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Research article

Lifestyle segmentation of tourists: the role of personality

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A B S T R A C T

Background: The significance of national tourism in the global data highlights the importance of studying the characteristics of Spanish tourists that show interest in visiting Valencia (Spain). Personality traits might influence tourism behavior, and their importance has scarcely been addressed in the prior tourism literature.
Objectives: We aimed to identify the touristic profiles of national tourists based on their lifestyles and to analyze the influence of personality traits in tourism segmentation.
Methodology: 329 individuals participated in this study, they responded questionnaires about sociodemography, personality, lifestyle and a 3-item questionnaire developed by the authors. We performed analysis to obtain profiles by lifestyle, we carried out tests to study differences in personality traits among profiles and we analyzed the effects of the responses to the author-developed questionnaire and the demographic characteristics of the subjects on their cluster membership.
Results: The results show that this market can be segmented into four clusters. We found significant statistical differences in personality traits among profiles. In addition, the authors present an author-designed questionnaire that, together with demographic variables, is able to predict participants' profiles.
Conclusion: The results suggest that lifestyle is an appropriate indicator for this market segmentation and the analysis of its relationship with personality provides a deep comprehension of the resulting profiles. In addition, the profile prediction by the responses to the author-developed questionnaire constitutes a new basis for tourism segmentation, as these predictors might be used as "quick touristic classifiers".
Implications or recommendations: The study of decision-making processes in tourism allows researchers and sellers to predict tourist behaviors and adapt offers to tourists' preferences and interests.

1. Introduction

Modern tourism is not about replicating other people's experiences, it is about finding new experiences of one's own (Brea, 2015). This change of mentality implies that consumers are looking for new types of tourism, not the classic types booked by everyone (Brea, 2015). At present, tourists' interests show that they want to enjoy what others have previously experienced and, besides, have new and more personal experiences (Dancausa Millán et al., 2019). In the last decades, the tourist industry has evolved across the board, mainly because of the trends that are reflected in modern tourists, who have growing access to information and greater needs (Alonso et al., 2018). Hence, new tourism products are continually being created, or developments are being used to complement existing products (Brea, 2015).

Tourists' characteristics have been widely studied, since their interests and preferences directly affect touristic behavior (Usakli and Baloglu, 2011). Profiling techniques based on lifestyle and benefit segmentation are well established. While benefit segmentation criteria groups clients according to the importance they attribute to the combination of sensory, rational and emotional benefits expected from a product or service (Lewis, 1980); lifestyle focuses on the set of activities, interests and opinions that characterize the way of life of the subjects (Pessemier and Tigert, 1966; Tigert, 1972; Wind and Green, 2011).

The characteristics of tourists can also be evaluated by personality, which has an influence on their behavior (Ekinci and Hosany, 2006), and cognitive processes, which can influence the choice of tourism destination (Lew, 1987) and even make strong emotional connections with some places (Ekinci and Hosany, 2006; Hosany et al., 2006; Usakli and Baloglu, 2011).

In the present study, we apply lifestyle segmentation in a Spanish sample and analyze the influence of personality traits in tourism segmentation. In the following sections, the market segmentation techniques in tourism and the relationship between personality and tourism are discussed.

2. Research into tourism segmentation

2.1. Tourism segmentation: lifestyle and benefit segmentation

The market segmentation, introduced by Wendell Smith (1956), is a widely extended practice that is employed by marketers in different fields, with the objective of splitting the heterogeneous market into smaller homogeneous groups for a better understanding of the demand based on selected criteria. The tourism segmentation was first introduced by Mazanec in 1984, and is considered the dominant analytic approach in tourism research (Dolnicar, 2019). Sellers of tourism products have tried to use values and attitudes to segment markets, since people's lifestyles has a huge influence on their motivations and purchasing behaviors (Burke, 2014). Furthermore, the culture is an important factor for categorizing different types of tourists, because factors such cognitive comprehension, interest and even depth of cultural experience determine touristic profiles in the field of cultural tourism (Vong, 2013).

