could activate an individual's personal norms to act in environmentally responsible ways, such as using public transportation instead of driving a car. Likewise, negative emotions associated with air travel's environmental impact, such as guilt and shame, may activate personal norms to reduce flights and seek alternative modes of transportation.

Drawing on the NAM as a theoretical framework, this study aims to contribute to the understanding of the motivational factors providing insights into the psychological mechanisms underlying ENVRB among Gen Z. The findings of this study can have practical implications for policymakers, activists, and stakeholders in the aviation and tourism industries. By understanding the factors influencing Gen Z's ENVRB, policymakers can design targeted interventions and policies to promote sustainable travel practices. Additionally, the study's insights into the role of affective constructs, such as flight shame, can inform the development of strategies to reduce environmentally harmful actions associated with air travel. Ultimately, the study aims to contribute to sustainability efforts by guiding the design of initiatives that encourage pro-environmental behaviour among Gen Z in India, the world's third-largest aviation market.

Theoretical background and hypotheses development

Gen Z exhibits unique characteristics reflecting their deep-rooted environmental awareness and commitment to sustainable living, which makes investigating their attitudes towards ENVRB, particularly relevant. Growing up in a world marked by heightened discussions on climate change and environmental issues, Gen Z has actively embraced pro-environmental values and spearheaded a range of impactful initiatives (Prayag et al., 2022). This generation's passion for climate activism has been particularly evident, as they have organised protests, strikes, and campaigns demanding urgent action on climate change (Seyfi et al., 2023). Moreover, Gen Z's sustainable consumption patterns have driven a shift towards ethical and eco-friendly products, emphasising reusable items and advocating for companies with environmentally responsible practices (McKinsey, 2023). They have also championed the transition to renewable energy

sources, supporting clean energy initiatives and advocating for policy changes to accelerate the adoption of solar, wind, and other renewable technologies (Gomes et al., 2023). Harnessing the power of social media, this generation effectively utilises online platforms to raise awareness, share informative content and mobilise support for environmental causes (Seyfi et al., 2022). While individual actions, such as recycling, reducing food waste, conserving water, and embracing plant-based diets, demonstrate Gen Z's commitment to minimising their environmental impact, it is their collective efforts that have truly positioned them as a driving force for positive change and a source of inspiration for others to join the movement towards a more sustainable future.

Understanding the factors influencing ENVRB among Gen Z is crucial for harnessing their passion for positive change. The hypotheses developed below incorporate emotional aspects, such as LNA, respect for nature, and flight shame, which are highly relevant to Gen Z due to their heightened awareness of climate change and environmental issues. The study's focus on the mediating effects of these emotional and ethical factors offers a unique perspective on the attitude–behaviour relationship within the context of Gen Z's ENVRB.

Norm activation model and environmentally responsible travel behaviour

The NAM provides a theoretical framework for understanding the factors influencing ENVRB, including awareness, consequences, and personal norms (Han, 2014; Schwartz, 1977; Steg & de Groot, 2010). In this study, we build upon the tenets of the NAM to develop our hypotheses. According to NAM, individuals' awareness of the consequences is crucial, as it activates the personal norms influencing specific behaviour (De Groot & Steg, 2009; Han, 2014). Awareness is a "perception of specific behaviour outcomes", and the ascription of responsibility reflects a "personal feeling of responsibility for the consequences of specific acts" (De Groot & Steg, 2009; Schwartz, 1977). Personal norms refer to "behavioural self-expectations experienced as feelings of moral obligation" (Harland et al., 2007).

The NAM has been widely recognised as a mediator and moderation model (Onwezen et al., 2013). De Groot and Steg (2009) and Steg and de Groot (2010) studies strongly support its role as a mediator. Han (2014) notes that people often realise the negative impact of their actions before taking responsibility, which triggers personal norms and encourages environmentally sustainable behaviour. The NAM has been applied extensively to study altruistic behaviour, including in the sustainable tourism domain (see Liu, An, et al., 2020; Liu, Teng, et al., 2020; Owen et al., 2018; Wang et al., 2021), while an increasing number of scholars are combining the NAM with the Theory of Planned Behaviour (see Davison et al., 2014). By utilising the NAM, we aim to investigate the interrelationships and mediating effects of love and respect for nature, flight shame, environmental concerns, and self-assets on ENVRB among Gen Z in India. This integration of emotional and ethical aspects, as proposed by Han (2014), allows us to delve deeper into the underlying processes that shape individuals intentions' and behaviours.

It is important to note that ENVRB is influenced by various internal, social, situational, and demographic determinants and contextual factors, which need further exploration (Nguyen & Johnson, 2020; Steg & Vlek, 2009). Recent research in sustainable tourism also supports this idea, as it confirms that pro-environmental behaviour is contextually dependent and varies across nations (Juvan & Dolnicar, 2017; Kim & Stepchenkova, 2020; Li & Wu, 2020; Lin et al., 2022; Mandić & Vuković, 2022; Udall et al., 2020; Wu et al., 2021; Xu et al., 2020). While increasing research focuses on developed Western societies, more extensive theoretical justifications and behavioural evidence are needed for non-western communities (Alzubaidi et al., 2021; Lin et al., 2022), where divergences in environmental attitudes and behaviours have been noted (Chwialkowska et al., 2020). To better understand the factors influencing ENVRB, integrative models like the NAM can be used to study individuals with diverse characteristics (Bleidorn

et al., 2021). This study's contribution is to expand our understanding of these factors and their effects on ENVRB.

This study responds to the call for innovative evidence on ENVRB antecedents in emerging economies, specifically among Gen Z, across different demographic segments Alzubaidi et al., 2021; Bleidorn et al., 2021; Nguyen & Johnson, 2020). Our approach aligns with De Groot and Steg (2009) interpretation of the NAM as a mediator model, which asserts that individuals must first recognise the potential outcomes of their actions to develop a sense of responsibility. This sense of accountability triggers personal norms, leading to specific behaviours (De Groot & Steg, 2009). Moreover, we incorporate Han's (2014, p. 464) revision of the model, which proposes that "activation of one's personal norm and prosocial intention formation is more sufficiently explicated when positive and negative (pride and guilt) aspects of the emotional process are involved", by examining the mediating role of flight shame. Using the NAM, we explore how love and respect for nature, flight shame, environmental concerns and self-assets are interrelated and influence ENVRB among Gen Z in India.

Hypothesis development

Environmental concerns

Environmental concerns encompass "one's evaluation and attitude towards their own and others' behaviour with environmental cnsequences" (Fransson & Gørling, 1999). It could refer to a specific attitude, responsible behaviour, or comprehensive value orientation (Fransson & Gørling, 1999). Previous research suggests that environmental concerns are positively associated with travel practices that promote sustainability, as increased awareness of environmental issues can inspire responsible travel behaviour (Coelho et al., 2017). Therefore, this study adopts this reasoning.

Helm et al. (2018) and Torkar and Bogner (2019) noted that consumers' attitudes towards ENVRB are founded on egoistic, social, or biospheric value orientations. However, psychological and cultural barriers can impede the translation of environmental concerns into ENVRB (Tam & Chan, 2017). Confidence is vital in connecting concern and conduct, as individuals and communities with elevated confidence levels exhibit a stronger concern-behaviour association (Tam & Chan, 2018). Environmental knowledge and risk perception levels also influence environmental concerns (Saari et al., 2021). This relationship has been observed in longitudinal studies conducted in the USA (Qiao & Dowell, 2022) and South Korea (Lee et al., 2014). Moreover, environmental concerns, particularly understanding the consequences of specific behaviour, could explain flight shame (Chiambaretto et al., 2021). However, Chiambaretto et al. (2021) study focused on understanding the environmental footprint of air transport does not provide convincing empirical evidence demonstrating the relationship between constructs.

Environmental concerns are related to LNA and respect for nature (Wu & Zhu, 2021). Emotional attachment and knowledge about nature are the foundation for caring for its welfare (Schultz, 2002). Further, as a "property of a consumer's relationship with nature" (Dong et al., 2020, p. 2), LNA can strengthen the connection between the consumer and the ultimate goal: ENVRB (Ahuvia, 2005). Simultaneously, respect for nature reflects our "most fundamental duty toward nature" (Taylor, 1981, p. 197). While the literature suggests that environmental concerns significantly impact environmentally conscious behaviour, factors such as values, knowledge, trust, and affinities can influence this relationship. However, it remains unclear whether awareness of environmental problems affects emotional and ethical affinity toward nature, ultimately driving more environmentally conscious behaviour. A further empirical investigation is required to establish this relationship.

To delve deeper into these correlations, we put forth the following hypotheses:

- H1—Environmental concern has a positive effect on ENVRB.
- H1-1—Environmental concern has a positive direct effect on ENVRB.

- H1-6—Environmental concern has a positive effect on flight shame.
- H1-7—Environmental concern has a positive direct effect on flight shame.
- H1-10—Environmental concern has a positive effect on LNA.
- H1-11—Environmental concern has a positive effect on respect for nature.

Environmental self-assets

Environmental self-assets reflect "self-evaluation of one's capability to act when facing an environmental issue" (Saari et al., 2020). The construct draws from the theory developed by Sonenshein et al. (2014), suggesting how "environmentally aware individuals evaluate themselves positively around having assets and negatively around questioning their performances (self-doubts)". Environmental self-assets amalgamate a customer's worth, expertise, and knowledge resources, mirroring the degree of their familiarity with particular ecological problems and how this awareness results in certain conduct (Saari et al., 2020). Values are widely accepted determinants of ENVRB (Steg & Vlek, 2009), while experiences reflect our ability to advocate for particular environmental issues and concerns (Sonenshein et al., 2014). Environmental knowledge, the third type of self-asset, has direct (Cologna et al., 2022) and indirect (*via* attitudes and behavioural intentions) effects (Liu, An, et al., 2020; Liu, Teng, et al., 2020) on ENVRB. Thus, it can be hypothesised that environmental self-assets, which incorporate all these factors, will significantly impact ENVRB.

