

## BIG FIVE PERSONALITY TRAITS AND TOURIST'S INTENTION TO VISIT GREEN HOTELS

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### ABSTRACT

Personality is more enduring in nature and differs person to person. Thus, this paper examined the effect of an individual's personality traits on tourists' intention to visit green hotel using Big five model. A self-administered questionnaire was utilised using adapted items from relevant literature. Data were conveniently collected from the 285 tourists' who visited India at central locations (tourist places, hotels, and airports). Model was analysed by means of measurement and structural model using statistical analysis software SPSS V.20 & AMOS V.21. The findings reveal that four personality traits viz. agreeableness, conscientiousness, openness, and extraversion were positive predictors of intention to visit green hotels, but neuroticism was an insignificant predictor. This study helps to gain fresh and better understanding of the tourists' intention to visit green hotels because, in past researches, the relationships between personality traits and green tourist's behavioural intention were contradictory and inconsistent. This study is one of its first kind to examine the effect of an individual's personality traits on his/her intention to visit green hotel using Big five model in the context of a developing nation; India.

**KEYWORDS:** Green Hotel, Intention to visit, Conscientiousness, Openness, Agreeableness, Neuroticism, Extraversion.

Tourists' concern about environmental issues has been continuously increasing. Due to this, they are getting more aware about the negative impact of their consumption pattern on the environment and have started to seek and purchase eco-friendly products and services [18, 23, 24]. These actions led to transform their attitude and behaviour into environmentally favourable one [32]. In general, such pro-environmental behaviour is observed as triggered by either self-interest motives or pro-social [4]. Thus, for consumers' eco-friendly consumption has become a motivating force which can safeguard the environmental resources in route to save the environment [37]. Green hotels differentiated from ordinary hotels in that they use products and services that reduce water and energy consumption, solid waste output to protect the environment from further depletion of its natural resources [12]. Green hotels enthusiastically follow eco-friendly guidelines, dynamically exercise eco-management practices to exhibit their commitment towards the environment, and constantly improve and implement sustainability hotel strategies [26, 20]. According to a study [3], if an individual chooses to visit and stay in a green or eco-friendly hotel, the adverse impact associated with their stay is inevitably reduced. Further, environmentalism has been studied from various perspectives such as social and psychological factors (attitude, perception and beliefs) that affect an individuals' environmental attitude and behaviour. Although recently some research works have tried to investigate environmental commitment from the

personality viewpoint [11, 15, 22, 36], there is a scarcity of the research on the relationship between personality traits and eco-friendly behaviour, particularly towards the tourists intention to visit the green hotel. Moreover, the findings of these recent studies are inconsistent and contradictory for the relationship between personality and environmental concern [26, 29]. This inconsistency demands an investigation of the personality traits affecting an individuals' intention and behaviour towards the environment in a hospitality and tourism context. Moreover, personality develops when a person's life starts with grasping different things from the environment whereas attitude, on the other hand, is more dynamic as it is affected by internal as well as external surroundings of an individual. Personality is more enduring in nature whereas an individuals' attitude would certainly change from one person to another. In light of these concerns, the objective of the current study is to address the gaps above by investigating the relationships between personality traits and consumers' intention to visit the green or eco-friendly hotel. Precisely, personality traits will be measured by using a highly validated 'Big Five' nomenclature, which is the highest popular in previous studies and encompasses five wide-ranging dimensions of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness [13, 27].

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## THEORETICAL BACKGROUND AND HYPOTHESIS

### Personality Traits: Agreeableness

It is referred as how an individual differs in being compassionate, likeable, warmth, generous, and harmonious in the relationship with others [28]. Individuals' with a higher degree of agreeableness can behave in an eco-friendly manner as they consider that it is beneficial to the society as well as to the environment [26]. In fact, a limited number of ecological studies [11, 16, 29] reveals that individuals with a high degree of agreeableness are more inclined towards the environmental aspect of their behaviour. On the contrary, authors [26] found an adverse relationship between agreeableness and environmental behaviour. Certainly, it is logical to assume that individuals who are altruistic, empathetic in nature, and compassionate would create more eco-friendly individuals' and tourists. The higher the individuals' agreeableness level greater the environmental concern [15]. From the above discussion we can hypothesise that:

