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# FROM TRAITS TO AWARENESS: PERSONALITY-DRIVEN INSIGHTS FOR SUSTAINABLE TOURISM GOVERNANCE

**Dr. Betül Garda[1], Dr. Mehmet Erhan Summak[2], Dr. A. Celil Çakıcı[3]**

[1]Associate Professor: Selçuk University, Vocational School of Social Sciences, Konya, Türkiye,
ORCID ID: 0000-0002-2406-6448
[2]Professor: Selçuk University, Vocational School of Social Sciences, Konya, Türkiye,
ORCID ID: 0000-0002-1678-0609
[3]Professor: Mersin University, Faculty of Tourism, Department of Tourism Management, Mersin, Türkiye,
ORCID ID: 0000-0002-9192-1969

bgarda@gmail.com[1]

**Abstract**
This study explores the pathway from individual personality traits to sustainable tourism awareness, integrating psychological, environmental, and socio-cultural perspectives. Drawing on the Big Five Personality Inventory and the Sustainable Tourism Awareness Scale, data were collected through a large-scale survey (n = 1,449) and analyzed using multiple regression techniques. Findings reveal that conscientiousness and openness to experience are the strongest predictors of sustainable tourism awareness, while agreeableness and extraversion show moderate associations.
From a local governance perspective, the results highlight how understanding residents' personality-driven sustainability profiles may assist municipalities and local tourism authorities in developing targeted awareness campaigns, participatory programs, and community-based initiatives. The study provides to the discourse on local self-government and sustainable policy design, emphasizing the psychological foundations of environmental and social responsibility.

**Keywords:** Personality traits, Sustainable tourism awareness, Environmental psychology, Sustainable behavior, Tourism policy, Local governance

## HIGHLIGHTS

- The study empirically demonstrates that personality traits—especially conscientiousness and openness—significantly shape sustainable tourism awareness, highlighting psychological determinants of pro-environmental attitudes.
- By linking individual psychology with local governance and policy design, the research introduces a novel interdisciplinary framework that explains how residents' personality profiles can guide sustainability strategies.
- The findings provide actionable insights for municipalities and local tourism authorities, offering personality-based approaches to strengthen community participation, environmental responsibility, and social cohesion in sustainable tourism.

## INTRODUCTION

Sustainability has become a central concept across nearly all industries, and the tourism sector is no exception. Within this context, examining the factors that influence individual and stakeholder behaviors shaping the perception of sustainable tourism (Kollmuss & Agyeman, 2002) is of critical importance for both the future of the industry and the well-being of society. Personality traits, in particular, represent one of the key determinants shaping individuals' attitudes and behaviors toward sustainability in tourism.

Among the theoretical frameworks used to examine personality, the Five-Factor Model of Personality (Costa & McCrae, 1992; Benet-Martinez & John, 1998; Sümer & Sümer, 2005) provides a systematic structure for explaining individual differences. Although previous research (Kvasova, 2015; Moghavvemi et al., 2017; Ceylan, 2020; Blomstervik & Olsen, 2022; Wasaya et al., 2024; Li et al., 2024) has explored general associations between personality

variables and environmental attitudes, studies that investigate how these traits manifest within the context of tourism remain limited in scope.

Sustainable tourism awareness encompasses local residents' understanding of the environmental, economic, and socio-cultural dimensions of tourism (Choi & Sirakaya, 2005). However, the relationship between personality traits and sustainable tourism awareness has not yet been fully clarified. While socio-demographic factors such as education, gender, age, and income have been found to play a role in this relationship (Dunlap & Van Liere, 1978; Zelezny et al., 2000; Hines et al., 1987), there is still no consensus in the literature on which personality dimensions exert the strongest influence on individuals' participation in sustainable tourism practices.

Within the context of a destination distinguished by its historical, cultural, and natural richness, this study aims to determine the extent to which personality traits influence sustainable tourism awareness. In doing so, it seeks not only to provide a unique contribution to the existing body of literature but also to develop practical recommendations for advancing sustainable tourism policies.

## CONCEPTUAL FRAMEWORK

### Personality Traits

Personality refers to the relatively stable psychological characteristics that shape an individual's patterns of thoughts, emotions, and behaviors across time and situations. As such, it constitutes a fundamental structure that influences how individuals interact with their environment, make decisions, and form value judgments (McCrae & Costa, 2008). One of the most widely accepted frameworks in personality research is the Five-Factor Model of Personality (Costa & McCrae, 1992; Benet-Martinez & John, 1998; Sümer & Sümer, 2005), which provides a comprehensive theoretical structure for explaining individual differences and behavioral tendencies.

The Five-Factor Model conceptualizes personality through five major dimensions: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (Goldberg, 1990). Each dimension influences individuals' social interactions, environmental sensitivity, and decision-making processes in distinct ways.

In tourism research (Sirakaya-Türk, Uysal & Hammitt, 2007; Kvasova, 2015; Moghavvemi et al., 2017; Kim & Stepchenkova, 2019; Blomstervik & Olsen, 2022), personality traits have frequently been used to explain travel motivations, pro-environmental attitudes, and sustainable behavioral tendencies. Findings from these studies indicate that individuals with higher levels of conscientiousness tend to display stronger pro-environmental behaviors, while openness to experience enhances interest in new cultures and diverse experiences (Chen & Phou, 2013). Furthermore, agreeableness has been associated with greater social sensitivity, whereas individuals with higher levels of neuroticism tend to perceive environmental risks more acutely (Sirakaya-Türk et al., 2007).

