Sustainable Tourism Attitude and Preference in Italian Adults: Value Orientation and Psychological Need Satisfaction

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Abstract: Sustainability became a leading concept in tourism development practice and research. Several studies have shown the relationship between sustainability choices and value orientation. However, there is a lack of studies that explore how autonomous motivation, based on the satisfaction of the basic psychological needs, might predict sustainability attitudes and preference. The present study aims to explore the relationship between attitudes towards sustainable tourism, preference for a sustainable stay, values orientation, and psychological need satisfaction in Italian adults, testing the hypothesis that also basic needs satisfaction and tourist preferences should contribute to increasing a positive attitude toward sustainable tourism. Participants are 142 Italian adults (M = 42,11 years, 80% women). This research used the online survey method collection and snowball strategy recruitment. The results showed that participants have a high level of attitude and preference towards sustainable tourism. Correlation indicated that there is a positive association between positive attitudes towards sustainable tourism, self-transcendence, and basic psychological need satisfaction. Furthermore, regression revealed that psychological basic need satisfaction, preference for a sustainable stay and value orientation explain people's attitudes towards sustainable tourism. These findings imply more attention may be needed to psychological needs to understand how people might deal with environmental sustainability.

1. Introduction

In the last decades, sustainability has been prominent in international discourse, goals and development policy as a development strategy bring an enhanced quality of life for all people while preserving the destination's natural and cultural heritage [1]. Sustainability is closely linked to the theme of global environmental changes; local events are connected to people´s behaviors and causes at a global level [2]. In this regard, the tourism experience is part of those human activities that can affect environmental changes and have a considerable impact [3]. Furthermore, sustainable tourism has grown in popularity because the increased awareness that consumers' decisions about where to spend their vacation have a large environmental and economic impact. Initiatives that intend to promote responsible tourism are growing in collaboration with and respecting the local population [4]. On the other hand, the efforts to decrease the negative impacts of tourism are essential, and an important transition towards more sustainable tourism might be to study more about the determinants of tourists' choices.

The past 30 years of research on sustainable tourism have seen an exponential increase [5] and it has been defined in many ways [6]. One of the most cited definitions is provided by the World Tourism

Organization, which defines sustainable tourism as "tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, and the environment and host communities" (UNEP and UNWTO, 2005, pp. 11–12), however, it has been criticized as vague and biased [7].

Although it is a controversial topic in the literature, sustainability in tourism is generally considered a goal to find a balance between the economic, environmental, and social demands of all stakeholders in considering the influences of tourism [8]. Sustainable tourism activities focus on environmental, economic, social, and cultural development. Maintaining a holistic balance between these four dimensions is crucial to ensuring the short- and long-term development of sustainability for the tourism sector. In addition, the sustainability of tourism has a value of immediate economic interest. In fact, it characterizes the future of the sector and is reflected in a variety of key elements in different dimensions. We can consider, for example, practices such as ecotourism and nature-based tourism in the context of sustainable environmental development; cultural tourism and rural tourism in the context of sustainable culture development; community tourism and accessible tourism in the context of sustainable society development, and behavioral economics and circular economics in the context of sustainable economic development [9].

In other words, sustainability refers to tourism activities developed in such a way as to remain viable in a tourist area for an unlimited time, without altering the natural, social, and artistic environment and without hindering the development of local social and economic activities. It is, therefore, an ecological, socio-cultural, and economic compatibility with respect to the territorial community. In Italy, the relationship between population and sustainable tourism, defined as tourism that respects the environment and seeks to reduce the energy and resource consumption of the territory, has been monitored for ten years at the national level. The data of the X report „Italians, sustainable tourism, and ecotourism" presented in September 2020, underline that the percentage of people that consider that today there is an emergency in Italy for the damage that tourism can bring to the environment is in decline compared to the data from 2019, while the percentage of those who believe that tourism is always a resource and not a problem is stable.