**H1:** Tourists' with a higher level of Agreeableness are more likely to visit the green hotel.

### Extraversion

Extraversion is defined as how much an individual is assertive, active, social, talkative and outward spoken [27]. The studies by Fraj & Martinez [11] and Markowitz et al. [26] found that persons who have a high level of Extraversion activities are more inclined towards showing the environmental concern for the environment. On the contrary, [15, 16] was not able to find any relationship between individuals extraversion personality trait and environmental concern. Another interesting finding demonstrated by Milfont and Sibley [29] reveals that Extraversion trait had a considerable influence on environmental commitment. Further, it is also stated that the extraversion trait of personality is also positively associated with post-materialistic values which comprise of self-expression and personal well-being, which have been formerly associated with the higher level of concern towards environment [17]. On the ground of above conversation, the following hypothesis has been developed:

**H2:** Tourists' with a high level of Extraversion characteristic are more likely to visit the green hotel.

### Neuroticism

This personality trait is related to the propensity to experience negative feelings of an individual such as anger, anxiety, fear and insecurity about any object [27]. Individuals having a higher level of neuroticism tends to respond impulsively, have less control over stress and react emotionally to the situation. Further, it is also identified that neurotics are much more sensitive to stressful situations. Besides the negative aspects of the neuroticism, it is found positively linked with the ecological conservation [36] when evaluated using Eysenck Personality Measures [10]. Also, this trait yielded diversified results when integrated with Big Five model while examining the relationship between neuroticism and environmentalism. For example, Hirsh and Dolderman [16] and Fraj and Martinez [11] reported no relationships between the environmentalism and neuroticism, while another study by Milfont and Sibley [29], neuroticism was found in an uneven (both positive and negative) relationship with environmental engagement. Along in line, Hirsh [15] revealed that people with high level of neuroticism elicited significantly greater disposition towards the environmentalism. More recently, while investigating the relationship between personality traits and tourist's ecological behaviour, Kvasova [22] reveals that neuroticism is positively associated with the tourist's eco-friendly behaviour. Despite the diversified results in previous studies, it is logical to assume that people with higher level of neuroticism are more likely concerned about harmful consequences and thus will exhibit environmentally friendly behaviour [15]. From above discussion, we may carefully hypothesise that:

**H3:** Tourists' with a high level of Neuroticism are more likely to visit the green hotel.

### Conscientiousness

Conscientiousness is defined as a personality trait in which individuals have a tendency to be systematic, self-disciplined, responsible, and follow the procedures and norms [27]. This personality trait is found to be linked to environmental conservation and engagement [30]. It is clear that individuals having future orientation are usually more anxious about the consequences of their actions and tend to relate with planning for better prospects in future including the environmental ones also [29]. Besides, being responsible and conscientious personalities they sensibly follow societal norms and this desire 'to do the right thing' can be seen in their eco-friendly behaviour

[15]. The association of conscientiousness with the environment is still debatable because of the variations in the findings. While few studies show the inconsistent or contradictory aspect of the relationship (e.g. Hirsh & Dolderman [16]; Markowitz et al. [26]), other studies reveal that conscientiousness is significantly correlated with individuals' environmental actions (e.g. Fraj & Martinez [11]; Milfont & Sibley [29]). Thus, from above discussion we may hypothesize that:

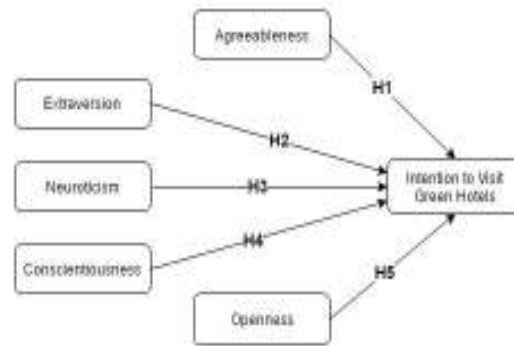
**H4:** Tourists' with a high level of Conscientiousness are more likely to visit the green hotel.