These insights suggest that personality traits not only reflect individual psychological tendencies but also play a significant role in shaping sustainable tourism awareness. Therefore, considering personality factors in understanding sustainable tourism behavior offers both theoretical and practical contributions.

### Sustainable Tourism Awareness

Sustainable tourism awareness refers to individuals' understanding of the environmental, economic, and socio-cultural impacts of tourism activities. It emphasizes that tourism is not merely an economic activity but also a process closely linked to the preservation of natural resources, the maintenance of cultural heritage, and the improvement of local residents' well-being (Choi & Sirakaya, 2005; Sirakaya-Türk et al., 2018).

Sustainable tourism awareness is generally discussed through three main dimensions: (1) environmental awareness, (2) socio-cultural sensitivity, and (3) economic responsibility (Lee,

2013; Mihalič, 2016). These dimensions directly influence individuals' participation in tourism activities, consumption habits, and environmentally responsible behaviors.

Research on sustainable tourism awareness (Andereck et al., 2005; Byrd, 2007; García et al., 2021) highlights that local residents' attitudes are decisive for the success of sustainable tourism policies. The Sustainable Tourism Attitude Scale (SUS-TAS) developed by Choi and Sirakaya (2005) is considered one of the most comprehensive and pioneering instruments for measuring individuals' understanding of sustainable tourism. This scale offers an integrated approach by simultaneously assessing environmental, social, and economic dimensions of sustainability. Subsequent studies (Sirakaya-Türk et al., 2018; Ko & Stewart, 2002; Nunkoo & Ramkissoon, 2016) have widely utilized this scale to analyze public awareness and participation levels across various destinations.

The literature suggests that sustainable tourism awareness extends beyond environmental sensitivity to encompass personal responsibilities related to social justice, economic balance, and the preservation of cultural heritage. Nevertheless, empirical studies examining how personality-based individual differences influence this awareness remain limited, forming the theoretical foundation of the present research.

The relationship between personality traits and sustainable tourism awareness has increasingly become a focus of tourism literature in recent years. Some studies (Nițu-Antonie et al., 2022; Irfan et al., 2022; Ki et al., 2022) have shown that individuals with higher levels of empathy, conscientiousness, and extraversion tend to make more responsible travel choices and prefer sustainable alternatives. Moreover, cultural factors and socio-cognitive approaches have been found to significantly shape the interaction between personality and sustainability (Shahid et al., 2022). Song et al. (2023) and Jiang et al. (2023) demonstrated positive relationships between openness and agreeableness and sustainable tourism behaviors. Abbas et al. (2023) reported that conscientious individuals are more likely to participate in sustainable practices. Similarly, Mariani et al. (2023) emphasized that integrating personality traits with environmental education can mediate sustainability awareness within different cultural contexts. Solomovich et al. (2024) and Bashir et al. (2024) further suggested that openness and conscientiousness play critical roles in predicting sustainable tourism awareness.

Based on these explanations, the following hypothesis has been proposed:

**H:** Personality traits influence sustainable tourism awareness.

The role of education level in shaping sustainable tourism awareness has been frequently emphasized in the literature (Costa & McCrae, 1992; Kollmuss & Agyeman, 2002; Ceylan, 2020; Özdemir Uçgun & Narcı, 2022). Kollmuss and Agyeman (2002) argued that individuals' levels of environmental awareness are directly related to their education, with higher-educated individuals showing greater sensitivity toward environmental issues. Similarly, Rasoolimanesh and Jaafar (2017) examined residents of the Lenggong Valley World Heritage Site in Malaysia and found that education significantly influenced perceptions of sustainable tourism. Accordingly, the following hypothesis has been developed:

**H2:** Sustainable tourism awareness differs according to education level.

## METHOD

### Population and Sampling

The population of the research consists of individuals aged between 20 and 69 years. The study was conducted among residents of the central districts of Konya — Selçuklu, Karatay, and Meram — who fall within this age group. The choice of the 20–69 age range was based on the classification system of the Turkish Statistical Institute (TURKSTAT), which categorizes age groups in five-year intervals.

The dependent variable of the study is sustainable tourism awareness. According to the 2023 Address-Based Population Registration System, there are 228,158 individuals aged 20–69 in

Karatay, 215,900 in Meram, and 445,870 in Selçuklu. Since the population size in each district exceeds 10,000, the sample size was calculated using the infinite population formula[1] for estimating the mean (appropriate for metric scale variables).

In order to calculate the sample size, an estimate of the standard deviation of the dependent variable was required. Because no previous study on the people of Konya provided a standard deviation or variance value related to sustainable tourism awareness, the standard deviation was estimated. Given that the dependent variable was measured using a five-point Likert scale, the standard deviation can be approximated by dividing the range (R = Max – Min) by four (Yolal, 2016, p. 68). Thus, for a 5-point scale (R = 5 – 1 = 4), the standard deviation was estimated as 1.00. The acceptable margin of error was determined as ±0.10 at a 5% significance level.