Arrobas and colleagues (2020) [10] underline the importance of exploring people's attitudes because only by changing them, adequate behavior and action will be guaranteed in the future. They refer to a conceptual framework to understand how pro-environmental behavior has exhibited [11], indicating the positive beliefs as at the core, then a disposition for a behavior intention arises, based on attitudes, models, and capabilities. This need for an attitude change in sustainability has been the subject of constant debate for several years, given the significant decline of natural resources. Passafaro (2019) [12] identifies some key characteristics of attitudes that refer to the environment and organizes them based on their distance from behavior and their level of abstraction (from the worldview related to environment protection to the cycle tourism), in line with classical theories by Ajzen and Fishbein (1977) [13] on attitudes. General environmental attitudes seem to be more influenced by values and beliefs [14]. Furthermore, the type of motivation an individual owns might influence the selection of actions, attitudes toward these actions, the effort and persistence one devotes to them, and also the emotions experienced [15]. Tourists' attitudes represent key determinants of tourists' choices and activities that are cases of ecological behavior [16].

1.1. Sustainable Tourism and Value Orientation

In tourism research, several studies have examined the relationship between tourist behavior and values [17–21]. In the field of psychosocial sciences, Schwartz's contribution represents a widely accepted theorization about value orientation. According to this model, values are conceptualized as important standards serving as guiding principles in people's lives. Schwartz's value theory [22] includes 10 distinct values that vary along two dimensions, openness to change versus conservation and self-transcendence versus self-enhancement.

The first dimension (openness to change vs. conservation) describes the antithesis between values that emphasize independence and the readiness for change (hedonism, self-direction, stimulation) and values that emphasize order and the resistance to change (security, conformity, tradition).

The second dimension (self-transcendence vs. self-enhancement) describes the antithesis between values that emphasize concern for the welfare and for the others (universalism, benevolence) and values that emphasize the pursuit of personal interests and relative success and dominance over others (power, achievement). Universalism expresses altruism towards humanity and comprises aspects like equality, social justice, and peace on earth, whereas benevolence expresses altruism towards in-groups and comprises principles such as cooperation, indulgence, care, and responsibility [21]. According to this structure, values are interdependent.

In the area of sustainable tourism, Fairweather and colleagues (2005) [23] examined the relationship between the anthropocentric and biocentric value orientations of tourists to a destination and their responses to eco-labels. Recent research underlines that people who tend to prefer more sustainable tourism features show higher levels of pro-social and biocentric values. This group believes, more often than others, that people should reflect on the possible social and environmental impact of their tourism choices when planning their holiday [3].

Recently Osikominu and Bocken (2020) [24] chose the Schwartz Model of Universal Human Values Model to analyze the voluntary simplicity lifestyle by analyzing values and practices. The study analyses how people that adopt a voluntary lifestyle of simplicity change their consumption habits towards more sustainable vacation models like individual trips backpacking or camping, community gardens, or visiting friends [24].

In this regard, other authors [2] combine psycho-cultural perspectives with cultural ecosystem services and use the Environmental Schwartz Value Survey [25] to explain individuals' environmental thoughts and behaviors. It delineates four value groups: biospheric (e.g., concern for the environment), altruistic (e.g., concern for others), egoistic (e.g., concern for personal resources), and hedonic (e.g., concern for pleasure and comfort).

1.2. Psychological Needs and Preference for a Sustainable Stay

People have basic psychological needs to feel competent, autonomous, and a sense of belonging or relatedness to others [26]. This assumption represents a central aspect of the self-determination theory [27] that underlines that individuals might be more or less proactive, according to the social conditions in which they live. The vitality of basic psychological needs allows people to act more autonomously and to persist more at important actions [28] like sustainable choices in tourism experience. Basic psychological need satisfaction refers to people's need for competence, autonomy, and relatedness in their life activities. Competence satisfaction involves feeling effective in the social environment and being able to express one's abilities and achieving positive outcomes. Autonomy satisfaction denotes the feeling of being the perceived source of one's behavior and the experience of being full self-determined when engaging in one's activities. Finally, relatedness satisfaction refers to the experience of closeness and connection with others [29,30]. Self-determination theory differentiates two main types of motivation. Autonomous motivation includes both intrinsic and extrinsic motivation, which people have identified with an activity's value that they would ideally assimilate into their sense of self. Controlled motivation, in contrast, consists of both external and introjected regulation of some elements, such as avoidance of shame, contingent self-esteem, and ego-involvement.

The autonomous motivation, in the interpretation of Deci and Ryan (1985) [31], represents the highest level of development, the maturity that permits one to independently adjust one's action in agreement with the surrounding environment and to reach good satisfaction in the interpersonal relationships, as well as a sense of self-realization. Literature underlines that being autonomous supports internalization of values, awareness of intrapersonal dynamics and their relation to behavior, and satisfaction of the basic psychological needs in line with the psychosocial approach [32,33].