Aspects such as sociodemographic variables can be evaluated, and they are employed in tourism research to define tourists' profiles too (Ozdemir et al., 2012). These sociodemographic variables tend to include gender, age, income, occupation, family status, education and nationality. There are, in addition, other characteristics that define tourists' profiles, for example, whether they are looking for sun and sea or other attractions. Sun seekers are a big part of the tourism industry market, and the survival of many package holiday companies depends on them (Prebensen and Kleiven, 2006). However, benefit segmentation and lifestyle segmentation seem to be the mostly accepted techniques for tourism segmentation in the recent investigations, in combination with other moderating variables.

On the first hand, benefit segmentation is a concept introduced by Haley in 1968. He developed a method to better predict and understand future buying behavior than traditional techniques of market segmentation, such as demographics, geography, and volume-based segmentation (Frochot and Morrison, 2000). Haley (1968) argued that it is important to segment the market based on the consumers' expectations and preferences. Tourists can travel, for example, to visit family or friends, to visit a city, discover nature, take part in outdoor activities or just for a vocational stay, and more (Ferreira Lopes et al., 2010). In other words, with previous knowledge about the types of benefits searched for by tourists, companies can design trips based on individuals' interests, so they can meet the tourists' expectations and make more profits (Ferreira Lopes et al., 2010).

Benefit segmentation has been employed in several studies, to segment the market of near-home tourists in the Upper New York State (Yannopoulos and Rotenberg, 2000), rural tourists in Scotland (Frochot, 2005), Japanese pleasure travelers to the USA and Canada (Jang et al., 2002) or senior tourists in Portugal (Eusébio et al., 2017), among others. Although benefit segmentation is a widely applied technique, it could incur some potential disadvantages. Frochot and Morrison (2000) identified some handicaps of this method. First, the majority of the studies that employ benefit segmentation asks the questions to the travelers before the departure. Conversely, the authors suggest that the moment in which the questions are answered should be during the travel. Second, trends and fashion have an influence in the perceived benefits, as well as the season and other temporary circumstances, so the benefit segmentation analysis should be repeated periodically to take into account these variables.

On the other hand, lifestyle shows the manner in which people live and influence their behavior in consuming products and services, including their choice of holiday destinations and activities (Füller and Matzler, 2008; Hjalager, 2004). Information about lifestyle is useful for market segmentation and to understand consumers, no matter their background culture (Plummer, 1974). Lifestyle segmentation has aroused as one of the most effective segmentation techniques within psychographic market segmentation (Lee and Sparks, 2007), since being able to understand the needs and wants of customers through their

lifestyle patterns is crucial to better communicate with, and market to, consumers thanks to the knowledge about their lifestyles (Srihadi et al., 2016; Plummer, 1974).

In recent years several studies have employed lifestyle segmentation for creating tourist profiles, specifically in the field of urban tourism. In 2016 Iversen et al. (2016) examined whether lifestyle clustering could connect lifestyle with its psychological precursors, such as cultural values and travel motives. In fact, researchers have agreed that segmentation by the use of psychographic variables, such as lifestyle, cultural values, motivation, and personality, is appropriate for the identification of differences among tourists (Chen and Sasias, 2014). McKercher and Lau (2008) examined the daily movements of tourists staying in four hotels located in close proximity to each other in Hong Kong. They identified six lifestyle main factors for the segmentation of the tourists: territoriality, the number of journeys made each day, the number of stops made, participation in commercial day tours, participation in extra-destination travel and multi-stop travel patterns. Özel and Kozak (2012) identified eight lifestyle profiling factors to segment Turkish domestic tourists: Adventure, Creativeness and Challenge, Knowledge and Experience, Achievement and Autonomy, Rest and Relaxation, Sports and Socialization, Escape, Family Togetherness and Fun and Travel Bragging. A 2016 study by Srihadi et al. about tourism segmentation in Jakarta recognized six lifestyle factors as the bases for the identification of clusters: culture adventurous, shopaholic, aspiring indulgers, conservative, sport adventurous and foodie.