Using the infinite population formula for estimating means, the required sample size for each district was calculated as 384 respondents (Ural & Kılıç, 2013, p. 45). To compensate for potential data loss or invalid responses, the sample size was increased to 400 respondents per district, resulting in a total of 1,200 participants. Quotas were established according to gender and age group distributions for each district. The number of questionnaires to be collected by district, age group, and gender is presented in Table 1.

**Table 1.** Age- and Gender-Based Quota Distribution in the Study Population

| District | M (20-29) | % | $n_{(m)}$ | F (20-29) | % | $n_{(f)}$ | M (30-39) | % | $n_{(m)}$ | F (30-39) | % | $n_{(f)}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Karatay | 30470 | 13,4 | 53 | 31517 | 13,8 | 55 | 29658 | 13,0 | 52 | 28906 | 12,7 | 51 |
| Meram | 27497 | 12,7 | 51 | 27816 | 12,9 | 52 | 23436 | 10,9 | 43 | 24313 | 11,3 | 45 |
| Selçuklu | 58775 | 13,2 | 53 | 63433 | 14,2 | 57 | 49782 | 11,2 | 45 | 53289 | 12,0 | 48 |
| Total | 116742 | 13,1 | 157 | 122766 | 13,8 | 164 | 102876 | 11,6 | 140 | 106508 | 12,0 | 144 |

| District | M (40-49) | % | $n_{(m)}$ | F (40-49) | % | $n_{(f)}$ | M (50-59) | % | $n_{(m)}$ | F (50-59) | % | $n_{(f)}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Karatay | 24929 | 10,9 | 44 | 24186 | 10,6 | 42 | 17823 | 7,8 | 31 | 17852 | 7,8 | 31 |
| Meram | 23618 | 10,9 | 44 | 24047 | 11,1 | 45 | 18415 | 8,5 | 34 | 19177 | 8,9 | 36 |
| Selçuklu | 49298 | 11,1 | 44 | 51087 | 11,5 | 46 | 35174 | 7,9 | 32 | 36978 | 8,3 | 33 |
| Total | 97845 | 11,0 | 132 | 99320 | 11,2 | 133 | 71412 | 8,0 | 97 | 74007 | 8,3 | 100 |

| District | M (60-69) | % | $n_{(m)}$ | F (60-69) | % | $n_{(f)}$ | TOTAL |
|---|---|---|---|---|---|---|---|
| Karatay | 10898 | 4,8 | 19 | 11919 | 5,2 | 21 | 228158 |
| Meram | 13179 | 6,1 | 24 | 14402 | 6,7 | 27 | 215900 |
| Selçuklu | 22928 | 5,1 | 21 | 25126 | 5,6 | 23 | 445870 |
| Total | 47005 | 5,3 | 64 | 51447 | 5,8 | 70 | 889928 |

| M | F | T(N) |
|---|---|---|
| 199 | 200 | 399 |
| 196 | 205 | 401 |
| 195 | 207 | 402 |
| 590 | 612 | 1202 |

## Data Collection and Analysis

The study, designed within the framework of the relational survey model, employed a questionnaire developed based on a comprehensive review of the literature. In addition to demographic questions, the survey included two standardized scales. Participants' personality traits were measured using the Big Five Personality Inventory (BFPI) (Costa & McCrae, 1992; Benet-Martinez & John, 1998). The Turkish adaptation of the inventory, developed by Sümer and Sümer (2005), consists of 44 items across five dimensions.

To assess residents' sustainable tourism awareness, the Sustainable Tourism Attitude Scale (SUS-TAS), originally developed by Choi and Sirakaya (2005) and later validated in

[1] $n=\sigma^2.Z^2\alpha/H^2 = 1,96^2*1,00^2/0,10^2 = 3,84/0,01 = 384$. [where n represents the sample size, Z is the theoretical value corresponding to the chosen significance level (Z = 1.96 for α = 0.05), σ denotes the estimated standard deviation, and H refers to the standard error (margin of error).]

subsequent studies (Nunkoo & Ramkissoon, 2016; Sirakaya-Türk et al., 2018), was utilized. This instrument comprises 39 items and seven dimensions. Items in both scales were rated on a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree.

The questionnaire was administered face-to-face between 1 and 30 April 2025 among residents living in the central districts of Konya (Selçuklu, Karatay, and Meram). The data collection process was conducted on a voluntary basis, with participants being informed about the research purpose and providing informed consent prior to participation. A total of 1,520 questionnaires were collected; after performing missing data analysis, 1,449 valid responses were retained for statistical analysis.

All data were analyzed anonymously and in accordance with ethical research principles. Data were coded and processed using computer software. The analyses included descriptive statistics, reliability analysis (Cronbach's alpha), and multiple regression analysis to test the proposed hypotheses.

**Reliability**

The data obtained from the scales were subjected to a reliability analysis. For this purpose, item analyses were conducted for each dimension by examining the item–total correlations, the presence of any negative correlations, and the multiple $R^2$ values. When necessary, items that reduced the internal consistency were removed to improve the Cronbach's alpha coefficients.