Flight shame refers to the negative emotion of shame people experience while being aware of the climate-damaging consequences of their acts (Chiambaretto et al., 2021; Mkono et al., 2020). Environmental self-assessment can explain flight shame since it reflects how a traveller is conscious and knowledgeable regarding specific ecological concerns and how this awareness is translated into particular conduct (Liu, An, et al., 2020; Liu, Teng, et al., 2020; Saari et al., 2020). Thus, it can be hypothesised that environmental self-assets will significantly impact flight shame. Further, both love and respect for nature are rooted in an individual's values, experiences, and knowledge (Martin & Czellar, 2017; Taylor, 1981), as "individual environmental identity plays a critical role in the formation of biospheric value orientation which is, in turn, manifested in greater emotional and ethical inclinations toward nature" (Martin & Czellar, 2017, p. 1). Since environmental self-assets combine a consumer's value, experience, and knowledge assets, it can be hypothesised that they will significantly impact respect and LNA. Moreover, feelings toward nature are also affected by the personal experience and understanding of socio-economic dependence (knowledge) on the natural environment, particularly in the least-developed countries (Marczak & Sorokowski, 2018).

Based on the above literature review, the following hypotheses are proposed:

- H2—Environmental self-assets have a positive total effect on ENVRB.
- H2-1—Environmental self-assets have a positive direct effect on ENVRB.
- H2-6—Environmental self-assets have a positive total effect on flight shame.
- H2-7—Environmental self-assets have a positive direct effect on flight shame.
- H2-10—Environmental self-assets have a positive effect on LNA.
- H2-11—Environmental self-assets have a positive effect on respect for nature.

Love for nature and respect for nature

Comprehending the affective facets of the relationship between humans and nature is of paramount importance (Schmuck & Schultz, 2002), as internalised motivations, such as love, awe, wonder, and respect, are powerful predictors of pro-environmental behaviour (Degenhardt, 2002; Kals & Maes, 2002). According to Kals and Maes (2002), there are three primary classifications of emotions specific to the environment: morality, sentimental attachment to nature, and ecological anxiety. LNA, a consideration of our research, falls under the second category and reflects a "feeling of inclination for nature or romantic attitude that is reflected in environmentally

responsible behaviour" (Kals & Maes, 2002). Perkins (2010) argues that most of the established measures of the human-nature relationship, such as connectedness to nature or the inclusion of nature in one's self, typically involve the cognitive facets of this relationship, leaving the phenomenon's emotional (affective) aspect unattended. According to Dong et al. (2020), this has remained the same since Perkins' article was published in 2010 because the number of such studies remained limited, with very few empirical attempts focused on specific aspects of ENVRB, such as recycling or green purchasing. Simultaneously, such deficiencies significantly constrain our understanding of emotions as psychological factors affecting ENVRB (Schmuck & Schultz, 2002).

The connected concept of respect for nature draws from the early work of Taylor (1981) on environmental ethics: the foundation of respect for nature is a moral stance rooted in personal ethical beliefs. Taylor (1981) wrote that esteeming nature encompasses four tendencies: comprising appraisal (forming evaluative judgments), conative (pursuing specific objectives), practical (behaving for a particular purpose), and emotional dimensions (experiencing certain emotions). Shepherd et al. (2009) conceptualise respect for nature as a "psychological value that captures the degree to which a person thinks it is important to be prudent with respect to managing natural resources and species, in line with the principles of sustainable development". A limited number of studies addressing the concept empirically (Saari et al., 2020; Shepherd et al., 2009; Wang & Wu, 2016) demonstrate a positive association between construct and ENVRB. However, LNA and respect for nature can also play a role in influencing negative emotions such as flight shame, as individuals who have a higher level of love and respect for nature may be more likely to experience negative emotions when engaging in environmentally harmful behaviour (Chiambaretto et al., 2021; Mkono et al., 2020). Overall, attention to the emotional aspects of the human–nature relationship can broaden our understanding of its contribution to ENVRB across generations in the emerging market of India.

From the literature review above, we can infer the following hypotheses:

- H3—LNA has a positive total effect on ENVRB.
- H3-1—LNA has a positive direct effect on ENVRB.
- H3-3—LNA has a positive effect on flight shame.
- H4—Respect for nature has a positive total effect on ENVRB.
- H4-1—Respect for nature directly affects ENVRB.
- H4-3—Respect for nature has a positive effect on flight shame.

Love for nature and respect for nature (mediation effects)

Research suggests that both love and respect for nature are essential in transforming individual environmental concerns, values, experiences, and knowledge (environmental self-assets) into ENVRB (Helm et al., 2018; Rhead et al., 2015; Saari et al., 2021; Wu & Zhu, 2021). For instance, Wu and Zhu (2021) found that emotional affinity (love) toward nature triggers personal values, creating a foundation for and guiding ENVRB. Meanwhile, Saari et al. (2021) verified the significance of awareness and risk perception (respect for nature) in translating environmental concerns into concrete responsible travel conduct. Helm et al. (2018) stressed the importance of biospheric values and cognition in fostering consciousness about global change and consequently modifying conduct. In contrast, Rhead et al. (2015) concluded that those who are less worried about the ecosystem (anthropocentric) are less likely to engage in ENVRB compared to those who are concerned (biospheric), confirming the relevance of respect and emotional affinity toward nature as a potential mediator in the environmental concerns—ENVRB relationship.

Studies conducted in the sustainable tourism domain have predominantly focused on environmental concerns, attitudes, and awareness as antecedents of ENVRB, while psychological attributes such as emotions and obligations have received insufficient attention as drivers or

mediators of such behaviour (Juvan & Dolnicar, 2017; Lin et al., 2022). However, Lin et al. (2022) particularly encourage research in countries and regions that have yet to be studied, such as India. Thus, delving into the mediating function of love and respect for nature in the relationship between environmental concern, environmental self-assets, and ENVRB can provide insights into promoting pro-environmental behaviour and help explain the attitude-behaviour gap.

Based on the above, it can be hypothesised that LNA and respect for nature mediates the relationship between environmental concern and ENVRB (H1-2, H1-3), the relationship between environmental self-assets and ENVRB (H2-2, H2-3), and the relationship between environmental self-assets and flight shame (H2-8, H2-9). Emotional and moral aspects such as love and respect for nature are crucial in transforming individual environmental concerns, values, emotions, experiences, and knowledge into ENVRB. Thus, exploring their mediating role in these relationships can shed light on promoting pro-environmental behaviour.

In light of the preceding studies, the following hypotheses are proposed:

- H1-2—LNA mediates the relationship between environmental concern and ENVRB.
- H1-3—Respect for nature mediates the relationship between environmental concern and ENVRB.
- H2-2—LNA mediates the relationship between environmental self-assets and ENVRB.
- H2-3—Respect for nature mediates the relationship between environmental self-assets and ENVRB.
- H2-8—LNA mediates the relationship between environmental self-assets and flight shame.
- H2-9—Respect for nature mediates the relationship between environmental self-assets and flight shame.

Flight shame (direct and mediation effects)

Flight shame (*Flygskam*) is a buzzword coined in Sweeden in 2017, describing a "feeling of climate guilt towards air transportation encouraging people to stop flying to diminish carbon emissions" (Gössling et al., 2019; Mkono et al., 2020). The notion is based on the assumption that numerous air travels are, in fact, non-essential or could be accomplished *via* less carbon-intensive modes of transportation (Chiambaretto et al., 2021). Nonetheless, even though individuals often understand the role air travel plays in global emissions (Chiambaretto et al., 2021), their inclination to modify their actions by employing alternate means of transportation is restricted by their disinclination to sacrifice travel convenience, availability, or affordability, and suffer the inconvenience of alternative transportation methods (Mkono, 2022).

Recent studies have found evidence of ongoing change in the social norms in favour of ambitious climate policies and support for market-based measures and policies that force airlines to reduce emissions (Gössling et al., 2020). Flight shame has also been positively associated with injunctive norms but not with descriptive norms (Doran et al., 2022), suggesting how feelings of flight shame depend upon the societal expectations of such emotional reactions. Flight shame is a negative emotion that could, like guilt and anger (Wang & Wu, 2016), affect ENVRB. Recent studies suggest that feelings of flight shame could mediate the transformation from one's environmental concerns to ecologically responsible travel behaviour, as they reflect a mixture of egoistic, social-altruistic, and biospheric environmental concerns (Helm et al., 2018). As a psychological attribute grounded in value orientations, feelings, and a sense of obligation, flight shame, like love or respect, could also mediate the transition from one's environmental concerns to ENVRB.

While no empirical evidence supports these hypotheses, they provide a theoretical framework for future research and highlight the importance of negative emotions, such as flight shame, in driving pro-environmental behaviour. Furthermore, an individual's capacity to act on an issue and behave pro-environmentally is grounded in values, knowledge, and experiences (Sonenshein et al., 2014), which are influenced by positive and negative emotions (Wu & Zhu, 2021). Therefore,

flight shame could be valuable for promoting sustainable behaviour by emphasising the adverse environmental impact associated with air travel.

Considering the previous research, the following hypotheses are proposed:

- H5—Flight shame has a positive effect on ENVRB.
- H1-4—Both LNA and flight shame significantly mediate the relationship between environmental concern and ENVRB.
- H1-5—Both respect for nature and flight shame significantly mediate the relationship between environmental concern and ENVRB.
- H1-8—LNA mediates the relationship between environmental concern and flight shame.
- H1-9—Respect for nature mediates the relationship between environmental concern and flight shame.
- H2-4—Both LNA and flight shame significantly mediate the relationship between environmental self-assets and ENVRB.
- H2-5—Both respect for nature and flight shame significantly mediate the relationship between environmental self-assets and ENVRB.
- H3-2—Flight shame mediates the relationship between LNA and ENVRB.
- H4-2—Flight shame mediates the relationship between respect for nature and ENVRB.