**Openness**

Openness can also be referred as openness to experience. It describes to the extent an individual having broadmindedness, imaginative, intellectually curious and novel characteristics with artistic feature [27]. The feature of intellectual curiosity of openness traits of the personality might inspire individual actions in the favour of environmental preservation [16,26]. The self-transcendence value in the Schwartz [35] value structure is also associated with the openness trait of the big five model which also supports the preservation of the natural resources along with other

values [31]. Remarkably, in the previous studies, the Openness trait was strongly associated with pro-environmental attitudes and behaviours [15,26,29]. For instance, Hirsh [15] revealed in his study that openness was a strong predictor of an individuals' pro-environmental behaviour, and less susceptible individuals were likely to exhibit a narrower and more conservative behaviour towards nature. Thus, by above discussion, we may posit that:

**H6:** Tourists' with a higher level of Openness are more likely to visit the green hotel



**Figure 1: Proposed conceptual model**

**Table 1: Constructs with their source of adoption**

Variables	Measuring Item	Source of Adoption
<b>Extraversion</b>	Am the life of the party Don't talk a lot Talk to a lot of different people at parties keep in the background	Donnellan et al., 2006; Milfont & Sibley, 2012; O Kvasova, 2015
<b>Agreeableness</b>	Sympathise with others' feelings Am not interested in other people's problem Feel others' emotions Am not interested in others	Donnellan et al., 2006; Milfont & Sibley, 2012; O Kvasova, 2015
<b>Conscientiousness</b>	Get chores are done right away Often forget to put things back in their proper place Like order Make a mess of things	Donnellan et al., 2006; Milfont & Sibley, 2012; O Kvasova, 2015
<b>Neuroticism</b>	Have frequent mood swings Am relaxed most of the time Get upset easily Seldom feel blue	Donnellan et al., 2006; Milfont & Sibley, 2012; O Kvasova, 2015
<b>Openness</b>	Have a vivid imagination Am not interested in abstract ideas Have difficulty understanding abstract ideas Do not have a good imagination	Donnellan et al., 2006; Milfont & Sibley, 2012; O Kvasova, 2015
<b>Intention to visit green hotel</b>	I am willing to visit green hotel when travelling I plan to visit green hotel when travelling I will make an effort to visit green hotel while travelling	Lee, Hsu, Han, and Kim (2010)

## METHODOLOGY

### Data Collection

The current study is concentrated on the tourists who visited India during summer 2016. A questionnaire was utilised which comprises of pre-identified and coded items for each of the construct measurement. For measuring the Big Five personality traits a 20-item short version (mini-IPIP) was operationalized instead of the 50-item 'Five-Factor Measurement Model' which was originally developed by Donnellan, Oswald, Baird, and Lucas [9]. The Mini-IPIP personality inventory also showed the convergent and discriminant validity along with criterion validity with other Big Five dimensions' items [8]. To measure the constructs items a seven-point Likert scale was used where 1 = very inaccurate and 5 = very accurate. The survey instrument consisted of three main components: (a) the Big Five traits; (b) intention to visit green hotel (c) socio-demographics (nationality, gender, age, education). The intention to visit scale items were adapted from Lee et al. [24] with some modifications in the wordings to make it contextual. Before the final data collection for the study, the questionnaire was pretested with the tourists from a different age, gender and nationalities and shows no problem for the flow, comprehension and content validity. Finally, data were collected at central locations (tourist places, hotels, airports) through personal interviews by researchers. All participated tourists were assured confidentiality about the responses provided by them [7]. A total of 400 visitors were randomly approached by assigning quotas on age, gender, and nationality. In which, 320 tourists were decided to participate resulting in the 80 % response rate. Finally, 285 individuals' with a 71% valid response rate, were considered for data analysis by eliminating the incomplete and inconsistent responses. Kline [21] also recommended that data must be ten times of the parameter. Therefore, a sample size of 285 supports the research as it has 27 items more than the suggested. Table 1 summarises the constructs with items and their source of adoption.

### Data Analysis

The proposed theoretical framework was analysed using SEM (structure equation modelling) as suggested by Anderson and Gerbing [1]. Validity and reliability of the construct were assessed by using measurement model and, later on, hypothesis and model fit were measured by using the structural model approach by SPSS V.20 & AMOS V.21 respectively.

## RESULTS, FINDING AND DISCUSSION

This study was conducted to examine the influence of personality on the tourists' intention to visit green hotels. A much diversified sample of participants interested in the study had a different nationality. The tourist from various countries has responded which represented seven countries: The United States (18.2%), the United Kingdom (13.4%), Russia (10.5%), Malaysia (11.2%), Australia (14.7%), India (18.6), and France (13.4). Among the total no. Of respondents, there were 186 males (65.3%) and 99 (34.7%) females. Most of the respondents were between 31-40 age groups (39.30%), followed by age group 41-50 (26.7%) and age group 50 or above (20.0%), remaining 30.67% were belong to 26-30 age group. A majority of respondents earned a post graduate 126 (44.2%), followed by graduate degree 92 (32.3%) and others 67 (23.5%).