Table 2 presents the results of the reliability analysis conducted for the five dimensions of the Big Five Personality Model (BFPM). The alpha coefficients were found to range between 0.545 and 0.560 in two dimensions and between 0.600 and 0.700 in the remaining three dimensions. Although these values are relatively low, previous studies using the Big Five Personality Inventory have reported similar internal consistency issues, particularly in cross-cultural validation processes (e.g., Sümer & Sümer, 2005; McCrae & Costa, 2008; Soto & John, 2017; Kvasova, 2015; Sirakaya-Türk et al., 2018). As highlighted by Soto and John (2017), such variations often result from semantic and cultural differences emerging during the adaptation of the BFI-2 scale across linguistic and cultural contexts. Therefore, the obtained alpha values are considered methodologically acceptable within the framework of cross-cultural personality assessment.

**Table 2.** Reliability Findings for the Big Five Personality Scale

| Dimensions / Statistics | Big Five Personality Model (BFPM) | | | | |
|---|---|---|---|---|---|
| | **N** | **A** | **C** | **E** | **O** |
| Sample Size | 1449 | 1449 | 1449 | 1449 | 1449 |
| Number of Items | 8 | 9 | 9 | 8 | 10 |
| Cronbach's Alpha (for dimension) | ,538 | ,560 | ,639 | ,597 | ,655 |
| Min–Max Item–Total Correlation | ,162-,352 | ,164-,345 | ,195-,440 | ,127-,391 | ,104-,441 |
| Negative Item–Total Correlation | None | None | None | None | None |
| Min–Max multiple $R^2$ | ,079-,162 | ,067-,199 | ,074-,273 | ,053-,222 | ,048-,229 |
| Cronbach's Alpha if Item Deleted | ,471-,535 | ,501-,558 | ,588-,636 | ,528-,624 | ,605-,677 |
| Deleted Items | N2, N4, N5, N7 | None | C2, C9 | E2, E5, E7 | O7, O9 |
| Remaining Number of Items | 4 | 9 | 7 | 5 | 8 |
| Min–Max Item–Total Correlation (after deletion) | ,301-,358 | | ,277-,487 | ,410-,450 | ,261-,464 |
| Min–Max multiple $R^2$ (after deletion) | ,105-,135 | | ,134-,272 | ,183-,216 | ,106-,228 |
| Cronbach's Alpha (after deletion) | ,545 | | ,650 | ,680 | ,691 |
| Mean of Remaining Items | 3,0459 | 3,4899 | 3,7942 | 3,6966 | 3,6026 |
| Standard Deviation of Remaining Items | 0,859 | 0,588 | 0,684 | 0,971 | 1,072 |
| Response Scale | 1= Strongly Disagree 5= Strongly Agree | | | | |
| N: Neuroticism, A: Agreeableness, C: Conscientiousness, E: Extraversion, O: Openness to Experience | | | | | |

Table 3 presents the reliability results of the Sustainable Tourism Awareness Scale (SUS-TAS) across its seven dimensions. The lowest alpha coefficient was 0.701, while the highest reached

0.915. These findings indicate that the scale demonstrates a high level of internal consistency and statistical reliability, confirming that the collected data are robust and suitable for further analysis. Furthermore, the obtained coefficients are consistent with those reported in previous applications of the SUS-TAS (Choi & Sirakaya, 2005; Sirakaya-Türk et al., 2018), supporting the scale's theoretical soundness and cross-cultural applicability within the context of sustainable tourism research.

**Table 3.** Reliability Analysis Results of the Sustainable Tourism Awareness Scale (SUS-TAS)

| Dimensions / Statistics | SUS-TAS | | | | | | |
|---|---|---|---|---|---|---|---|
| | **ES** | **SC** | **EB** | **CP** | **LTP** | **VS** | **CBE** |
| Sample Size | 1449 | 1449 | 1449 | 1449 | 1449 | 1449 | 1449 |
| Number of Items | 9 | 8 | 7 | 4 | 4 | 3 | 3 |
| Cronbach's Alpha (for dimension) | ,915 | ,889 | ,864 | ,635 | ,801 | ,742 | ,730 |
| Min–Max Item–Total Correlation | ,629-,768 | ,349-,802 | ,575-,695 | ,334-,548 | ,511-,658 | ,560-,571 | ,504-,621 |
| Negative Item–Total Correlation | None | None | None | None | None | None | None |
| Min–Max multiple $R^2$ | ,450-,703 | ,164-,687 | ,364-,537 | ,125-,358 | ,266-,443 | ,313-,326 | ,268-,385 |
| Cronbach's Alpha if Item Deleted | ,901-,910 | ,861-,902 | ,837-,852 | ,470-,620 | ,730-,800 | ,652-,665 | ,561-,699 |
| Deleted Items | None | SC7 | None | CP3, CP4 | None | None | None |
| Remaining Number of Items | | 7 | | 2 | | | |
| Min–Max Item–Total Correlation (after deletion) | | ,661-,812 | | ,541-,541 | | | |
| Min–Max multiple $R^2$ (after deletion) | | ,467-,686 | | ,292-,292 | | | |
| Cronbach's Alpha (after deletion) | | ,902 | | ,701 | | | |
| Mean of Remaining Items | 4,3574 | 2,8567 | 4,0474 | 3,5149 | 4,2474 | 4,0263 | 3,7506 |
| Standard Deviation of Remaining Items | 0,710 | 1,117 | 0,753 | 1,098 | 0,721 | 0,814 | 0,946 |
| Response Scale | 1= Strongly Disagree 5= Strongly Agree | | | | | | |
| ES: Environmental Sustainability, SC: Social Costs, EB: Economic Benefits, CP: Community Participation, LTP: Long-Term Planning, VS: Visitor Satisfaction, CBE: Community-Based Economy | | | | | | | |