Figure 1 provides a visual representation of the hypotheses being tested.

Research methodology

The present research employs a deductive approach and quantitative cross-sectional research design.

Research context, sample, and data collection

Our research focused on the Indian context, an emerging market facing various environmental threats due to increasing unsustainable consumption (Kautish et al., 2021). To enhance the

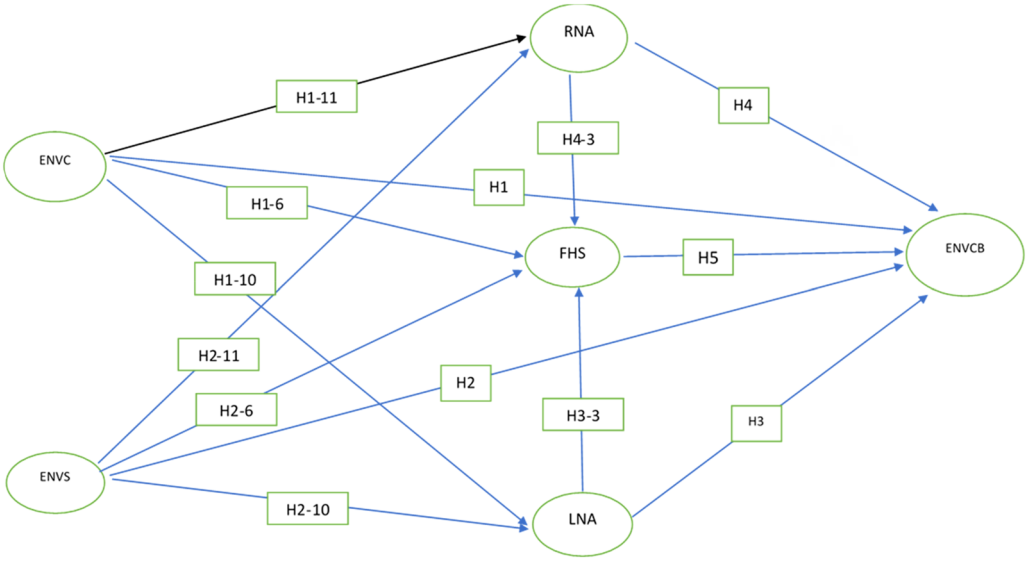

Figure 1. Proposed conceptual model.

Table 1. Socio-demographic profile of the respondents.

		Frequency	Percent
Gender	Male	253	56.7
	Female	193	43.3
Monthly income	Up to 0.5 million	201	45.1
	0.5 million – 0.1 million	121	27.1
	0.1 million–0.2 million	100	22.4
	Above 0.2 million	24	5.4
Education	Higher sec	105	23.5
	Graduate	173	38.8
	PG	149	33.4
	Doctorate	19	4.3
Nativity	Urban	195	43.7
	Township	147	33.0
	Rural Village	104	23.3
Have you ever travelled through air	Yes	446	100.0
How many time you have travelled through air	One time	225	50.4
	Two–four times	129	28.9
	Five–seven times	43	9.6
	Eight–ten times	11	2.5
	More than ten times	38	8.5
What was the reason for your travel	Vacations	205	46.0
	Business	52	11.7
	Leisure	76	17.0
	VFR	113	25.3
	Total	446	100.0

Note: The monthly income of the respondents in Indian Ruppees.

study's robustness, data were collected from a representative sample of the entire Indian population belonging to the Gen Z cohort. To ensure data diversity, four state capitals (Bengaluru, Kolkata, New Delhi, and Mumbai) were selected, representing the highest populated state capitals of Southern, Eastern, Northern, and Western India, respectively, as per the Indian census (Kapoor & Dwivedi, 2020). Using a cross-sectional design, data were collected from all participants from August to October 2022 with the help of a professional market research firm, *Think Survey* (2023), which is active in the Indian market and has a presence in almost all the cities, and includes 17154 responses. The firm has 832 Gen Z registered users in these selected 04 state capitals, and 120 responses from each state capital have been collected for this study. The sampling frame consists of 832 respondents of Gen Z across these 04 state capitals, and because of the geographical spread, the authors believe the structure adequately represents Gen Z across the country. The purposive (non-probability) sampling was used because the targeted population was Gen Z Indian citizens from four different regions (Table 1).

Measures

The study's research instrument was developed to assess ENVRB among Gen Z in the context of the flight shame movement. Six relevant dimensions were identified, and constructs and scale items were adapted from prior studies. The questionnaire underwent pretesting with 40 Gen Z respondents, resulting in minor amendments to the initial draft. The final questionnaire includes 37 items, with four adapted from Goh and Balaji (2016) and Heo and Muralidharan (2019) for environmental concern, four from Saari et al. (2020) for environmental self-assets, 12 from Dong et al. (2020) and Kautish et al. (2021) for LNA further segregated into three parts namely a passion for nature (four items each), intimacy with nature (five things), commitment to nature (three Items), four from Saari et al. (2020) for respect for nature, nine from Heo and Muralidharan (2019) and Sharma and Paço (2021) for ENVRB, and four from Gössling et al. (2020) for flight shame (Table 2). The questionnaire was checked for errors and unbiased language, utilising simple statements with a 5-point Likert scale.

Table 2. Assessment of measurement models.

Construct	Items	Loadings	CR	rho_A	AVE
Environmental concern			0.841	0.759	0.571
	ENVC1	0.756			
	ENVC2	0.667			
	ENVC3	0.784			
	ENVC4	0.808			
Environmental self-assets			0.868	0.801	0.623
	ENVS1	0.775			
	ENVS2	0.816			
	ENVS3	0.779			
	ENVS4	0.787			
Respect for nature			0.813	0.710	0.524
	RNA1	0.621			
	RNA2	0.783			
	RNA3	0.812			
	RNA4	0.662			
Passion for nature			0.847	0.763	0.581
	LNP1	0.779			
	LNP2	0.676			
	LNP3	0.793			
	LNP4	0.796			
Intimacy with nature			0.877	0.826	0.589
	LNI1	0.710			
	LNI2	0.804			
	LNI3	0.775			
	LNI4	0.795			
	LNI5	0.751			
Commitment to nature			0.837	0.750	0.633
	LNC1	0.841			
	LNC2	0.857			
	LNC3	0.677			
Love for nature (LNA) (second-order)			0.920	0.877	0.794
	Passion	0.859			
	Intimacy	0.917			
	Commitment	0.895			
Flight shame			0.869	0.806	0.627
	FSH1	0.861			
	FSH2	0.826			
	FSH3	0.839			
	FSH4	0.618			
Environmentally responsible travel behaviour			0.918	0.901	0.555
	ENVRB1	0.694			
	ENVRB2	0.763			
	ENVRB3	0.751			
	ENVRB4	0.757			
	ENVRB5	0.770			
	ENVRB6	0.744			
	ENVRB7	0.781			
	ENVRB8	0.795			
	ENVRB9	0.634			

Note: See Appendix A for the names of the items.

Data analysis

This study applied partial least squares–structural equation modelling (PLS-SEM) using SmartPLS 4 software (Ringle et al., 2022). This study is prediction-oriented and exploratory, so PLS-SEM is the preferred approach (Hair et al., 2019; Rasoolimanesh & Ali, 2018). The conceptual model of this study is considered complex by involving five reflective constructs at the first-order level and one second-order construct involving three dimensions. Moreover, several parallel and serial mediation hypotheses have been tested in this study. Therefore, the literature highly recommends PLS-SEM for complex models and studies (Hair et al., 2021). Using PLS-SEM, the

Table 3. Discriminant validity using HTMT ratio and Fornell–Larcker criterion.

Constructs	ENVC	ENVS	RNA	LNA	FHS	ENVRB	ENVC	ENVS	RNA	LNA	FHS	ENVRB
ENVC							0.755					
ENVS	0.799						0.629	0.789				
LNA	0.823	0.809					0.336	0.414	0.724			
RNA	0.449	0.538	0.562				0.668	0.680	0.452	0.891		
FHS	0.327	0.478	0.543	0.490			0.264	0.381	0.404	0.411	0.792	
ENVRB	0.627	0.719	0.779	0.560	0.623		0.524	0.611	0.459	0.694	0.529	0.745

ENVC: environmental concern; ENVS: environmental self-assets; RNA: respect for nature; LN: love for nature; FHS: flight shame; ENVRB: environmentally responsible travel behaviour.

measurement model and structural model were assessed, and the product of the coefficient approach using bootstrapping was applied to test mediation hypotheses (Rasoolimanesh, Wang, et al., 2021).

A sample size of 446 is sufficient to perform PLS-SEM to get high power (Reinartz et al., 2009). Moreover, the results of G*Power identified a minimum sample size of 204 to get the power of 0.95 for this study (Faul et al., 2009). The Common Method Variance (CMV) was tested since the data were collected from one source. To assess CMV, Harman's single-factor test and full collinearity were applied (Kock, 2015; Rasoolimanesh, Seyfi, et al., 2021). The factor analysis results for Harman's single-factor approach showed the explained variance of 35.06 for the first factor. In addition, the results showed the full collinearity of all constructs lower than 3.3 (Kock, 2015), indicating that the data is free from common method bias.