In the literature about Sustainable Tourism, some authors explore preferences for a sustainable stay that could represent specific pro-environment behavior and includes contact and respect for nature, sustainable mobility, and choice of vacation less standardized in their experience [34]. In today's highly competitive and dynamic context, the knowledge of tourist preferences that might correspond to "attractive" qualities of the place is central to the hospitality industry [35]. Tourist preferences may be influenced by socio-demographic, travel characteristics, and destinations [36–38].

Previous research projects, in the context of tourism and hospitality, have highlighted the relationship between sustainable tourism and value orientation and self-determination theory was used to understand workers' attitudes [39], the association between subjective well-being and spiritual tourism [40] and customer satisfaction with the tourism experience and its impact on their lives [41].

However, there are no studies that explore how autonomous motivation, based on the satisfaction of the psychological needs of autonomy, competence, and relatedness, could predict tourists' sustainability attitudes and preferences.

The present work will examine the relationship between sustainable tourism attitudes, preferences for a sustainable stay, value orientation, and psychological basic need satisfaction in Italian adults. In line with previous research [42], our proposed model expects that value orientation toward concern for the welfare and for others (self-transcendence) should predict a more sustainable tourism attitude. Therefore, the main objective of the study was to test the hypothesis that also basic needs satisfaction and tourist preferences should contribute to increasing a positive attitude toward sustainable tourism, overcoming the gap in the literature.

2. Materials and Methods

2.1. Participants and Procedure

For this study, we recruited a convenience community sample of 142 people with an average age of 42.10 years (range = 20–74), 80% of the participants were women, and this reflects the common female majority in response degrees. Fifty percent of participants have a university degree, 27% a college degree, 19% a postgraduate degree, and only 4% high school.

Most of the respondents (81.7%) were employed, followed by a small group of students (9.2%). Unemployed and retired people represented 9.1% of the total respondents.

This research used the online survey method for data collection and participants were recruited using a snowball strategy. The online self-report questionnaire comprised several constructs with various items and was designed by using the application 'survio.com' and diffused through social networks. Completing the questionnaire took a mean of 20 min.

The objectives and the voluntary nature of the study were written explained, and informed consent was obtained by having them fill out a form on the above platform. The data collection procedure was in accord with the Research Ethical Code of the Italian Association of Psychology and the ethical recommendations of the Declaration of Helsinki, as well as the American Psychological Association (APA) standards for the treatment of human volunteers.

2.2. Instruments

Socio-demographic information. Respondents were asked to provide some socio-demographic data (age, gender, educational level, last destination travel).

Questions about Sustainable Tourism definition and experience. Respondents were asked to indicate the most important element to consider a tourist destination sustainable and to provide some examples of a sustainable tourist destination.

General Attitudes Towards Sustainable Tourism (ATST) [42]. This scale was composed of seven items that assess the inclination to promote the sustainability principles about tourism issues. The scale measures individual beliefs concerning two core topics of tourism sustainability: First, the importance of accepting both social and environmental responsibilities during holidays (e.g., vacationers should

not be concerned with respecting the local environment, this task should be left to the local authorities), second, the interest in making contact with the hosts' culture (e.g., during the holiday, it is important to dedicate time to the understanding of the present and past history, culture, and traditions of the place visited). Seven-point Likert scales were used, ranging from 1 (completely disagree) to 7 (completely agree). The scale includes two factors: Positive and negative attitudes, but in the present work, we choose to use only the positive ones. Cronbach's alpha coefficient computed on the present sample was acceptable: 0.67 for Positive attitude.

Preferences for a Sustainable stay [34,43]. Based on surveys and reports of two major national Italian institutes of research: ISTAT and IPR Marketing, authors developed 12 items about the preference of people towards a sustainable stay in a destination (e.g., the location is easily accessible by public transportation). These items measure perceptions regarding people's preferences on a five-point Likert scale, ranging from 1 (Strong Disagreement) to 5 (Strong Agreement). Cronbach's alpha coefficient for these items computed on the present sample was 0.82.