## Validity

Following the detailed reliability analyses conducted for both scales, it was decided to compute the total scores for each dimension. Since the dimensions of the scales were theoretically predefined (Choi & Sirakaya, 2005; Costa & McCrae, 2008) and both instruments had been previously validated and applied in studies conducted in Türkiye (Sümer & Sümer, 2005; Ceylan, 2020), no additional factor analysis was deemed necessary. Accordingly, dimension scores were calculated by summing the item scores and dividing them by the number of items, thus obtaining mean values based on the five-point Likert scale. These averaged scores served as the core variables in the subsequent analyses. The verification confirmed that the scales were both valid and reliable, ensuring that the obtained measures were appropriately employed in the correlation and regression analyses.

## FINDINGS

### Participant Profile

The socio-demographic characteristics of the participants provide a crucial foundation for assessing the representativeness and generalizability of the study's findings. Detailed distributions are presented in Table 4. Data collected from a total of 1,449 respondents indicate that the sample adequately reflects the demographic structure of the central districts of Konya, particularly in terms of gender, age, education, and income levels. Among the respondents,

54.0% were male and 46.0% were female. In terms of district representation, 39.1% of participants resided in Selçuklu, 31.5% in Meram, and 29.5% in Karatay.
Regarding marital status, 50.9% of participants were married and 49.1% were single, suggesting a balanced distribution of perspectives across different social backgrounds.
When classified by age groups, the majority of respondents were aged 20–29 years (43.8%), followed by 30–39 years (22.4%) and 40–49 years (20.3%). Those aged 50 years and above (13.5%) represented a smaller proportion, indicating that the study primarily captures the sustainable tourism awareness of younger and middle-aged individuals.
In terms of education level, 43.4% of respondents held a university degree, 28.9% a high school diploma, 22.6% completed primary education, and 5.0% possessed a postgraduate qualification. This distribution reflects a participant group with predominantly moderate to high educational attainment.
With respect to income level, the largest segment of participants earned between 22,104 and 30,000 TL (36.1%), followed by 30,001–40,000 TL (26.4%) and 40,001–50,000 TL (23.0%). Approximately 14.5% of respondents reported incomes above 50,001 TL, suggesting a predominantly middle-income profile.
Overall, the demographic structure of the sample demonstrates sufficient heterogeneity, ensuring the statistical reliability and generalizability of the findings to the broader population of Konya.

**Table 4.** Socio-Demographic Distribution of Participants across Districts

| | | **Districts** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Variable** | **Category** | **Selçuklu** | | **Meram** | | **Karatay** | | **Total** |
| | | f | % | f | % | f | % | f |
| Gender | Male | 246 | 36,9 | 227 | 34,1 | 193 | 29,0 | 666 |
| | Female | 320 | 40,9 | 229 | 29,2 | 234 | 29,9 | 783 |
| Marital Status | Married | 255 | 34,6 | 254 | 34,4 | 229 | 31,0 | 738 |
| | Single | 311 | 43,7 | 202 | 28,4 | 198 | 27,8 | 711 |
| Age(years) | 20-29 | 284 | 44,7 | 185 | 29,1 | 166 | 26,1 | 635 |
| | 30-39 | 92 | 28,3 | 132 | 40,6 | 101 | 31,1 | 325 |
| | 40-49 | 116 | 39,5 | 85 | 28,9 | 93 | 31,6 | 294 |
| | 50-59 | 61 | 43,6 | 33 | 23,6 | 46 | 32,9 | 140 |
| | 60-69 | 13 | 23,6 | 21 | 38,2 | 21 | 38,2 | 55 |
| Education Level | Primary School | 106 | 32,3 | 106 | 32,3 | 116 | 35,4 | 328 |
| | High School | 162 | 38,7 | 121 | 28,9 | 136 | 32,5 | 419 |
| | Undergraduate | 276 | 43,9 | 188 | 29,9 | 165 | 26,2 | 629 |
| | Postgraduate | 22 | 30,1 | 41 | 56,2 | 10 | 13,7 | 73 |
| Monthly Income (TRY) | 22104-30000 | 184 | 35,2 | 143 | 27,3 | 196 | 37,5 | 523 |
| | 30001-40000 | 169 | 44,1 | 110 | 28,7 | 104 | 27,2 | 383 |
| | 40001-50000 | 148 | 44,4 | 90 | 27,0 | 95 | 28,5 | 333 |
| | 50001-60000 | 38 | 38,0 | 46 | 46,0 | 16 | 16,0 | 100 |
| | 60001 and above | 27 | 24,5 | 67 | 60,9 | 16 | 14,5 | 110 |
| Total | | 566 | 39,1 | 456 | 31,5 | 427 | 29,5 | 1449 |

**Regression Analysis Results**

To test the proposed hypotheses, multiple linear regression analyses were conducted by considering each dimension of sustainable tourism awareness (i.e., Environmental Sustainability – ES, Social Costs – SC, Economic Benefits – EB, Community Participation – CP, Long-Term Planning – LTP, Visitor Satisfaction – VS, and Community-Based Economy – CBE) as separate dependent variables. The results are presented in Table 5.