Results and findings

This study applied PLS-SEM to assess measurement models, including reliability, convergent validity, discriminant validity, and test hypotheses. The conceptual model of this study includes five first-order reflective constructs: environmental concern (ENVC), environmental self-assets (ENVS), respect for nature (RNA), flight shame (FHS), and ENVRB (ENVRB). It also includes one reflective second-order construct, LNA over three dimensions: a passion for nature, intimacy with nature, and commitment to nature. Using a two-stage approach to establish the second-order construct (Sarstedt et al., 2019), all first-order constructs' reliability and validity, including LNA's dimensions, were assessed in the first stage. Table 2 shows the results of the assessment of the measurement model. The composite reliability (CR), rho-A and the average variance extracted (AVE) of all constructs are greater than 0.7, 07, and 0.5, respectively, indicating acceptable reliability and convergent validity (Ali et al., 2018; Hair et al., 2019). In addition, the discriminant validity of all first-order constructs was assessed using the two most conservative approaches: the heterotrait–monotrait (HTMT) ratio and the Fornell–Larcker criterion (Henseler et al., 2015; Rasoolimanesh, 2022). The values of HTMT of all constructs were lower than 0.9, and the square root of the AVE of each construct was greater than the correlation with any other latent variable of all constructs. The results indicated acceptable discriminant validity for the model in the first stage. Then, using a latent variable score of dimensions of LNA, the second-order construct was established, and measurement models were assessed in the second stage too. Tables 2 and 3 show the criteria for determining constructs' reliability, convergent validity, and discriminant validity in the second stage. Thus, we applied both approaches to assess discriminant validity in this study.

Table 4 and Figure 2 show the structural model and hypothesis testing assessment results. The findings showed the substantial and positive total effects of environmental concerns and environmental self-assets on ENVRB (H1 and H2), in which the impact of environmental self-assets is more substantial. The majority of the total effect of environmental concern goes through LNA (H1-2 and H1-4), indicating insignificant direct effects (H1-1) and indirect effects through respect for nature (H1-3 and H1-5). The direct (H2-1) and indirect effects through LNA (H2-2

Table 4. Results of hypothesis testing.

	Hypothesis	Effects	*p*-Value	Confidence interval—bias corrected	Supported
H1	ENVC → ENVRB (total effect)	0.230	<0.01	[0.138, 0.324]	Yes
H1-1	ENVC → ENVRB (direct effect)	0.054	0.128	[−0.023, 0.133]	No
H1-2	ENVC → LNA → ENVRB	0.157	<0.01	[0.108, 0.216]	Yes
H1-3	ENVC → RNA → ENVRB	0.010	0.124	[0.000, 0.029]	No
H1-4	ENVC → LNA → FHS → ENVRB	0.024	<0.01	[0.013, 0.040]	Yes
H1-5	ENVC → RNA → FHS → ENVRB	0.007	0.054	[0.001, 0.016]	No
H1-6	ENVC → FHS (total effect)	0.041	0.242	[−0.052, 0.140]	No
H1-7	ENVC → FHS (direct effect)	−0.084	0.078	[−0.182, 0.016]	No
H1-8	ENVC → LNA → FHS	0.096	<0.01	[0.051, 0.153]	Yes
H1-9	ENVC → RNA → FHS	0.029	<0.05	[0.005, 0.063]	Yes
H1-10	ENVC → LNA	0.398	<0.01	[0.311, 0.484]	Yes
H1-11	ENVC → RNA	0.114	<0.01	[0.015, 0.213]	Yes
H2	ENVS → ENVRB (Total Effect)	0.467	<0.01	[0.373, 0.559]	Yes
H2-1	ENVS → ENVRB (Direct effect)	0.180	<0.01	[0.079, 0.284]	Yes
H2-2	ENVS → LNA → ENVRB	0.169	<0.01	[0.112, 0.234]	Yes
H2-3	ENVS → RNA → ENVRB	0.029	0.059	[0.002, 0.063]	No
H2-4	ENVS → LNA → FHS → ENVRB	0.026	<0.01	[0.014, 0.075]	Yes
H2-5	ENVS → RNA → FHS → ENVRB	0.022	<0.01	[0.013, 0.036]	Yes
H2-6	ENVS → FHS (total effect)	0.355	<0.01	[0.256, 0.455]	Yes
H2-7	ENVS → FHS (direct effect)	0.165	<0.01	[0.051, 0.277]	Yes
H2-8	ENVS → LNA → FHS	0.103	<0.01	[0.051, 0.153]	Yes
H2-9	ENVS → RNA → FHS	0.087	<0.01	[0.053, 0.129]	Yes
H2-10	ENVS → LNA	0.429	<0.01	[0.343, 0.511]	Yes
H2-11	ENVS → RNA	0.339	<0.01	[0.246, 0.431]	Yes
H3	LNA → ENVRB (total effect)	0.454	<0.01	[0.352, 0.555]	Yes
H3-1	LNA → ENVRB (direct effect)	0.394	<0.01	[0.288, 0.495]	Yes
H3-2	LNA → FHS → ENVRB	0.060	<0.01	[0.032, 0.095]	Yes
H3-3	LNA → FHS	0.241	<0.01	[0.124, 0.348]	Yes
H4	RNA → ENVRB (total effect)	0.149	<0.01	[0.075, 0.227]	Yes
H4-1	RNA → ENVRB (direct effect)	0.085	<0.05	[0.006, 0.170]	Yes
H4-2	RNA → FHS → ENVRB	0.064	<0.01	[0.40, 0.094]	Yes
H4-3	RNA → FHS	0.257	<0.01	[0.171, 0.346]	Yes
H5	FHS → ENVRB	0.251	<0.01	[0.184, 0.318]	Yes

ENVC: environmental concern; ENVS: environmental self-assets; RNA: respect for nature; LNA: love for nature; FHS: flight shame; ENVRB: environmentally responsible travel behaviour.

and H2-4) are significant for the impact of environmental self-assets on ENVRB. However, respect for nature did not play a moderative effect. These findings showed the importance of LNA for transferring the impact of environmental concern and environmental self-assets to ENVRB.

In addition, the results of this study showed significant and positive total (H2-6) and direct (H2-7) effects, as well as indirect effects of environmental self-assets on flight shame through LNA and RNA (H2-8 and H2-9). On the other hand, the total and direct effects of environmental concern on flight shame (H1-6, H1-7) were not significant, and the indirect effects through LNA (H1-8) and RNA (H1-9) were significant but weaker compared to ENVS. These results showed the more critical role of environmental self-assets than environmental concerns in generating flight shame and pro-environmental behaviour.

The results of hypothesis testing demonstrated the positive and significant effect of both LNA and respect for nature on ENVRB (H3, H3-1, H3-2, H4, H4-1, and H4-2) and flight shame (H3-3 and H4-3), with the effects of LNA being more substantial for several relationships. Finally, the findings demonstrated the significant impact of flight shame on ENVRB.

Discussion and conclusion

Our discussion focuses on three critical research questions in our study. First, we examine how environmental concerns and self-evaluations influence individuals' inclinations towards ENVRB. Second, we explore the impact of affective constructs, such as love and respect for nature, on

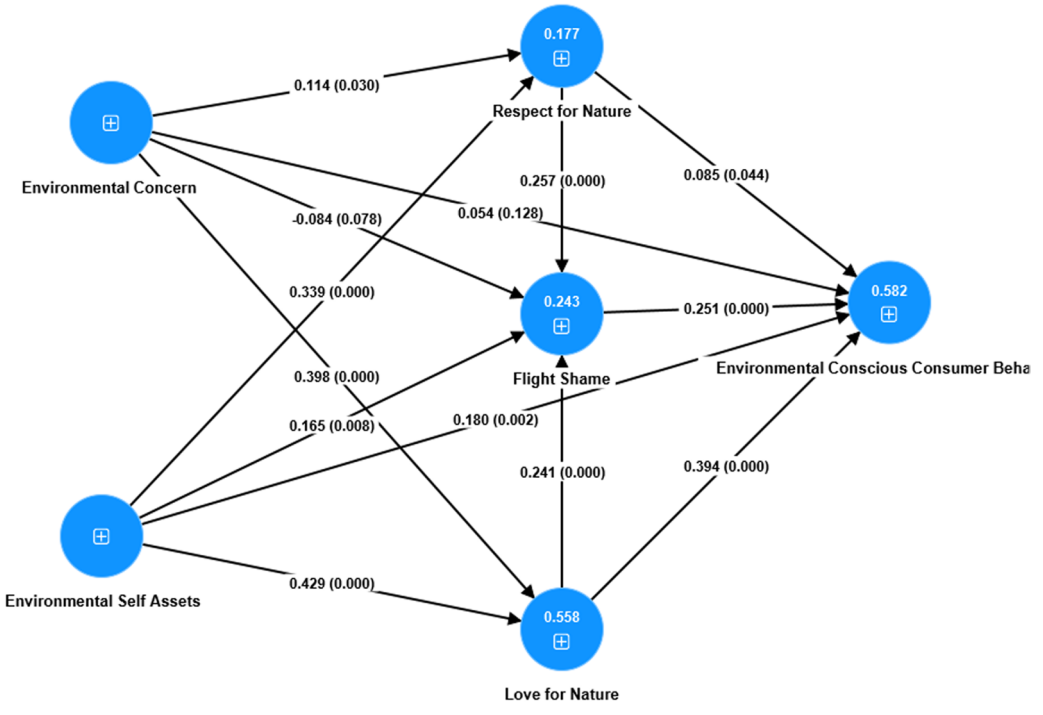

Figure 2. Results of assessment of structural model.

the relationship between environmental concerns, self-assets, and ENVRB. Lastly, we investigate the effect of flight shame on ENVRB and its connection to environmental concerns and self-assets. Through these investigations, our study advances our understanding of the factors shaping environmentally conscious travel behaviour and emphasises the role of emotional connections and societal expectations in promoting sustainable tourism.