The Portrait Values Questionnaire (PVQ) [44]. The scale was composed of 40 items and allowed scoring of ten value scales, each consisting of three to six items. Participants read a description of an individual and then they were asked to respond on a six-point Likert scale the degree to which the description was similar to them (e.g., Thinking up new ideas and being creative is important to this person. They like to do things in their original way, with responses ranging from 1 (Not like me at all) to 6 (Very much like me). The scores were calculated by averaging the items for each of the ten value types: the higher the score assigned, the higher the importance given to the corresponding value. Cronbach's alpha coefficients computed on the present sample were all acceptable, ranging from 0.70 for conservation to 0.84 for self-enhancement.

Basic Psychological Need Satisfaction and Frustration Scales (BPNSFS) [45]. The scale has 12 items related to need satisfaction: Four items for each basic psychological need (autonomy, e.g., I feel free to decide what to do; relatedness, e.g. I feel I'm perfectly integrated into a group; and competence, e.g., I feel I can accomplish even the most difficult tasks), and 12 items related to need frustration: Four items for each of the basic psychological needs. Responses range on a Likert scale from 1 (Strong Disagreement) to 5 (Strong Agreement). In the present work, we choose to use only the first factor (need satisfaction), Cronbach's alpha coefficient computed on the present sample is acceptable: 0.85.

2.3. Data Analysis

For the statistical data analysis, the statistics program IBM SPSS 20 was used. All significance tests are two-sided with a Type I error rate of 5%. Descriptive statistics were used to characterize the sample and the study variables. We used bivariate correlation analyses based on Pearson's r and linear regression analyses to test our hypothesis. Tolerance values (cut-off points greater than 0.1) were used as measures to detect multicollinearity between independent variables.

3. Results

Participants were asked to indicate what they consider the most important factor in order to consider a tourist destination "sustainable". Most participants indicated a low environmental impact (43%) that included both pollution reduction, low plastic use, but also structures that did not disfigure the landscape from an architectural point of view. Fourteen percent referred to energy-saving and therefore to a limitation of waste (e.g., food, water). Ten percent of participants stressed the importance of using local resources, in particular, local staff within the tourist facility, but also food products at km 0. The fact that the structure is immersed in nature is an element to define its sustainability for 9.1% of respondents. Recycling activity is a sustainability indicator for 7.4% of participants. The importance of the use of energy from renewable sources (6.6%) and respect for local traditions and culture (4.1%) is highlighted. Finally, the participants indicate the fact that the destination is not mass (overtourism)

(2.5%), that it is accessible to the disabled (0.8%), that there is a relationship of trust between client and manager (0.8%), and that the value for money is good (0.8%).

When the participants had to indicate a destination that, according to the criteria defined by them, could be considered sustainable, 33.1% said they did not have an answer, 18.3% indicated camping, 16.2% bed and breakfast, 14.1% agritourism. They follow with lower percentages: Mountain refuge (4.9%), residence (3.5%), rented flat (2.8%), albergo diffuso (2.1%), the second house (1.4%), guesthouse (1.4%), hostel (0.7%), treehouse (0.7%), and camper (0.7%).

This high percentage of participants who have not been able to indicate a destination could indicate the existence of a gap between the representation of "sustainable tourism" and the concrete operational translation of this concept into tourist facilities where to go on holidays.

Means and standard deviations and correlation among the study's variables are presented in Table 1.

Table 1. Means, standard deviations, and correlation among variables.

	1	2	3	4	5	6	7	M	SD	Range of Score
1. Positive Attitudes Towards Sustainable Tourism	1							5.62	1.12	1–7
2. Preferences for a sustainable stay	0.330 **	1						3.57	0.61	1–5
3. Openness to change	0.018	0.150	1					4.03	0.70	1–6
4. Conservation	0.129	0.246 **	−0.045	1				4.05	0.58	1–6
5. Self- Enhancement	−0.114	−0.081	0.468 **	0.045	1			3.13	0.88	1–6
6. Self-Transcendence	0.394 **	0.247 **	0.228 **	0.416 **	−0.043	1		4.92	0.56	1–6
7. Basic Psychological Need Satisfaction	0.333 **	0.276 **	0.254 **	0.210 *	0.050	0.393 **	1	4.16	0.48	1–5

$* p < 0.05; ** p < 0.005$.

The positive attitude towards sustainable tourism in our participants appears high (m = 5.62). These scores indicate the sensitivity of the study participants towards sustainable tourism. However, this positive attitude does not seem to be matched by the choice of sustainable tourist destinations. When asked where they had spent their last holiday, 29.6% of participants indicated a hotel, which they themselves do not mention among the choices they consider "sustainable".