2.2. Personality and tourism

According to Lew (1987), based on review studies about what is attractive to tourists, one tourist goal is to delve into "back regions" to experience authenticity (MacCannell, 1976); this "quest for authenticity" involves risk, and every environment has security and risk elements. Risk taking is a component of the decision-making process in a situation that implies uncertainty, in which the probability of each outcome is previously known (Bechara et al., 2005; Krain et al., 2006). Decision-making process is influenced by three main elements: decision features, situational factors and individual differences (Einhorn, 1970; Hunt et al., 1989). Decision features and situational factors refer to the characteristics of the decision itself (e.g. ordering of choice options; Appelt et al., 2011) and the context of the decision (e.g. time pressure; Dror et al., 1999), respectively. Individual differences when facing a risky decision could be defined as the perception of benefits/risks, which is related to the tourist's perception of risk and safety when (s)he arrives at his/her destination (Lew, 1987), and the risk attitude, as "how much risk they [the subjects] are willing to accept in exchange for a specific return" (Figner and Weber, 2011 [p. 212]). The chosen destination plays a fundamental role because, in tourist-oriented destinations, visitors can find pleasure in a secure environment. In contrast, in non-tourist-oriented destinations, with partially unstructured environments, visitors may accept a certain level of risk (Naoi, 2003). This propensity to be attracted to potentially risky activities has been related to temperamental aspects (Zuckerman and Kuhlman, 2000), such as personality traits, since they can act as cognitive barriers, an insulation against concern about negative consequences and a motivational force for taking a risky decision (Nicholson et al., 2002).

Dann (1996) and Gartner (1994), in their socio-linguistic model of destination image formation, defined three image components that determine tourists' predispositions: cognitive (external sources or stimuli); affective (internal sources or stimuli); and conative image, which was distinguished on the basis of its sources of stimuli and motives. This study found that the cognitive destination evaluation was sometimes explained socio-linguistically via the strategy of mental comparison. The cognitive image component is an evaluation of the known attributes of a product, or an understanding of the product in an intellectual way (Scott, 1965).

In every pre-trip experience, the comparison is undertaken by recall processes and references to vicarious or real experiences. In some cases,

there is a sense of "déjà vu", that is, an evocation of memory. It has been argued that the language used by tourists, for example, when describing destination image, can be analyzed to obtain more valid insights into tourist motivation and satisfaction than answers to questionnaire items, which measure the same main variables (Dann, 1996). The affective component of image is related to the individual's emotional motives for destination selection (Boulding, 1956). The conative image component is related to an action component, in other words, after all external and internal information is processed, a decision is reached (Dann, 1996). It is believed that tourists can develop strong emotional connections with some places because of the human trait-like features of destination personality (Ekinci and Hosany, 2006; Usakli and Baloglu, 2011). Sasaki (2000) developed a 12-range framework for evaluating destinations and hypothesized, in line with Lew (1987), that there are three assessment dimensions: the *staged-authentic* dimension, which defines the degree of change/escape that destinations offer tourists; the o*rdinary-unique* dimension, which defines the perceived characteristics of the facilities and activities available at destinations; and the r*estful/relaxing-adventurous/exciting* dimension, which defines the types of experiences that tourists anticipate at destinations. These dimensions were created to delineate the attractiveness of tourist destinations (Sasaki, 2000).

2.3. The present study

The present study was developed in the context of Valencia, Spain. Valencia is a tourist-oriented city, which offers a combination of tradition and vanguard, sea and mountain. This complex set of characteristics make Valencia a heterogeneous destination which needs for further comprehension by tourist marketers. Recent studies analyzed the profiles of foreign visitors of Valencia according to their expenditure (Rabasa et al., 2018) or the perceived environmental sustainability of tourists of the Mediterranean area (Sánchez-Fernández et al., 2016, 2019). However, few attention has been payed to the analysis of the national tourist market in this city. The Valencian Community, located in the east of the Iberian Peninsula, received 10,800,309 tourists during the third quarter of 2018, of which 7,480,051 were Spanish residents (National Statistical Institute, 2019). This strong influence of national tourism emphasizes the importance of studying the characteristics of Spanish tourists who show interest in visiting Valencia.