Awareness and individual inclinations towards ENVRB

Prior research (Cologna et al., 2022; Dong et al., 2020; Helm et al., 2018; Liu An, et al., 2020; Liu, Teng, et al., 2020; Qiao & Dowell, 2022; Saari et al., 2021; Torkar & Bogner, 2019) has established a strong link between environmental concerns, environmental self-assets, and ENVRB, indicating that one person's comprehension of the environmental consequences influences that person's actions. However, cultural and psychological barriers can impede this connection in specific contexts (Tam & Chan, 2018). Therefore, innovative evidence is needed to explore the antecedents of ENVRB in emerging economies across various demographic segments (Alzubaidi et al., 2021; Bleidorn et al., 2021; Nguyen & Johnson, 2020).

This study delivers an Eastern society emerging economy perspective by focusing on representatives of Gen Z in India. The results of our two-stage analysis align with previous research by demonstrating a strong and positive connection between environmental concerns, environmental self-assets, and ENVRB. Furthermore, we provide evidence that a personal understanding of environmental consequences can influence behaviour, supporting the importance of education and awareness-raising efforts to encourage environmentally conscious behaviour among tourists. Simultaneously, we add to the existing body of knowledge by emphasising the need to address cultural patterns and psychological barriers that may hinder the adoption of environmentally conscious behaviour, particularly in emerging economies. This suggests sustainable tourism initiatives must be tailored to specific cultural contexts and address different demographic

segments' unique challenges and motivations. This is particularly the case when targeting younger generations, such as Gen Z, in efforts to promote sustainable tourism. Tourism stakeholders and politicians can develop targeted campaigns and initiatives that resonate with their values and priorities by understanding the factors influencing environmentally conscious behaviour among this demographic. Finally, our findings underscore the need for innovative approaches to promoting sustainable tourism in diverse cultural and demographic contexts.

The effects associated with LNA and respect for nature

Although internalised motivations are significant predictors of ENVRB (Degenhardt, 2002; Kals & Maes, 2002), empirical studies exploring this phenomenon are limited (Dong et al., 2020; Perkins, 2010; Saari et al., 2020). This lack of attention is also apparent in sustainable tourism, where psychological factors like emotions and obligations must be more adequately studied (Juvan & Dolnicar, 2017; Lin et al., 2022). Emotional affinity (LNA) and moral attitude (respect for nature) could explain the attitude-behaviour gap. However, there is insufficient empirical evidence to support the hypothesis that emotional and ethical affinity for nature mediates the link between awareness of environmental problems and ENVRB.

Our analysis results demonstrate how most of the total effect of environmental concerns and environmental self-assets goes through LNA, while the impact of respect for nature was insignificant, suggesting that the LNA has a critical role in the transition of environmental concerns and environmental self-assets to ENVRB. Love and respect for nature both significantly positively affected sustainable travel behaviour. These results highlight the importance of considering emotional and ethical factors in promoting environmentally conscious behaviour among tourists. Specifically, the study suggests that emotional affinity may be critical in bridging the gap between environmental awareness and behaviour. Consequently, there is a need to focus on LNA as a predictor of ENVRB rather than just moral attitudes. This suggests that sustainable tourism initiatives should foster a deep emotional connection between tourists and the natural environment rather than relying solely on appeals to morality or duty. Finally, our findings underscore the importance of measuring and understanding the complex psychological factors that influence environmentally conscious behaviour among tourists. By identifying the specific emotional and ethical factors that drive environmentally conscious behaviour, tourism stakeholders can develop targeted strategies and interventions more effectively to promote sustainable tourism. This study suggests that fostering a deep LNA may be critical to successful sustainable tourism initiatives.

The effects associated with flight shame

Previous studies (Theoretical background and hypotheses development section) suggest that it needs to be clarified if understanding the consequences of specific behaviour, particularly environmental concerns and environmental self-assets, could explain flight shame (Chiambaretto et al., 2021; Mkono et al., 2020). Further, Doran et al. (2022) suggest how flight shame depends upon societal expectations. Considering it is grounded in value orientations, feelings, and a sense of obligation and emotional affection, LNA could also mediate the transition from environmental concerns and environmental self-assets to ENVRB; however, there is yet no convincing empirical evidence to support such a hypothesis.

The results of our analysis demonstrate a significant effect of flight shame on ENVRB. Further, we reveal the significant positive indirect effects of environmental self-assets on flight shame through LNA and respect for nature. Both environmental self-assets and environmental concerns had a significant positive indirect impact on flight shame through love and respect for nature. However, it should be noted that the indirect effects were weaker for environmental concerns

compared to environmental self-assets. Therefore, we conclude that environmental self-assets are critical to generating LNA and ENVRB. Finally, respect and LNA significantly positively affect flight shame.

These results suggest that flight shame significantly predicts ENVRB. Therefore, tourism stakeholders and politicians should consider addressing the issue of flight shame in their sustainable tourism initiatives and messaging. Further, our findings reveal the importance of environmental self-assets in generating LNA and respect for nature, mediating the transition from flight shame to ENVRB. Consequently, there is a need for incorporating programmes and initiatives that help tourists develop a greater sense of environmental self-assets, which could ultimately lead to more sustainable tourism behaviour and reduced flight shame. Further, we emphasise the role of emotional factors, such as love and respect for nature, in the emergence of flight shame and in promoting ENVRB. Developing emotional appeals and messaging in sustainable tourism initiatives could foster a greater emotional connection between tourists and the ecosystem. This study highlights the importance of promoting environmental self-assets and emotional connections to nature in developing flight shame and promoting sustainable tourism behaviour.

Theoretical contributions

This study significantly advances current knowledge by providing new insights into the antecedents of ENVRB, particularly in the context of emerging economies and the Gen Z demographic in India. It confirms previous research that establishes a strong positive link between environmental concerns, environmental self-assets, and ENVRB. However, it goes beyond previous studies by highlighting the need to address cultural patterns and psychological barriers that may hinder the adoption of environmentally conscious behaviour. The study emphasises the role of emotional factors, such as LNA for nature, in bridging the gap between environmental awareness and behaviour, and it suggests that sustainable tourism initiatives should foster a deep emotional connection between tourists and the natural environment. Additionally, the study identifies flight shame as a significant predictor of ENVRB and emphasises the importance of promoting environmental self-assets and emotional connections to nature in reducing flight shame and promoting sustainable tourism. By identifying the significance of the emotional factors, our research offers practical implications for tourism stakeholders and policymakers. Tailoring sustainable tourism initiatives to resonate with the values and priorities of Gen Z and addressing the specific challenges and motivations of different demographic segments become vital for fostering ENVRB. Overall, our findings contribute to a more comprehensive understanding of sustainable tourism promotion in diverse cultural and demographic contexts, underscore the need for innovative approaches to engage younger generations in a positive environmental change, and inform developing targeted strategies and interventions in sustainable tourism initiatives.

Practical contributions and implications

The results of this study have important implications for tourism destination managers, tourism businesses, and tourism policymakers, including politicians and activists, particularly in the context of Gen Z in India. Unlike Western societies, India presents a unique cultural context with distinct challenges and motivations related to sustainable tourism. Our findings highlight the importance of tailoring sustainable tourism initiatives to align with the cultural nuances of Gen Z in India, recognising their values, priorities, and social norms.

Education and awareness-raising efforts are crucial for encouraging environmentally conscious behaviour among tourists (He et al., 2023), mainly targeting younger generations such as Gen

Z. However, our results emphasise the importance of tailoring sustainable tourism initiatives to align with the unique cultural contexts and address the unique challenges and motivations of different demographics to ensure that campaigns and initiatives resonate with their values and priorities. Specifically, strategies should be implemented that enable tourists to make informed decisions about their environmental impact, such as encouraging tourists to offset their carbon emissions. Innovative approaches to promoting sustainable tourism in diverse cultural and demographic contexts should be adopted, by using new technologies, collaborating with local communities, and engaging in sustainable tourism certification schemes. However, as Becken and Coghlan (2022) explained, "knowledge alone won't fix it", suggesting a need to build a deep emotional connection between tourists and the natural environment to promote environmentally conscious behaviour and reduce flight shame.

Our results explain that flight shame is a critical predictor of pro-environmental behaviour. In light of these findings, policymakers, tourism stakeholders and educators should consider implementing programmes and initiatives that help tourists develop a greater sense of environmental self-assets. Drawing on recent conclusions by D'Arco et al. (2023) and Salinero et al. (2022), which highlight the significance of personal norms for inspiring environmental behaviour within Gen Z, it is crucial to incorporate measures that encourage the development of personal norms aligned with sustainable tourism practices. For example, educational programmes targeting at Gen Z and emphasising the environmental impacts of tourism can be integrated into school curricula, community events, or online platforms to reach a wider audience. Influential figures and Gen Z role models passionate about sustainability could be engaged to share their personal experiences, tips, and stories, creating a positive influence on young travellers. Responsible travel campaigns could be launched focused on the values and priories of Gen Z, using emotional appeals and storytelling techniques to foster a deeper emotional connection with nature and promote responsible travel behaviour. Finally, design thinking workshops and volunteering opportunities could be used to foster collaborative partnerships and personal involvement of Gen Z and a sense of responsibility towards the environment.

Finally, emotional appeals and messaging can be effective strategies to promote a greater emotional connection between tourists and the natural environment. Overall, by leveraging the power of emotions, tourism stakeholders can develop more effective strategies and initiatives to promote sustainable tourism and mitigate the adverse environmental impacts associated with tourism development, particularly concerning transportation choices. For example, storytelling campaigns could be developed using captivating visuals, narratives, and personal stories to evoke emotions such as awe, wonder, and appreciation for nature. The development of platforms or campaigns where individuals can publicly declare their intentions to reduce their environmental impacts while travelling (sustainable tourism pledges) can evoke feelings of personal responsibility and foster a sense of belonging to a community of like-minded travellers. Creating impactful symbols and powerful slogans that represent environmental stewardship and using them in promotional materials can evoke emotions and resonate with tourists' values and aspirations.