Next, 25.4% went on holiday in an apartment for rent, in a bed and breakfast (12%), in the second house (8.5%), in camping (7%), at friends' home (3.5%), in residence (2.8%), in agritourism (2.8%), in tourist village (2.8%), in hotel (1.4%), guesthouse (1.4%), hostel (0.7%), religious hospitality (0.7%), camper (0.7%), and cruise (0.7%). If we consider the value orientation and the two dimensions described above (self-transcendence vs. self-enhancement, and openness to change vs. conservation), we can notice how self-transcendence, that includes benevolence and universalism, refers to people that transcend selfish concerns to promote the welfare of others, presents the higher score in our participants means (m = 4.92), followed by conservation (m = 4.05) that includes tradition, conformity, and security, and that is characterized by self-limitation, preserving traditional practices, and safeguarding stability.

Basic psychological need satisfaction mean (m = 4.16) is higher than the theoretical mean.

As expected, results indicated a significant correlation between the positive attitudes toward sustainable tourism and self-transcendence, r = 0.39, $p < 0.000$, as well as basic psychological need satisfaction, r = 0.33, $p < 0.000$, and preferences for a sustainable stay, r = 0.33, $p < 0.000$.

Descriptive statistics about participants' Preferences are summarized in Table 2.

In general, the mean scores show that the aspects that impact the most the preference to choose sustainable hospitality are whether accommodation minimizes inconveniences (m = 4.44), whether accommodations are in places where nature is intact and protected (m = 4.10), and whether it consents one to visit the place even during low season (m = 4.01).

Family-run accommodation facilities obtain a lower score (m = 2.51) from our participants.

A hierarchical regression model was used to assess the associations between the study's variables (Table 3).

Table 2. Means and standard deviations regarding preferences for a sustainable stay.

Sustainable Characteristics of Tourism Facilities	M	SD
Location easily accessible by public transportation	2.75	1.44
Places to move easily on foot or by bike	3.68	1.24
Accommodation facilities with environmental certification	3.04	1.09
Family-run accommodation facilities	2.51	1.26
Places where nature is intact and protected	4.10	1.07
Program with actions to reduce energy consumption and pollution	3.52	1.11
Program with a series of actions carried out to enhance local characteristics	3.96	1.09
Authentic relationship with the local population	3.82	1.21
Moments of contact with nature	3.84	1.17
Accommodation minimizes inconveniences	4.44	0.85
Where there are few tourists	3.18	1.16
Opt for off-season period	4.01	1.00

Table 3. Regression model.

	B	SE	Beta	95% CI for B
(Constant)	−0.12	0.91		−1.922, 1.674
Self-Transcendence	0.55	0.16	0.28 ***	0.228, 0.876
Preferences for a sustainable stay	0.39	0.14	0.22 **	0.111, 0.678
Basic Psychological Need Satisfaction	0.39	0.19	0.17 *	0.006, 0.773
Adjusted R^2 0.24				

Dependent variable: Positive attitude toward sustainable tourism. * $p < 0.05$; ** $p < 0.005$; *** $p < 0.001$.

The model predicted 24% (Adjusted R^2, F = 14.11, $p < 0.000$) of the variance in positive attitudes toward sustainable tourism, and tolerance levels were high (>0.81), indicating no multicollinearity among predictor variables. Having higher self-transcendence value orientation (β = 0.28, $p < 0.001$), higher preferences for a sustainable stay (β = 0.22, $p < 0.01$), and higher basic psychological need satisfaction (β = 0.17, $p < 0.05$) were significantly associated with positive attitudes toward sustainable tourism.

4. Discussion

The purpose of this study was to extend current knowledge on how sustainable tourism attitude and preference are associated with value orientation and psychological needs. In contrast to previous studies, we examined the relationship between tourist attitude and values, including psychological needs, because the vitality of psychological needs permits people to persist more at important actions like sustainable choices in tourism experience.

According to the literature [42], understanding tourist preferences, values, and attitudes might be useful in predicting their environmental behavior once in place and in responding to their educational needs regarding sustainability.

Our participants reported high positive attitudes toward sustainable tourism, indicating their perception of the importance of accepting both social and environmental responsibilities while on holiday and expressing interest in getting in touch with the hosts' culture and with nature.

Some dimensions were more relevant to our participants in the choice of accommodation. In particular, less-massified conditions like the possibility to visit the place even during low season and the attempt to minimize any inconvenience to its patrons.