### Measurement Model: Reliability and Validity

The measurement model was estimated by Confirmatory Factor Analysis (CFA) with a maximum likelihood estimation method to assess the relationship between the variables. The outcomes of the measurement model evaluation revealed that the measurement model indicated a good fit to the data ( $\chi^2 = 343.553$ , D.F. = 215,  $p < .000$ , RMSEA = .049, CFI = .947, GFI = .908, IFI = .947, TLI = .937). The measurement model replicates the quantitative measures of the constructs reliability and validity. In this study, for measuring the internal consistency Cronbach's  $\alpha$  was used which ranges from .793 to .813 in the acceptable limit of .70 and above as recommended by Hair et al. [14] indicating a good consistency. Further, the convergent and discriminant validity were measured using three parameters: Composite Reliability (C.R), Factor Loadings and the Average Variance Extracted (A.V.E). The standardised factor loading of all the items ranges was above the threshold limit of .6 and above. However, one item OPN3 did not achieve the threshold standardised factor loadings (.48), but it is retained for further analysis because it affects the overall reliability results [6]. The Average Value Extract score (A.V.E) ranging from .50 to .62, which also gained on and above the acceptable limit of .5 [14] and also the square root of the A.V.E was higher than the correlation between each construct which shows good adequacy. Moreover, the value of composite reliability which shows the internal consistency of multiple indicators ranges from .80 to .82, which also exceeds the acceptable limit of .6

exhibiting adequate discriminant validity [2]. From above results, it can be stated that proposed theoretical model have a good validity (both convergent and

discriminant) and reliability. Table 2 and Table 3 summarises the values of model measurement results and correlation among the constructs respectively.

**Table 2: Result of Confirmatory Factor Analysis (Factor Loading, Reliability, Volatility and Validity)**

Construct	Items	Factor loading	Cronbach's $\alpha$	AVE*	C.R
Extraversion	EVX1	.76	.805	.512	.807
	EVX2	.66			
	EVX3	.69			
	EVX4	.75			
Conscientiousness	CON1	.68	.795	.511	.805
	CON2	.63			
	CON3	.70			
	CON4	.84			
Agreeableness	AGR1	.79	.801	.503	.801
	AGR2	.67			
	AGR3	.71			
	AGR4	.66			
Neuroticism	NEU1	.88	.813	.533	.818
	NEU2	.61			
	NEU3	.68			
	NEU4	.72			
Openness	OPN1	.89	.793	.511	.803
	OPN2	.66			
	OPN3	.58			
	OPN4	.69			
Intention to visit green hotel	INT1	.90	.805	.623	.825
	INT2	.65			
	INT3	.83			

**Note:** \*AVE=Average Variance Extracted, AVE\* calculated as  $\sum SMC / (\sum SMC + \sum \text{standard measurement error})$ , C.R-Composite Reliability

**Table 3: Correlations among the Constructs**

	EVX	AGR	CON	NEU	OPN	INT
<b>EVX</b>	<b>0.715</b>					
<b>AGR</b>	0.150 <sup>a</sup>	<b>0.714</b>				
<b>CON</b>	0.139 <sup>a</sup>	0.289 <sup>b</sup>	<b>0.709</b>			
<b>NEU</b>	0.225 <sup>b</sup>	0.115	0.206 <sup>b</sup>	<b>0.730</b>		
<b>OPN</b>	0.093	0.166 <sup>b</sup>	0.311 <sup>b</sup>	0.306 <sup>b</sup>	<b>0.714</b>	
<b>INT</b>	0.257 <sup>b</sup>	0.308 <sup>b</sup>	0.394 <sup>b</sup>	0.248 <sup>b</sup>	0.347 <sup>b</sup>	<b>0.789</b>
<b>Mean</b>	4.04	3.73	3.88	3.96	4.07	4.25
<b>S.D</b>	.805	.844	.747	.725	.627	.631