Future research

Future research could explore effective educational and awareness-raising strategies to promote sustainable tourism behaviour among various demographic segments, including younger generations. Furthermore, investigating cultural patterns and psychological barriers that may hinder the adoption of environmentally conscious behaviour in emerging economies is crucial. Emotional factors like love and respect for nature should also be studied to reduce flight shame and foster deep connections between tourists and the environment. Innovative approaches to promoting sustainable tourism in diverse cultural and demographic contexts could also be identified. By

addressing these topics, researchers can help inform policy decisions to ensure the tourism industry's long-term viability.

Study limitations

While our study contributes valuable insights into the factors shaping ENVRB among Gen Z in India, it is important to acknowledge its limitations. First, our research focused solely on Gen Z individuals in India, which restricts the generalizability of our findings to other demographic segments or cultural contexts. Secondly, our study relied on self-reported data, which may be subject to biases such as social desirability or recall errors. Additionally, our study primarily explored the influence of emotions and values on ENVRB. While these factors have been shown to be significant, other variables may not be considered in our research that could also contribute to sustainable tourism behaviour. Furthermore, our study utilised a cross-sectional design, capturing data at a specific point in time. Longitudinal studies or experimental designs could provide a more robust analysis of the causal relationships between the studied variables and offer insights into the dynamics and changes in ENVRB over time. Furthermore, future studies can be administered by using probability sampling, which could provide a more holistic analysis of the relationship among the studied variables. Lastly, it is important to acknowledge that our study focused primarily on the individual-level factors influencing environmentally conscious behaviour. The role of external factors such as policy frameworks, infrastructure, and industry practices in facilitating sustainable tourism was not extensively explored. By acknowledging these limitations, future research can build upon our findings and address these gaps to further advance the understanding of sustainable tourism behaviour among Gen Z and beyond.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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References

Aasen, M., Thøgersen, J., Vatn, A., Dunlap, R., Fisher, D., Hellevik, O., & Stern, P. (2022). The limited influence of climate norms on leisure air travel. *Journal of Sustainable Tourism*, 1–20. https://doi.org/10.1080/09669582.2022.2097687

Ahuvia, A. C. (2005). Beyond the extended self: Loved objects and consumers' identity narratives. *Journal of Consumer Research*, *32*(1), 171–184. https://doi.org/10.1086/429607

Ali, F., Kim, W. G., Li, J., & Jeon, H. M. (2018). Make it delightful: Customers' experience, satisfaction and loyalty in Malaysian theme parks. *Journal of Destination Marketing & Management*, *7*, 1–11. https://doi.org/10.1016/j.jdmm.2016.05.003

Alzubaidi, H., Slade, E. L., & Dwivedi, Y. K. (2021). Examining antecedents of consumers' pro-environmental behaviours: TPB extended with materialism and innovativeness. *Journal of Business Research*, *122*, 685–699. https://doi.org/10.1016/j.jbusres.2020.01.017

Amadeus (2020). *Rethinking travel global traveller survey*. Amadeus.

Becken, S., & Coghlan, A. (2022). Knowledge alone won't "fix it": Building regenerative literacy. *Journal of Sustainable Tourism*, 1–17. https://doi.org/10.1080/09669582.2022.2150860

Bleidorn, W., Lenhausen, M. R., & Hopwood, C. J. (2021). Proenvironmental attitudes predict proenvironmental consumer behaviors over time. *Journal of Environmental Psychology*, *76*, 101627. https://doi.org/10.1016/j.jenvp.2021.101627

Büchs, M. (2017). The role of values for voluntary reductions of holiday air travel. *Journal of Sustainable Tourism*, *25*(2), 234–250. https://doi.org/10.1080/09669582.2016.1195838

Chiambaretto, P., Mayenc, E., Chappert, H., Engsig, J., Fernandez, A. S., & Le Roy, F. (2021). Where does flygskam come from? The role of citizens' lack of knowledge of the environmental impact of air transport in explaining the development of flight shame. *Journal of Air Transport Management*, *93*, 102049. https://doi.org/10.1016/j.jairtraman.2021.102049

Chwialkowska, A., Bhatti, W. A., & Glowik, M. (2020). The influence of cultural values on pro-environmental behavior. *Journal of Cleaner Production*, *268*, 122305. https://doi.org/10.1016/j.jclepro.2020.122305

Cocolas, N., Walters, G., Ruhanen, L., & Higham, J. (2020). Air travel attitude functions. *Journal of Sustainable Tourism*, *28*(2), 319–336. https://doi.org/10.1080/09669582.2019.1671851

Coelho, F., Pereira, M. C., Cruz, L., Simões, P., & Barata, E. (2017). Affect and the adoption of pro-environmental behaviour: A structural model. *Journal of Environmental Psychology*, *54*, 127–138. https://doi.org/10.1016/j.jenvp.2017.10.008

Cologna, V., Berthold, A., & Siegrist, M. (2022). Knowledge, perceived potential and trust as determinants of low- and high-impact pro-environmental behaviours. *Journal of Environmental Psychology*, *79*, 101741. https://doi.org/10.1016/j.jenvp.2021.101741

Davison, L., Littleford, C., & Ryley, T. (2014). Air travel attitudes and behaviours: The development of environment-based segments. *Journal of Air Transport Management*, *36*, 13–22. https://doi.org/10.1016/j.jairtraman.2013.12.007

de Groot, J. I. M., Bondy, K., & Schuitema, G. (2021). Listen to others or yourself? The role of personal norms on the effectiveness of social norm interventions to change pro-environmental behavior. *Journal of Environmental Psychology*, *78*. https://doi.org/10.1016/j.jenvp.2021.101688

De Groot, J., & Steg, L. (2009). Morality and prosocial behavior: The role of awareness, responsibility, and norms in the norm activation model. *The Journal of Social Psychology*, *149*(4), 425–449. https://doi.org/10.3200/SOCP.149.4.425-449

Deloitte (2021). *2021 Millennial and gen Z survey: A call for accountability and action-India*. Deloitte. Retrieved October 28, 2022, from https://www2.deloitte.com/content/dam/Deloitte/in/Documents/about-deloitte/in-deloitte-millennial-survey-2021-India-report-noexp.pdf

Degenhardt, L. (2002). Why do people act in sustainable ways? Results of an empirical survey of lifestyle pioneers. In P. Schmuck & W. P. Schultz (Eds.), *Psychology of sustainable development* (pp. 123–147). Kluwer.

Dickinson, J. E., Robbins, D., & Lumsdon, L. (2010). Holiday travel discourses and climate change. *Journal of Transport Geography*, *18*(3), 482–489. https://doi.org/10.1016/j.jtrangeo.2010.01.006

Dong, X., Liu, S., Li, H., Yang, Z., Liang, S., & Deng, N. (2020). Love of nature as a mediator between connectedness to nature and sustainable consumption behavior. *Journal of Cleaner Production*, *242*, 118451. https://doi.org/10.1016/j.jclepro.2019.118451

Doran, R., Pallesen, S., Böhm, G., & Ogunbode, C. A. (2022). When and why do people experience flight shame? *Annals of Tourism Research*, *92*(9), 103254. https://doi.org/10.1016/j.annals.2021.103254

D'Arco, M., Marino, V., & Resciniti, R. (2023). Exploring the pro-environmental behavioral intention of Generation Z in the tourism context: The role of injunctive social norms and personal norms. *Journal of Sustainable Tourism*, 1–22. https://doi.org/10.1080/09669582.2023.2171049

European Travel Commission (2020). *Study on generation Z travellers*. European Travel Commission.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Fang, Y., Trupp, A., Hess, J. S., & Ma, S. (2022). Tourism under climate crisis in Asia: Impacts and implications. *Journal of Sustainable Tourism*, 1–17. https://doi.org/10.1080/09669582.2022.2112202

Flaherty, G. T., & Holmes, A. (2020). Will flight shaming influence the future of air travel? *Journal of Travel Medicine*, *27*(2), https://doi.org/10.1093/jtm/taz088

Fransson, N., & Gørling, T. (1999). *Environmental concern: Conceptual definitions, measurement methods, and research findings*. Retrieved from http://www.idealibrary.com

Goh, S. K., & Balaji, M. S. (2016). Linking green skepticism to green purchase behavior. *Journal of Cleaner Production*, *131*, 629–638. https://doi.org/10.1016/j.jclepro.2016.04.122

Gomes, S., Lopes, J. M., & Nogueira, S. (2023). Willingness to pay more for green products: A critical challenge for Gen Z. *Journal of Cleaner Production*, *390*, 136092. https://doi.org/10.1016/j.jclepro.2023.136092

Gössling, S., Hanna, P., Higham, J., Cohen, S., & Hopkins, D. (2019). Can we fly less? Evaluating the 'necessity' of air travel. *Journal of Air Transport Management*, *81*, 101722. https://doi.org/10.1016/j.jairtraman.2019.101722

Gossling, S., Humpe, A., & Bausch, T. (2020). Does 'flight shame' affect social norms? Changing perspectives on the desirability of air travel in Germany. *Journal of Cleaner Production*, *266*(1), 122015. https://doi.org/10.1016/j.jclepro.2020.122015

Gössling, S., Scott, D., & Hall, M. (2015). Inter-market variability in CO_2 emission-intensities in tourism: Implications for destination marketing and carbon management. *Tourism Management*, *46*, 203–212. https://doi.org/10.1016/j.tourman.2014.06.021

Haddouche, H., & Salomone, C. (2018). Generation Z and the tourist experience: Tourist stories and use of social networks. *Journal of Tourism Futures*, *4*(1), 69–79. https://doi.org/10.1108/JTF-12-2017-0059

Hair, J. F., Jr, Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Han, H. (2014). The norm activation model and theory-broadening: Individuals' decision-making on environmentally-responsible convention attendance. *Journal of Environmental Psychology*, *40*, 462–471. https://doi.org/10.1016/j.jenvp.2014.10.006