In the present study, developed in the context of Valencia (Spain), we aim to identify the touristic profiles of national tourists based on their lifestyles. Additionally, we analyze the influence of personality traits in tourism segmentation as, to our knowledge, the importance of personality traits has scarcely been addressed in the prior literature. Finally, we present an author-developed questionnaire that, with demographic variables, is able to predict the profiles of the participants.

We measured sociodemographic variables, lifestyles, and the personalities of a group of participants. The subjects also indicated whether they identified with three statements developed by the authors, based on the personality aspects that seem to most influence tourism behavior (see Section 3.2 for further details about the questionnaires). The hypotheses of the present study are:

- H1. There is a direct relationship between the lifestyle of participants and their personality traits.
- H2. There is a direct relationship between the lifestyle of participants and their self-reported identification with 3 statements developed by the authors.

3. Method

3.1. Subjects

329 individuals participated in this study. The sample size of the present study is comparable to that in other tourism segmentation studies (e.g. James et al., 2017), and satisfies the minimum ratio of sample to free items which is 10 cases per parameter (Hair et al., 2014) [this research consisted of 27 items, so the required sample size would be 270]. The participants were Spanish residents who showed interest in visiting Valencia. The subjects were provided by a panel company; this company operates under an incentive system and managed the survey responses of this research. The company administered a filter question to measure each respondent's interest in visiting Valencia. Selection criteria for subjects participating in this study included being 18 years old or older, being Spanish resident and showing interest in visiting Valencia. Additionally, this study applied quota-sampling methods to obtain proportionate samples of males and females.

Before participating in the study, each participant received relevant written information and gave their written consent for inclusion in the study.

3.2. Questionnaires

The participants responded to a demographic questionnaire; a personality self-reported measure; a lifestyle questionnaire developed by the authors; and an author-developed questionnaire composed of three items. The demographic questionnaire collected information about the age, gender, family status, level of education, work status and income level of the participants. For the personality measurement, participants responded the Spanish version of the brief Temperament and Character Inventory-Revised (TCI-R-67; Pérez, 2009; Cloninger, 1999), which is composed by 67 items that measure 8 subscales: novelty seeking, exploratory excitability, harm avoidance, reward dependence, persistence, self-directedness, cooperativeness and self-transcendence. The Cronbach alpha coefficients in non-clinic population ranged from .705 to .879 (Pérez, 2009). For the lifestyle assessment, we developed a questionnaire consisting of 65 travel-specific lifestyle items. To develop this measure, we used the activities, interests, and opinions (AOIs) described by González and Bello (2002) for defining the lifestyles of a Spanish sample, and carried out little modifications in order to adapt the AOIs to the moment in which the study was carried out. Therefore, the statements that composed these measures concerned the following interests and opinions: society, politics, job, home milieu, personal success factors, environment, religion, future, family, friendship, responsibility, aspirations, attitude to personal problems, saving, innovation and fashion; and the following activities: do-it-yourself, sport, cinema, cultural activities, visits to beautiful places, nightlife, shopping, reading, music, TV programs and social media. Some examples of the items included in this questionnaire are: "At the weekends (or my free days) I prefer to spend time at home" for home milieu, or "My family is part of most of my plans" for family. Participants responded using a five-point Likert scale, which represented the weighting assigned to each statement from strong disagreement to strong agreement. In addition, the participants completed an author-developed questionnaire composed of three items. This questionnaire was designed with the aim of considering the three personality aspects that seem most to influence tourism behavior: risk perception (Correia et al., 2008); social reward dependence (Leask et al., 2014; Santos et al., 2016); and novelty seeking (Wong and Zhao, 2014). The first question is related to risk-taking, seen as the improvisation and experiencing aspect of traveling ["When I'm travelling, I don't mind improvising, undertaking activities or going to places that nobody has recommended to me, although I know there is a risk of things going wrong"]; the second item concerns social reward dependence, referred to trends and social media in tourism ["When I'm travelling, I like publishing what I'm doing on social media. I usually visit trendy places in urban destinations and take loads of photographs to show to my friends"]; the third question is related to novelty seeking, understood as uncertainty and innovation during a trip ["When I'm travelling, I'm attracted to unknown places, different cultures and generally, to living new experiences"].