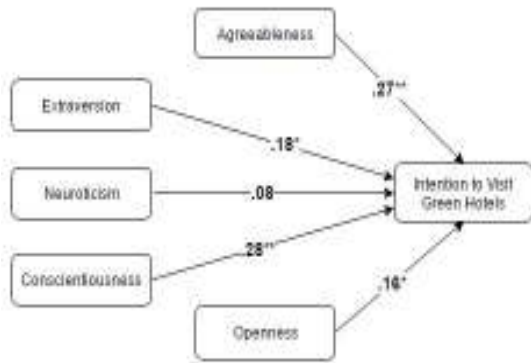
**Note:** EVX: Extraversion, CON: Conscientiousness, AGR: Agreeableness, NEU: Neuroticism, OPN: Openness, INT: Intention to visit the green hotel. Note: The bold values represent the square root of AVE,

S.D= Standard deviation a. Correlation is significant at the .05 level (2-tailed). b. Correlation is significant at the .01 level (2-tailed).

**Structural Model: Goodness of Fit Indices and Hypothesis testing results**

Based on the procedure recommended by Anderson and Gerbing [1], the theoretical framework was tested by using the goodness of fit indices. The results of structural analysis reveals that the proposed theoretical model has a good fit as values falls within the acceptable limit ( $\chi^2 = 397.226$ ,  $\chi^2/d.f.= 1.789$ ,  $P < .000$ , Goodness of Fit Index(GFI)=.881, Tucker-Lewis Index(TLI)=.905, Adjusted Goodness Of Fit Index (AGFI) = .902, Comparative Fit Index (CFI) =.915, Incremental Fit Index (IFI)=.916 and Root Mean Square Error of Approximation (RMSEA)= .053). All the observed value were well above the recommended criteria of .80, and all other values also exceeded the cut-off level [2,5]. Consequently, from the above

analytical results, it can be inferred that the proposed theoretical model indicated a good overall data fit. The findings show that the proposed theoretical framework represents a better model fit for measuring the tourists' intention to visit green hotels.



**Figure 2: Structural Model**

The Big Five personality traits appeared as significant predictors of tourists' intention to visit green hotel except Neuroticism. The estimates of standardised coefficients reveal that the agreeableness positively and significantly influences the tourists' intention to visit Green hotels ( $\beta = .265, t = 3.908, P < .001$ ). Since agreeable trait of an individuals' personality reflects his/her concern by showing their caring attitude and behaviour for other people. An agreeable individuals' tendency is to be sympathetic, compliant and socially concern for the people that help extend their intent towards the environmental protection by selecting to visit green hotels when travelling. The results coincide with the previous studies that examine this relationship [15,29]. Agreeableness was also found reflecting the higher order value of self-transcendence [31], which Individuals who are more concern, empathetic and have less self- focused tend to build a personal connection with the natural environment. On the contrary, people with egoistic and non-cooperative nature who are not willing to build their interests in line with social goals are less likely to participate in green hotel visit. It is also evident from our findings that tourists that possessed a high level of agreeableness are more likely to demonstrate their intention towards visiting a green hotel i.e. environmental behaviour, as also predicted by latest concepts of pro-environmental behaviours [34]. Extraversion also had a positive and significant impact on the tourist's intention to visit Green hotels ( $\beta = .181, t = 2.762, P < .01$ ). These results also coincide with (e.g. Kvasova [22], Markowitz et al.

[26]). The findings implied that highly expressive values and high level of subjective wellbeing are more tends towards green behaviour. On the contrary, based on the previous studies [15,16,29] it seems that extrovert individuals do not have a strong influence on the environmental behaviour. The inconsistency could be explained by the fact that extraversion is explained differently in behavioural and non-behavioural environmentalism. Since tourists with high extraversion which is often perceived as attention-seeking individuals are more active in nature than the general population as the relationship between extraversion trait and intention to visit green hotel is found stronger and significant [26].