Hares, A., Dickinson, J., & Wilkes, K. (2010). Climate change and the air travel decisions of UK tourists. *Journal of Transport Geography*, *18*(3), 466–473. https://doi.org/10.1016/j.jtrangeo.2009.06.018

Harland, P., Staats, H., & Wilke, H. A. M. (2007). Situational and personality factors as direct or personal norm mediated predictors of pro-environmental behavior: Questions derived from norm-activation theory. *Basic and Applied Social Psychology*, *29*(4), 323–334. https://doi.org/10.1080/01973530701665058

He, M., Blye, C. J., & Halpenny, E. (2023). Impacts of environmental communication on pro-environmental intentions and behaviours: A systematic review on nature-based tourism context. *Journal of Sustainable Tourism*, *31*(8), 1921–1943. https://doi.org/10.1080/09669582.2022.2095392

Helm, S. V., Pollitt, A., Barnett, M. A., Curran, M. A., & Craig, Z. R. (2018). Differentiating environmental concern in the context of psychological adaption to climate change. *Global Environmental Change*, *48*, 158–167. https://doi.org/10.1016/j.gloenvcha.2017.11.012

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant Validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Heo, J., & Muralidharan, S. (2019). What triggers young Millennials to purchase eco-friendly products?: The interrelationships among knowledge, perceived consumer effectiveness, and environmental concerns. *Journal of Marketing Communications*, *25*(4), 421–437. https://doi.org/10.1080/13527266.2017.1303623

Higham, J., Loehr, J., Hopkins, D., Becken, S., & Stovall, W. (2022). Climate science and tourism policy in Australasia: Deficiencies in science-policy translation. *Journal of Sustainable Tourism*, 1–27. https://doi.org/10.1080/09669582.2022.2134882

IATA (2018). *IATA forecast predicts 8.2 billion air travelers in 2037* [press release]. Retrieved October 27, 2022, from https://www.iata.org/pressroom/pr/Pages/2018-10-24-02.aspx

Investindia (2022). *India to become the third largest aviation market in the world by 2024*. Retrieved November 9, 2022, from https://www.investindia.gov.in/sector/aviation

Jacobson, L., Åkerman, J., Giusti, M., & Bhowmik, A. K. (2020). Tipping to staying on the ground: Internalized knowledge of climate change crucial for transformed air travel behavior. *Sustainability*, *12*(5), 1994. https://doi.org/10.3390/su12051994

Juvan, E., & Dolnicar, S. (2017). Drivers of pro-environmental tourist behaviours are not universal. *Journal of Cleaner Production*, *166*, 879–890. https://doi.org/10.1016/j.jclepro.2017.08.087

Kals, E., & Maes, J. (2002). Sustainable development and emotions. In P. Schmuck & W. P. Schultz (Eds.), *Psychology of sustainable development* (pp. 97–122). Kluwer Academic Publishers. https://doi.org/10.1007/978-1-4615-0995-0_6

Kapoor, K. K., & Dwivedi, Y. K. (2020). Sustainable consumption from the consumer's perspective: Antecedents of solar innovation adoption. *Resources, Conservation and Recycling*, *152*, 104501. https://doi.org/10.1016/j.resconrec.2019.104501

Kautish, P., Sharma, R., Mangla, S. K., Jabeen, F., & Awan, U. (2021). Understanding choice behavior towards plastic consumption: An emerging market investigation. *Resources, Conservation and Recycling*, *174*, 105828. https://doi.org/10.1016/j.resconrec.2021.105828

Kim, M. S., & Stepchenkova, S. (2020). Altruistic values and environmental knowledge as triggers of pro-environmental behavior among tourists. *Current Issues in Tourism*, *23*(13), 1575–1580. https://doi.org/10.1080/13683500.2019.1628188

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Lee, Y. K., Kim, S., Kim, M. S., & Choi, J. G. (2014). Antecedents and interrelationships of three types of pro-environmental behavior. *Journal of Business Research*, *67*(10), 2097–2105. https://doi.org/10.1016/j.jbusres.2014.04.018

Lenzen, M., Sun, Y. Y., Faturay, F., Ting, Y. P., Geschke, A., & Malik, A. (2018). The carbon footprint of global tourism. *Nature Climate Change*, *8*(6), 522–528. https://doi.org/10.1038/s41558-018-0141-x

Li, Q., & Wu, M. (2020). Tourists' pro-environmental behaviour in travel destinations: benchmarking the power of social interaction and individual attitude. *Journal of Sustainable Tourism*, *28*(9), 1371–1389. https://doi.org/10.1080/09669582.2020.1737091

Lin, M. T. B., Zhu, D., Liu, C., & Kim, P. B. (2022). A systematic review of empirical studies of pro-environmental behavior in hospitality and tourism contexts. *International Journal of Contemporary Hospitality Management*, *34*, 3982–4006. https://doi.org/10.1108/IJCHM-12-2021-1478

Liu, J., An, K., & Jang, S. C. (2020). A model of tourists' civilised behaviors: Toward sustainable coastal tourism in China. *Journal of Destination Marketing & Management*, *16*, 100437. https://doi.org/10.1016/j.jdmm.2020.100437

Liu, P., Teng, M., & Han, C. (2020). How does environmental knowledge translate into pro-environmental behaviors?: The mediating role of environmental attitudes and behavioral intentions. *The Science of the Total Environment*, *728*, 138126. https://doi.org/10.1016/j.scitotenv.2020.138126

Mandić, A., & Vuković, M. (2022). Millennials attitudes, choices and behaviour - integrative analysis. *Journal of Ecotourism*, *21*(1), 87–97. https://doi.org/10.1080/14724049.2021.1932925

Mandić, A., Walia, S., & Kautish, P. (2023). The antecedents of pro-environmental tourist behaviour of Gen Z: An eastern society perspective. *Anatolia*, 1–18. https://doi.org/10.1080/13032917.2023.2224368

Marczak, M., & Sorokowski, P. (2018). Emotional connectedness to nature is meaningfully related to modernisation. Evidence from the Meru of Kenya. *Frontiers in Psychology*, *9*, 1789. https://doi.org/10.3389/fpsyg.2018.01789

Martin, C., & Czellar, S. (2017). Where do biospheric values come from? A connectedness to nature perspective. *Journal of Environmental Psychology*, *52*, 56–68. https://doi.org/10.1016/j.jenvp.2017.04.009

McKinsey (2023). *True Gen': Generation Z and its implications for companies*. Retrieved from https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies

Mkono, M. (2020). Eco-anxiety and the flight shaming movement: Implications for tourism. *Journal of Tourism Futures*, *6*(3), 223–226. https://doi.org/10.1108/JTF-10-2019-0093

Mkono, M. (2022). How people resist flight shame: A Reddit perspective. *Annals of Tourism Research Empirical Insights*, *3*(1), 100044. https://doi.org/10.1016/j.annale.2022.100044

Mkono, M., Hughes, K., & Echentille, S. (2020). Hero or villain? Responses to Greta Thunberg's activism and the implications for travel and tourism. *Journal of Sustainable Tourism*, *28*(12), 2081–2098. https://doi.org/10.1080/09669582.2020.1789157

Nguyen, N., & Johnson, L. W. (2020). Consumer behaviour and environmental sustainability. *Journal of Consumer Behaviour*, *19*(6), 539–541. https://doi.org/10.1002/cb.1892

Onwezen, M. C., Antonides, G., & Bartels, J. (2013). The norm activation model: An exploration of the functions of anticipated pride and guilt in pro-environmental behaviour. *Journal of Economic Psychology*, *39*, 141–153. https://doi.org/10.1016/j.joep.2013.07.005

Owen, S., Napoli, C., & Shin, J. (2018). *The gen Z equation*. Wgsn. Retrieved from https://www.wgsn.com/assets/marketing/emails/2018/GenZ_equation/Gen_Z_Equation_public.pdf?mkt_tok=eyJpIjoiWm1ZeE5qSTFOemxsTlRNeSIsInQiOiI2QjVTbkh1c3ZDWXREUUFcL0l0OGxWZFdKRTRPWE94RTV4TmdXV09tbm4yaldOMTdhckpTRUpvZEowMGNJRjV6WHVzazh5cDNrVXRycGpiTXNLbTVQeXBVM

Peeters, P., Higham, J., Cohen, S., Eijgelaar, E., & Gössling, S. (2019). Desirable tourism transport futures. *Journal of Sustainable Tourism*, *27*(2), 173–188. https://doi.org/10.1080/09669582.2018.1477785

Perkins, H. E. (2010). Measuring love and care for nature. *Journal of Environmental Psychology*, *30*(4), 455–463. https://doi.org/10.1016/j.jenvp.2010.05.004

Prayag, G., Aquino, R. S., Hall, C. M., Chen, N., & Fieger, P. (2022). Is Gen Z really that different? Environmental attitudes, travel behaviours and sustainability practices of international tourists to Canterbury, New Zealand. *Journal of Sustainable Tourism*, 1–22. https://doi.org/10.1080/09669582.2022.2131795

Rasoolimanesh, S. M. (2022). Discriminant validity assessment in PLS-SEM: A comprehensive composite-based approach. *Data Analysis Perspectives Journal*, *3*(2), 1–8.