3.3. Data analysis

Statistical analyses were carried out using SPSS version 22.0 (Statistical Package for the Social Sciences for Windows, Chicago, IL) for PCs. We examined the data for outliers and assessed the internal consistency of the scales using Cronbach's alpha. To obtain profiles with similar lifestyles, we performed a two-step analysis based on hierarchical and k-means techniques. We carried out one-way ANOVA tests to study differences in personality and in responses to the author-developed questionnaire among the clusters. Finally, we performed a multinomial logistic regression to analyze the effects of the responses to the questionnaire and the demographic characteristics of the subjects on their cluster membership.

4. Results

4.1. Description of the sample

We performed the first analysis to identify whether univariate or multivariate outliers existed. No participants were excluded from the analysis due to outlying rates. The final sample was made up of 329 individuals (167 men and 162 women; mean age = 38.44, SD = 11.41; 99% power in a one-way within-subjects ANOVA four groups, alpha = .05, effect size = 0.38; see Table 1 for further details). The internal consistency of the self-report scales was confirmed (Cronbach's alpha $\alpha_{lifestyle}$ = .888, $\alpha_{Novelty\ seeking}$ = .628, $\alpha_{Exploratory\ excitability}$ = .707, $\alpha_{Harm\ avoidance}$ = .622, $\alpha_{Reward\ dependence}$ = .845, $\alpha_{Persistence}$ = .847, $\alpha_{Self-directedness}$ = .833, $\alpha_{Cooperativeness}$ = .797, $\alpha_{Self-transcendence}$ = .905, bootstrap; 95%), since reliability values above 0.6 are acceptable in exploratory research (Nunally and Bernstein, 1994).

4.2. Segmentation of tourists and variations across clusters

In order to obtain profiles with similar lifestyles, we performed a two-step analysis based on hierarchical and k-means techniques, as used in earlier studies (e.g. Molera and Albaladejo, 2007). Participants were segmented into four clusters according to their self-reported lifestyles (see Figure 1). Figure 2 shows the demographic data of the participants based on profile. We carried out a one-way

ANOVA test to study personality differences among clusters. As seen in Table 2, significant differences exist among the clusters regarding all the dimensions of the self-reported measure. In addition, we studied the statistical differences between the clusters regarding the responses to the 3-item questionnaire. Table 3 shows that these differences are statistically significant.

4.3. Description of the segments

Cluster 1: *The Socials* (27% of the sample).

Lifestyle. The segment with the highest scores, specifically in items related to personal success factors, friendship, responsibility, innovation, fashion and in activities related to cinema, cultural activities, nightlife, shopping, and social media.

Demographic characteristics. The cluster includes more women than men, and has the highest level of education among the profiles. Characterized by being married with children, and having annual incomes between 30.001€ and 60.000€.

Personality traits. Characterized by high scores in Exploratory Excitability, Reward Dependence, Persistence, and Self-transcendence.

Responses to the 3-item questionnaire. *The Socials* present high interest in improvisation and experiencing, trends and social media and in uncertainty and innovation.

Cluster 2: *The Activists* (29% of the sample).

Lifestyle. They are interested in society, politics, and the environment in their own country and in other parts of the world. They take part in sports and cultural and recreational activities. They show weak interest in their jobs, home life, religion, fashion, shopping, and social media.

Demographic characteristics. This group presents a majority of single participants, typically with annual incomes lower than 15.000€.

Personality traits. *The Activists* present high scores in Exploratory Excitability and Harm Avoidance, and low scores in the Novelty Seeking, Self-directedness, Cooperativeness and Self-transcendence subscales.

Responses to the 3-item questionnaire. *The Activists* show the highest scores in improvisation and experiencing and in uncertainty and innovation when traveling, but do not show interest in visiting trendy places and posting on social media.