All models yielded statistically significant F-values, confirming their overall validity and predictive capability. Multicollinearity diagnostics indicated that the lowest tolerance value was 0.613, the highest VIF value was 1.632, and the Condition Index (CI) was 26.922, demonstrating the absence of multicollinearity problems and confirming that the coefficients could be interpreted with confidence.

According to the findings in Table 5, the model predicting environmental sustainability (ES) exhibited the highest explanatory power ($R^2 = 0.186$). In this model, conscientiousness ($\beta = 0.285$, $p < 0.001$) emerged as the strongest predictor, followed by openness to experience ($\beta = 0.130$, $p < 0.001$). These results indicate that individuals with higher levels of responsibility and openness tend to display stronger environmental awareness and pro-sustainability behavior.

Conversely, the model predicting social costs (SC) showed a negative association between conscientiousness ($\beta = –0.147$, $p < 0.001$) and perceived social costs. This suggests that individuals with a stronger sense of responsibility tend to perceive fewer negative social consequences of tourism, such as crowding, noise, or cultural disturbance. Similarly, the agreeableness dimension ($\beta = –0.097$, $p < 0.01$) also exhibited a negative relationship with social cost perception, implying that cooperative and empathetic individuals evaluate tourism's social impacts more positively.

The results also show that openness to experience positively influences several sustainability dimensions—such as economic benefits ($\beta = 0.110$), visitor satisfaction ($\beta = 0.130$), and long-term planning ($\beta = 0.154$)—highlighting its broad role in shaping sustainability awareness. Meanwhile, community participation (CP) displayed the lowest explanatory power ($R^2 = 0.010$), where only openness to experience ($\beta = 0.069$, $p < 0.05$) had a significant but weak effect.

Overall, the findings emphasize that conscientiousness stands out as the most influential personality trait, positively affecting multiple sustainability dimensions while reducing perceived social costs. This suggests that individuals with a strong sense of personal responsibility not only enhance environmental awareness but also interpret tourism's social effects in a more constructive and sustainability-oriented manner.

**Table 5.** Effects of Personality Dimensions on Sustainable Tourism Awareness

| BFPM Dimensions | Sustainable Tourism Awareness Dimensions (Dependent Variables) | | | | | | |
|---|---|---|---|---|---|---|---|
| | ES | SC | EB | CP | LTP | VS | CBE |
| | β | β | β | β | β | β | β |
| Neuroticism | ,053* | ,099*** | ,011 | ,020 | ,002 | ,000 | ,041 |
| Agreeableness | ,096*** | -,097** | ,102*** | ,019 | ,101*** | ,101*** | ,003 |
| Conscientiousness | ,285*** | -,147*** | ,129*** | ,035 | ,178*** | ,101*** | ,049 |
| Extraversion | ,065* | ,029 | ,054 | ,029 | ,062* | ,065* | ,015 |
| Openness to Experience | ,130*** | ,070* | ,110*** | ,069* | ,154*** | ,130*** | ,111*** |
| F - Value | 67,340*** | 19,015*** | 25,934*** | 3,990*** | 44,675*** | 26,402*** | 6,9866*** |
| R | ,435 | ,249 | ,287 | ,117 | ,366 | ,290 | ,154 |
| $R^2$ | ,189 | ,062 | ,082 | ,014 | ,134 | ,084 | ,024 |
| Adj. $R^2$ | ,186 | ,059 | ,079 | ,01 | ,131 | ,081 | ,020 |

*p<0,05; **p<0,01; ***p<0,001
Tolerance (min): 0.613; VIF (max): 1.632; CI (max): 26.922.
ES: Environmental Sustainability; SC: Social Costs; EB: Economic Benefits; CP: Community Participation; LTP: Long-Term Planning; VS: Visitor Satisfaction; CBE: Community-Based Economy.
Multicollinearity diagnostics (Tolerance, VIF, CI) confirmed the absence of collinearity problems among the predictors.
Adj. $R^2$ values represent the adjusted coefficient of determination for each regression model.

**Hypothesis Testing**

The proposed hypothesis — "Personality traits influence sustainable tourism awareness." — was tested using multiple linear regression analyses. Within this framework, each dimension of sustainable tourism awareness (Environmental Sustainability – ES, Social Costs – SC, Economic Benefits – EB, Community Participation – CP, Long-Term Planning – LTP, Visitor Satisfaction – VS, and Community-Based Economy – CBE) was treated as a separate dependent variable.