Rasoolimanesh, S. M., & Ali, F. (2018). Partial least squares-structural equation modeling in hospitality and tourism. *Journal of Hospitality and Tourism Technology*, *9*(3), 238–248. https://doi.org/10.1108/JHTT-10-2018-142

Rasoolimanesh, S. M., Seyfi, S., Hall, C. M., & Hatamifar, P. (2021). Understanding memorable tourism experiences and behavioural intentions of heritage tourists. *Journal of Destination Marketing & Management*, *21*, 100621. https://doi.org/10.1016/j.jdmm.2021.100621

Rasoolimanesh, S. M., Wang, M., Roldan, J. L., & Kunasekaran, P. (2021). Are we in right path for mediation analysis? Reviewing the literature and proposing robust guidelines. *Journal of Hospitality and Tourism Management*, *48*, 395–405. https://doi.org/10.1016/j.jhtm.2021.07.013

Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*, *26*(4), 332–344. https://doi.org/10.1016/j.ijresmar.2009.08.001

Rhead, R., Elliot, M., & Upham, P. (2015). Assessing the structure of UK environmental concern and its association with pro-environmental behaviour. *Journal of Environmental Psychology*, *43*, 175–183. https://doi.org/10.1016/j.jenvp.2015.06.002

Ringle, C. M., Wende, S., & Becker, J. M. (2022). *SmartPLS 4*. Oststeinbek: SmartPLS GmbH. Retrieved from http://www.smartpls.com

Ribeiro, M. A., Seyfi, S., Elhoushy, S., Woosnam, K. M., & Patwardhan, V. (2023). Determinants of generation Z pro-environmental travel behaviour: The moderating role of green consumption values. *Journal of Sustainable Tourism*, 1–21. https://doi.org/10.1080/09669582.2023.2230389

Saari, U. A., Damberg, S., Frömbling, L., & Ringle, C. M. (2021). Sustainable consumption behavior of Europeans: The influence of environmental knowledge and risk perception on environmental concern and behavioral intention. *Ecological Economics*, *189*, 107155. https://doi.org/10.1016/j.ecolecon.2021.107155

Saari, U. A., Mäkinen, S. J., Baumgartner, R. J., Hillebrand, B., & Driessen, P. H. (2020). How consumers' respect for nature and environmental self-assets influence their car brand experiences. *Journal of Cleaner Production*, *261*, 121023. https://doi.org/10.1016/j.jclepro.2020.121023

Salinero, Y., Prayag, G., Gómez-Rico, M., & Molina-Collado, A. (2022). Generation Z and pro-sustainable tourism behaviors: Internal and external drivers. *Journal of Sustainable Tourism*, 1–20. https://doi.org/10.1080/09669582.2022.2134400

Sarstedt, M., Hair, J. F.Jr., Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, *27*(3), 197–211. https://doi.org/10.1016/j.ausmj.2019.05.003

Schmuck, P., & Schultz, W. P. (Eds.). (2002). *Psychology of sustainable development*. Springer US. https://doi.org/10.1007/978-1-4615-0995-0

Schultz, P. W. (2002). Inclusion with nature: The psychology of human-nature relations. In *Psychology of sustainable development* (pp. 61–78). https://doi.org/10.1007/978-1-4615-0995-0_4 SpringerUS

Schwartz, S. H. (1977). Normative influences on altruism. *Advances in Experimental Social Psychology*, *10*, 221–279.

Seyfi, S., Sharifi-Tehrani, M., Hall, C. M., & Vo-Thanh, T. (2023). Exploring the drivers of Gen Z tourists' buycott behaviour: A lifestyle politics perspective. *Journal of Sustainable Tourism*, 1–19. https://doi.org/10.1080/09669582.2023.2166517

Seyfi, S., Hall, C. M., Vo-Thanh, T., & Zaman, M. (2022). How does digital media engagement influence sustainability-driven political consumerism among Gen Z tourists? *Journal of Sustainable Tourism*, 1–19. https://doi.org/10.1080/09669582.2022.2112588

Sharma, N., & Paço, A. (2021). Moral disengagement: A guilt free mechanism for non-green buying behavior. *Journal of Cleaner Production*, *297*, 126649. https://doi.org/10.1016/j.jclepro.2021.126649

Shepherd, D. A., Kuskova, V., & Patzelt, H. (2009). Measuring the values that underlie sustainable development: The development of a valid scale. *Journal of Economic Psychology*, *30*(2), 246–256. https://doi.org/10.1016/j.joep.2008.08.003

Sonenshein, S., Decelles, K. A., & Dutton, J. E. (2014). It's not easy being green: The role of self-evaluations in explaining support of environmental issues. *Academy of Management Journal*, *57*(1), 7–37. https://doi.org/10.5465/amj.2010.0445

Steg, L., & de Groot, J. (2010). Explaining prosocial intentions: Testing causal relationships in the norm activation model. *The British Journal of Social Psychology*, *49*(Pt 4), 725–743. https://doi.org/10.1348/014466609X477745

Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, *29*(3), 309–317. https://doi.org/10.1016/j.jenvp.2008.10.004

Stylos, N., Rahimi, R., Okumus, B., & Williams, S. (Eds.). (2021). *Generation Z marketing and management in tourism and hospitality: The future of the industry*. https://doi.org/10.1007/978-3-030-70695-1

Qiao, K., & Dowell, G. (2022). Environmental concerns, income inequality, and purchase of environmentally-friendly products: A longitudinal study of US counties (2010–2017). *Research Policy*, *51*(4), 104443. https://doi.org/10.1016/j.respol.2021.104443

Tam, K. P., & Chan, H. W. (2017). Environmental concern has a weaker association with pro-environmental behavior in some societies than others: A cross-cultural psychology perspective. *Journal of Environmental Psychology*, *53*, 213–223. https://doi.org/10.1016/j.jenvp.2017.09.001

Tam, K. P., & Chan, H. W. (2018). Generalised trust narrows the gap between environmental concern and pro-environmental behavior: Multilevel evidence. *Global Environmental Change*, *48*, 182–194. https://doi.org/10.1016/j.gloenvcha.2017.12.001

Taylor, P. W. (1981). *The ethics of respect for nature*, Princeton University Press.

Think Survey (2023). Retrieved July 27, 2023, from https://thinksurvey.co/

Torkar, G., & Bogner, F. X. (2019). Environmental values and environmental concern. *Environmental Education Research*, *25*(10), 1570–1581. https://doi.org/10.1080/13504622.2019.1649367

Udall, A. M., Groot, J. I. M., Jong, S. B., & Shankar, A. (2020). How do I see myself? A systematic review of identities in pro-environmental behaviour research. *Journal of Consumer Behaviour*, *19*(2), 108–141. https://doi.org/10.1002/cb.1798

Wang, J., & Wu, L. (2016). The impact of emotions on the intention of sustainable consumption choices: Evidence from a big city in an emerging country. *Journal of Cleaner Production*, *126*, 325–336. https://doi.org/10.1016/j.jclepro.2016.03.119

Wang, S., Ji, C., He, H., Zhang, Z., & Zhang, L. (2021). Tourists' waste reduction behavioral intentions at tourist destinations: An integrative research framework. *Sustainable Production and Consumption*, *25*, 540–550. https://doi.org/10.1016/j.spc.2020.12.010

Wu, J., Font, X., & Liu, J. (. (2021). Tourists' pro-environmental behaviors: Moral obligation or disengagement? *Journal of Travel Research*, *60*(4), 735–748. https://doi.org/10.1177/0047287520910787

Wu, L., & Zhu, Y. (2021). How love of nature promotes green consumer behaviors: The mediating role of biospheric values, ecological worldview, and personal norms. *PsyCh Journal*, *10*(3), 402–414. https://doi.org/10.1002/pchj.430

Xu, F., Huang, L., & Whitmarsh, L. (2020). Home and away: Cross-contextual consistency in tourists' pro-environmental behavior. *Journal of Sustainable Tourism*, *28*(10), 1443–1459. https://doi.org/10.1080/09669582.2020.1741596

Appendix A. Proposed constructs and scale items

Environmental concern	
I am concerned about the environment	EC1
The condition of the environment affects the quality of my life	EC2
I am willing to make sacrifices to protect the environment	EC3
I am emotionally involved in environmental protection issues	EC4
Environmental self-assets	
I am knowledgeable about environmental issues	ESA1
I stay up-to-date on environmental issues	ESA2
I am experienced at influencing the environmental opinions of others	ESA3
I care deeply about environmental issues	ESA4
Love for nature	
Passion for nature	
I cannot imagine anything else I own making me as happy as nature does	LN1
Sometimes just seeing nature can be very exciting for me	LN2
When I cannot be around nature, I find myself longing to see it	LN3
The day I touched nature was a dream come true for me	LN4
Intimacy with nature	
I know details about nature that are of little interest to most other people	LN5
I feel I really understand nature	LN6
I enjoy spending time in nature	LN7
I am happy to share myself and my resources with nature	LN8
I am always interested in learning more about nature	LN9
Commitment to nature	
I would like to always keep in touch with nature	LN10
I can't imagine leaving nature	LN11
Nature is irreplaceable	LN12
Respect for nature	
Sometimes some natural resources need to be sacrificed for important developments	RN1
Current patterns of production only require minor adjustments to protect the welfare of the natural environment	RN2
People only need to make minor changes to their current consumption out of respect for nature	RN3
It is the obligation of a society to vigorously protect the natural environment for the benefit of future generations	RN4
Environmental conscious consumer behaviour	
If given a choice, I always choose the mode of transport which cause the least amount of pollution	ECCB1
If I understand the potential damage to the environment that some transportation modes can cause, I do not prefer to travel through such modes.	ECCB2
I have switched to alternative means of transportation for ecological reasons.	ECCB3
When 1 have a choice between two modes of transport, I always prefer to opt for the one which is less harmful than the other for people and the environment	ECCB4
I do not opt for such modes of transport that harm the environment	ECCB5
I try to travel through energy-efficient modes of transport	ECCB6
I prefer to travel through such means of transport which causes less pollution than other modes	ECCB7
I prefer to opt for the means of transport which contributes towards environmental conservation	ECCB8
I have purchased the transportation services which are more expensive but are less harmful to the environment	ECCB9
Flight shame	
I fly less because of climate change	FS1
To fly stirs my conscience and I feel flight shame	FS2
I have stopped flying because of climate change	FS3
Policymakers are not doing enough to reduce emissions from aviation	FS4