Cluster 3: *The Cautious* (29% of the sample).

Table 1. Demographic data of participants.

| Variable	Frequency	Percent	Variable	Frequency	Percent
Gender			Level of education		
Male	167	50.76%	Grade school	6	1.82%
Female	162	49.24%	High school	18	5.47%
Age			College	82	24.92%
20 or younger	3	0.91%	Graduate school	159	48.33%
21–30	108	32.83%	Master's degree	64	19.45%
31–40	104	31.61%	Work status		
41–50	55	16.72%	Homemaker	7	2.13%
51–60	44	13.37%	Freelance	33	10.03%
61 or older	15	4.56%	Unemployed	45	13.68%
Family status			Student	32	9.73%
Married with children	122	37.08%	Retired	13	3.95%
Married with no children	73	22.19%	Employee	199	60.49%
Divorced with children living together	6	1.82%	Income		
Divorced with no children living together	6	1.82%	15.000€ or less	109	33.13%
Divorced with no children	5	1.52%	15.001€ - 30.000€	106	32.22%
Independent single	38	11.55%	30.001€ - 60.000€	57	17.33%
Non-independent single	77	23.40%	60.001€ - 75.000€	1	0.30%
Widowed with children living together	0	0.00%	75.001 or greater	4	1.22%
Widowed with no children living together	1	0.30%	No answer/don't know	52	15.81%
Widowed with no children	1	0.30%			

a

b
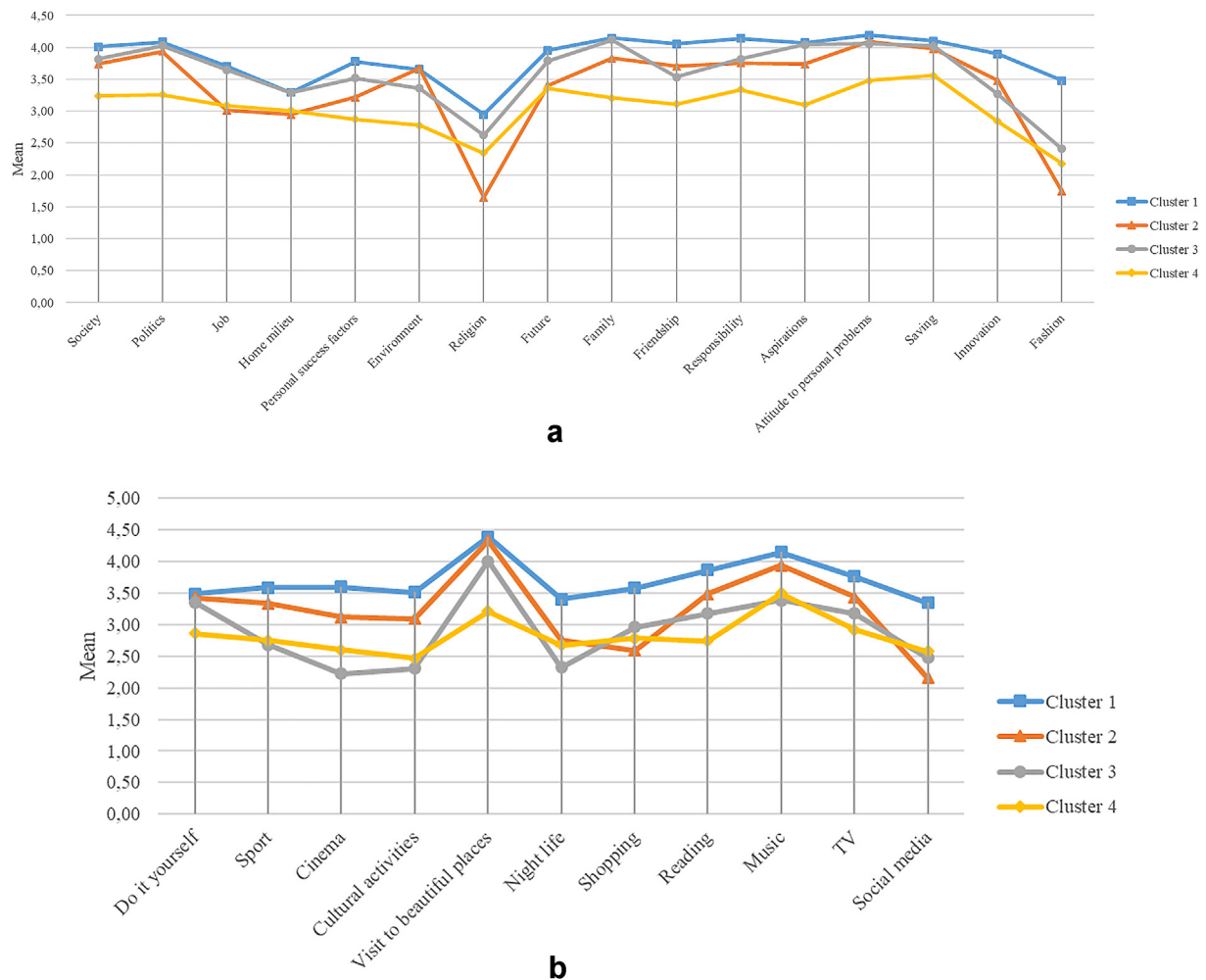
Figure 1. Lifestyle self-reported answers per cluster. Interests and opinions (Figure 1a) and activities (Figure 1b).