The results (Table 5) indicate that the proposed hypothesis is supported. Among the models, environmental sustainability (ES) demonstrated the highest explanatory power ($R^2 = 0.186$). In this model, conscientiousness ($\beta = 0.285$, $p < 0.001$) and openness to experience ($\beta = 0.130$, $p < 0.001$) emerged as the strongest predictors. In contrast, the social costs (SC) model revealed a negative association between conscientiousness ($\beta = –0.147$, $p < 0.001$) and agreeableness ($\beta = –0.097$, $p < 0.01$) with perceived social costs. This finding suggests that individuals with higher levels of responsibility and empathy tend to perceive the negative social impacts of tourism—such as crowding, noise, and cultural disturbance—in a more constructive and tolerant manner.

Overall, the findings further substantiate the significant influence of personality traits across multiple dimensions of sustainable tourism awareness. In particular, conscientiousness stands out as the most influential personality trait, strengthening environmental awareness while reducing perceptions of tourism's social costs.

**Conclusion**

**Theoretical Implications**

Since the 1990s, the concept of sustainable tourism awareness has become central to studies examining residents' perceptions of tourism. Early works by Ap (1992) and Lankford & Howard (1994), grounded in social exchange theory, proposed that individuals evaluate the benefits and costs of tourism through a rational balance. However, these models failed to capture the psychological and personality-based differences among individuals. The findings of the present study demonstrate that personality traits meaningfully reshape this rational balance: individuals with higher levels of conscientiousness tend to perceive the costs of tourism as lower and its benefits as higher ($\beta = –0.147$ / $\beta = 0.285$).

The Sustainable Tourism Attitude Scale (SUS-TAS) developed by Sirakaya & Choi (2005) conceptualized sustainable tourism awareness as a multidimensional construct encompassing environmental, economic, and social components. The results of the current study extend this theoretical framework by linking the "social costs" and "environmental sustainability" dimensions of the SUS-TAS to specific personality traits. The findings reveal that conscientiousness positively influences environmental sustainability while negatively predicting perceptions of social costs. This suggests that the "social cost" dimension defined by Sirakaya and Choi (2005) should not be interpreted merely as a cognitive assessment of tourism's negative societal impacts, but rather as a moral awareness process shaped by an individual's ethical responsibility. The negative association between conscientiousness and perceived social costs indicates that conscientious individuals evaluate potential drawbacks of tourism within a framework of personal control and social contribution. Hence, the traditional "cost–benefit" interpretation of social costs can be reconsidered: ethical responsibility functions as a cognitive filter that transforms the way individuals perceive tourism's negative outcomes. Consequently, the "social cost" dimension of the SUS-TAS may be reinterpreted, in light of these findings, as a multidimensional construct reflecting not only perceived negative effects but also one's moral consciousness and sense of social responsibility. This reinterpretation deepens the theoretical understanding of the link between the cognitive and ethical components of sustainable tourism awareness.

Andereck et al. (2005) emphasized that residents perceive the social impacts of tourism as equally important as environmental ones. Consistent with their argument, the present study found that individuals with higher levels of agreeableness and conscientiousness report significantly lower perceptions of social costs ($\beta = –0.097$; $\beta = –0.147$). This supports the notion that ethical sensitivity and social cohesion increase tolerance toward tourism-related externalities.

Lee (2013) argued that social trust and community solidarity enhance residents' sustainable tourism attitudes. In line with this, the positive role of agreeableness in the current findings suggests that cooperative individuals perceive tourism as an avenue for social connection rather than conflict.

Nunkoo & Ramkissoon (2016) identified moral obligation as a key determinant of residents' support for tourism. Similarly, the finding that conscientiousness significantly enhances environmental sustainability ($\beta = 0.285$) reinforces the idea that ethical responsibility drives pro-environmental and sustainability-oriented behaviors.

Kvasova (2015) demonstrated that openness to experience plays a crucial role in predicting eco-friendly behavior. Consistent with her findings, this study revealed significant effects of openness on long-term planning ($\beta = 0.154$) and visitor satisfaction ($\beta = 0.130$), indicating that open-minded individuals are more likely to internalize and adopt sustainability principles.

Moghavvemi et al. (2017) highlighted the influence of personality, emotional solidarity, and community attachment on residents' support for tourism development. The results of the present analysis align with this view, suggesting that individuals with higher levels of conscientiousness and agreeableness tend to perceive tourism not as a source of threat but as an opportunity for community progress.

Kim & Stepchenkova (2019) found that conscientious and open-minded individuals are more inclined toward pro-environmental behavior. This aligns with the strong effects of conscientiousness and openness identified in the environmental sustainability model of this study. Furthermore, as Sirakaya-Türk et al. (2018) noted, cultural context shapes the manifestation of sustainability awareness. The findings from Konya provide empirical evidence that personality-driven sustainability awareness is also culturally embedded.

Recent studies by Li et al. (2024) and Gautam & Bhalla (2024) confirm that regional personality profiles influence sustainable tourism awareness. Similarly, the results of the current study indicate that high levels of conscientiousness and openness are the principal predictors of sustainable tourism awareness among Konya residents.

Overall, these findings extend the evolution of sustainable tourism awareness research—from Ap (1992) to Li (2024)—by introducing a personality-based perspective. Conscientiousness and openness emerge not only as antecedents of environmental awareness but also as key drivers of social harmony and support for tourism development. The study thus contributes to the theoretical foundation of sustainable tourism by emphasizing the dynamic interplay between ethical responsibility and perceptions of social costs, offering a novel psychological dimension to the sustainability discourse.