Conscientiousness appeared to be the strongest predictor among other personality traits behind tourists' intention to visit green hotel ( $\beta = .276, t = 4.128, P < .001$ ). These findings also confirm the few previous studies (e.g. Hirsh [15], Milfont & Sibley [29]) but was not found consistent with some studies (e.g. Markowitz et al. [26]). The findings implied that tourists with a higher level of dutifulness, self-discipline, perfectionism and a purposeful life are more likely to behave eco-friendly and showed their intention to visit the green hotel. Apart from the propensity to follow social values and norms, individual tourists with a high level of conscientiousness have greater concern for the future perspectives rather than present [19]. Also, Openness was also found significantly influencing the tourists intention to visit green hotel ( $\beta = .159, t = 2.539, P < .05$ ) and likewise confirmed the findings of past few studies (e.g. Hirsh [15]). Results implied that tourists that are curious, intellectual, beauty sensitive are more likely to behave eco-friendly that in turn motivate them to visit green hotels. Apart from the confirmatory findings the results also contradict few relevant studies as openness was found negative and insignificant in the relationship with the eco-friendly behaviour of tourists (Markowitz et al. [26], Milfont and Sibley [29]). Openness trait was also associated with the higher order values of self-transcendence, precisely with the universalism component which consists of three environmental items (i.e. environmental protection; unity with nature, and a world of beauty). To support an individual inclination towards environmental preservation, a significant positive association between openness and universalism was observed by (e.g. Roccas et al. [33], Olver & Mooradian [31]). Contrary to some previous studies [15,22], Neuroticism was found to be insignificantly related to tourists' intention to visit

Green hotels ( $\beta=.077$ ,  $t= 1.227$ ,  $P = .22$ ) which confirm the finding of Hirsh and Dolderman [16]. A possible explanation for this finding could be that the other variables which were found to be significant for this study collectively exhibit an attitude for which neuroticism would be a contradictory variable. Individuals with a high level of openness and agreeableness will exhibit more positive behaviour rather than neurotic individuals. For example, a person who has frequent mood swings cannot like order, or get chores done right away. The findings of this study reveal that the personality traits certainly have a relationship with the green hotel visit intentions.

## CONCLUSION

This paper examined the relationship between an individual's personality traits with green hotel visit intention using the sample of 285 tourists' in India. The findings reveal that four personality traits viz. agreeableness, conscientiousness, openness, and extraversion were positive predictors of intention to visit green hotels, but neuroticism was an insignificant predictor. As far as the contribution of this study is concerned, it is one of its first kind which associated tourists' personality traits with the pro-environmental intention to visit in a hospitality context. An individuals' intention is affected by his/her personality, and that big five personality trait explains how much a person is willing to visit the green hotel. This study helps to gain fresh and better understanding of the tourists' intention to visit green hotels because, in past researches, the relationships between personality traits and green tourist's behavioural intention were contradictory and inconsistent. The framework presented in this study could be very useful for the further examination of individual psychology about green hotels.

Besides, contributing to the academic literature on the green hotel selection and tourists' personality traits, this study also provides some important implications for the hospitality and tourism industry as well as marketers. The primary target for the hotels is to attract green consumers and given the results of the study could be used in their green marketing campaign. For example, the relationship between agreeableness and intention to visit green hotel should urge hoteliers to stress upon the agreeableness personality characteristics such as cooperation, sympathy, compassion and altruistic face of the personality. Likewise, for the linkage between extraversion and tourists' green hotel visit intention,

hoteliers should focus on extraversion characteristics (i.e. novelty seeking, activity facet and sociability). Similarly, to focus upon the conscientious tourists', green hotel management should follow and promote practices which include order, achievements related activities (for e.g. to provide them with a list of sustainable practices followed by hotels), and law abiding compliances.

Despite this study's specific contribution to the existing and growing literature on the linkages between personality traits and tourists' green hotel visit intention, some noteworthy shortcomings can serve as suggestions for further research on the current topic under study. Although the 20 item personality measurement scale (Mini-IPIP) scale is a good measure of big-five personality traits, it did not permit for the measurement of the lower order individual personality traits. For this, further research could use more extensive and rigorous scale such as fifty item international personality item scale for the validation of these results. Secondly, the current study employed self-reported assessment of personality traits which could have caused the social desirability bias. Thirdly, the measurement items of the green hotel visit intention were taken from the available literature, but it did not reflect the overall green hotel choice behaviour. Certainly, it may also be possible that personality traits might be differently related to green hotel visit intention. The present study is restricted to measuring the tourists' intention to visit green hotel; provides no assessment of the actual behaviour of tourists'. Finally, the relationship between personality and green hotel visit intention might evolve over time providing the opportunity for the longitudinal investigation for deeper insights into the subject under study.

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