Preferences for a sustainable stay also referred to places where nature is intact and protected, moments of contact with nature, and actions that reduce energy consumption and pollution like moving by bike or public transportation, indicating the centrality of environmental concern as a core aspect of sustainability [46]. Data underline that participants consider environmental, economic, social, and cultural development in their idea of sustainability in tourism experience [9], however, low environmental impact is the key element in their representation.

Preferences for more sustainable activities in our study correlated positively with a self-transcendence value orientation, consistently with the literature that highlights the relationship between altruistic and pro-ecological values to tourist preference oriented to sustainability [3]. This aspect suggests the need for increased efforts to encourage the implementation of awareness programs for tourism choices. Many of the participants failed to provide an example of a destination they considered sustainable on the basis of the indicators that they had highlighted. This suggests the importance of increased information and the dissemination at the community level of a "culture of sustainability" [47] also in the tourism sector. Furthermore, tourist preferences were associated with basic psychological need satisfaction, so in line with the previous studies that had proven the importance of individual functioning in affecting tourist experience and choices [38,48,49], we think that self-determination represents an important element to add to this area of study.

From our results, it emerged that among the values, self-transcendence obtained the highest scores. This indicates attention to others and the environment and the idea of being only a small part of a larger world and acting accordingly. Although Italian culture may be portrayed as adhering to an Occidental value model, with a majority of individualistic values, it has some collectivistic elements [50], such as self-transcendence.

The results of this study reaffirm and give empirical support to previous studies that underlined participants with a self-transcendent value orientation reported a stronger environmental concern [46] that might be considered an important element in sustainable tourism. Furthermore, this appears in line with the literature that underlines that value orientation could be related to a change in consumption towards more sustainable vacation models [24].

Moreover, this study examined the role of basic need satisfaction, as defined within self-determination theory [28], in the relationships between value orientation and sustainable tourism attitudes. Our results confirmed the importance of basic psychological needs satisfaction in defining our attitudes and expectations towards sustainability in tourism choices.

Sustainable tourism is characterized by a series of choices concerning the selection of accommodations, destinations, and types of travel [51]. Having higher self-determination, and therefore, an autonomous, rather than heterodirect, motivation in making these choices may influence effort and persistence one devotes to those actions [26]. Similarly, the literature underlines that the type of individual's motivation influences the attitudes toward behavior and choices [28]. If basic psychological need satisfaction causally promotes the positive attitudes toward sustainable tourism, it would be beneficial for people to get trained in self-determination.

The present study is one of the first that explores the role of psychological needs satisfaction to explain a positive attitude toward sustainable tourism in Italy. This approach provided a more inclusive description of the relationship between individual variables and attitudes toward sustainable tourism. Additionally, we also considered value orientation and preferences for a sustainable stay, according to the literature that underlines that variation in people's attitudes may be explained from a value orientation perspective [52].

It is essential to assess our results in light of study limitations. In the present research, the data were gathered from a convenience sample (non-probability sampling), therefore, most of the data were derived from women, consequently, findings raised the topic of self-selection bias and generalization. Furthermore, due to the limited amount of work in this area, future studies should continue investigating psychological need satisfaction in tourism research. Although our sample size was sufficient for this exploratory study, a larger and more diverse sample would be more informative and could also ensure the inclusion of a more representative range of people. Studies may incorporate other viewpoints to provide a deeper understanding of the factors affecting attitudes and preferences in men and younger people. Future research would benefit from examining ethnic and social-economic differences in the relationship between psychological need satisfaction, value orientation, and tourism choices. The use of self-reported data might not provide an in-depth understanding of the role of different need. Future research may apply a mixed-method [53] to deepen the impact of autonomy, competence,

or relatedness on tourism attitudes. Furthermore, this work did not examine possible moderating and control variables (e.g., age, gender, and income) in the relationship between need satisfaction, value orientation, and positive attitudes.

Beyond these limitations, however, our findings highlight the association between attitudes towards sustainable tourism, preference for a sustainable stay, value orientation, and psychological need satisfaction. Furthermore, these findings might imply more attention may be needed to psychological needs in understanding how people might deal with environmental sustainability.

In conclusion, the current study added to the research, pointing at psychological basic need satisfaction, inside the self-determination theory, as a promising underlying mechanism in explaining people's attitudes towards sustainable tourism, to understand how people could deal with environmental sustainability.

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