**Policy and Governance Implications**

The findings highlight the importance of developing strategies that are sensitive to personality-based differences, particularly the role of conscientiousness as a sense of moral and social responsibility in shaping sustainable tourism awareness. Individuals with higher levels of conscientiousness not only display stronger environmental commitment but also tend to perceive tourism's potential drawbacks—such as crowding, noise, or cultural disturbance—as less harmful. This reduced perception of social costs reflects a higher level of civic tolerance and ethical awareness, which is likely to provide a foundation for stronger community cooperation in tourism development.

Accordingly, local tourism authorities and municipalities should design holistic governance strategies that foster responsibility-oriented values while addressing community concerns. Awareness campaigns appealing to moral responsibility are expected to enhance environmental consciousness and may help to mitigate perceptions of social costs. In parallel, programs encouraging openness to experience among young people—through creativity, innovation, and education—are likely to increase public engagement with sustainable tourism initiatives.

At the local governance level, municipalities are encouraged to strengthen participatory mechanisms that invite residents to take active roles in tourism-related projects. Such participation tends to enhance transparency and trust while helping to balance economic benefits with social well-being. Transparent communication of tourism's cultural and economic contributions is expected to reduce perceived inequalities and to promote social harmony.

These initiatives are likely to foster a culture of shared responsibility, transforming sustainability from an institutional objective into a civic value. The proposed recommendations are summarized below:

- Responsibility-centered awareness programs: Develop sustainability training and awareness campaigns emphasizing conscientiousness and moral duty, linking individual responsibility with collective well-being.
- Community participation to reduce social costs: Involve local residents in decision-making to strengthen trust, decrease perceived burdens of tourism, and promote social solidarity.
- Volunteer-based sustainability initiatives: Support community-led environmental and cultural projects that translate ethical awareness into visible collective action.
- Transparent communication and benefit sharing: Maintain continuous, open dialogue about tourism's social and economic impacts to reinforce residents' sense of fairness and cooperation.

By embedding ethical responsibility and social cost awareness into tourism governance, local authorities can ensure that sustainability becomes not only a policy priority but also a shared civic mindset. This approach aligns psychological diversity with participatory governance, fostering environmentally responsible citizenship and resilient local communities.

**Future Research Directions**

Although existing studies have illuminated the fundamental connections between personality traits and behavior, several critical gaps remain in the literature. First, the majority of research has relied on quantitative methods, which makes it difficult to capture the complex nature of individual motivations and cultural interactions.

Hoang et al. (2021) argued that the relationship between personality traits and sustainable tourism awareness is shaped by cultural context (e.g., individualism–collectivism), yet emphasized that empirical investigations on this topic remain limited. In the same year, Mariani et al. (2021) demonstrated that targeted marketing strategies and educational campaigns considering personality profiles can effectively promote sustainable behavior. These contributions highlight the importance of both cultural and psychological factors in understanding sustainability attitudes in tourism, while also underscoring the lack of systematic empirical research in this domain.

The significant role of education level in the development of sustainable tourism awareness has also been emphasized in previous research (Costa & McCrae, 1992; Kollmuss & Agyeman, 2002; Ceylan, 2020; Özdemir Uçgun & Narcı, 2022). Kollmuss and Agyeman (2002) found that individuals' levels of environmental awareness are directly related to their level of education, noting that those with higher education tend to be more sensitive to environmental issues. Similarly, Rasoolimanesh and Jaafar (2017) identified education as a significant factor influencing residents' perceptions of sustainable tourism in the Lenggong Valley World

Heritage Site in Malaysia. These findings provide an important point of comparison for evaluating the participant profile in the present study. Although the effect of education level on sustainable tourism awareness was beyond the scope of this research, it is recommended that future studies examine this variable in interaction with personality traits.

In subsequent years, Katz et al. (2022) and Elkhwesky et al. (2022) discussed the role of less-explored personality dimensions, such as emotional intelligence, in shaping sustainability awareness, but noted that in-depth empirical analyses remain scarce. Despite these developments, there is still a strong need for holistic and mixed-method research approaches to better understand how personality expressions vary across different tourism settings. These limitations point to several promising avenues for future research:

- Expansion of mixed-method designs: Increasing the use of studies that integrate qualitative and quantitative data will help clarify both the statistical and contextual dimensions of the relationship between personality traits and sustainability awareness.
- Longitudinal research: Conducting longitudinal analyses can reveal how changes in individuals' sustainable tourism behaviors evolve over time in interaction with their personality characteristics.
- Exploration of environmental education's mediating role: Future studies should be examined in greater depth to understand how environmental education shapes sustainability profiles among tourists from different cultural backgrounds (Mariani et al., 2023).

Policy makers are encouraged to design community-based sustainable tourism policies that take individual differences into account. Such an approach will strengthen not only individual engagement but also a collective sense of environmental responsibility. In conclusion, a deeper understanding of how personality traits influence sustainable tourism awareness will enrich the academic literature and contribute to the development of ecologically responsible and human-centered practices in the tourism sector. This perspective emphasizes that sustainability rests not only on environmental dimensions but also on its psychological and social foundations, thereby making a meaningful contribution to the long-term sustainability of tourism.

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