Lifestyle. Characterized by individuals with a keen interest in society and politics, they show high professional responsibility and enjoy spending free time at home. They value privacy and peace in their lives and are interested in religion and family. They show no interest in recreational activities or social media.

Demographic characteristics. Characterized by being married with children, and having annual incomes between 30.001€ and 60.000€.

Personality traits. *The Cautious* have high scores in Persistence, Self-directedness, Cooperativeness and Self-transcendence, and low scores in Exploratory Excitability, Harm Avoidance and Reward Dependence.

Responses to the 3-item questionnaire. *The Cautious* are characterized by intermediate scores in improvisation and experiencing and in uncertainty and innovation when traveling, but do not show interest in visiting trendy places and posting on social media.

Cluster 4: *The Adolescents* (15% of the sample).

Lifestyle. The segment with the lowest scores. They showed interest in fashion, sports, going to the cinema, listening to music and social media. They showed no interest in society, politics or the environment.

Demographic characteristics. This group is mostly made up of men, has more single people and has annual incomes lower than 15.000€.

Personality traits. *The Adolescents* are characterized by high Novelty Seeking, Self-directedness and Cooperativeness, and low Exploratory Excitability, Harm Avoidance, Reward Dependence, Persistence, and Self-transcendence.

Responses to the 3-item questionnaire. *The Adolescents* had the lowest scores in improvisation and experiencing, trends and social media and in uncertainty and innovation.

4.4. Predicting cluster membership

We performed a multinomial logistic regression to analyze the effects of the responses to the 3-item questionnaire and demographic characteristics of the subjects on the cluster membership of the subjects. The logistic regression model was statistically significant (p = .000) and the pseudo-R^2 was .353 (Nagelkerke pseudo-R^2). The percentage of right predictions of the model is 47.4%. According to the model, items 2 and 3 of the author-developed questionnaire and the dummy variables "Married with children", "Non-independent single" and "Incomes: 15.000€ or less" are statistically significant predictors of the clusters to which the participants belong (see Table 4 for further details regarding the regression analysis).

5. Discussion

The present study, developed in the context of Valencia (Spain), aimed to identify the touristic profiles of national tourists based on their lifestyles. The results suggest that this market can be segmented into four clusters, and that lifestyle is an appropriate indicator for this market segmentation. We studied the demographic and personality differences among the profiles, which provide a deep comprehension of the resulting profiles. In addition, we present an author-developed questionnaire that, with demographic variables, is able to predict the profiles of the participants. The results will be discussed by sections: (1) touristic profiles obtained; (2) personality differences among profiles and (3) profile prediction.
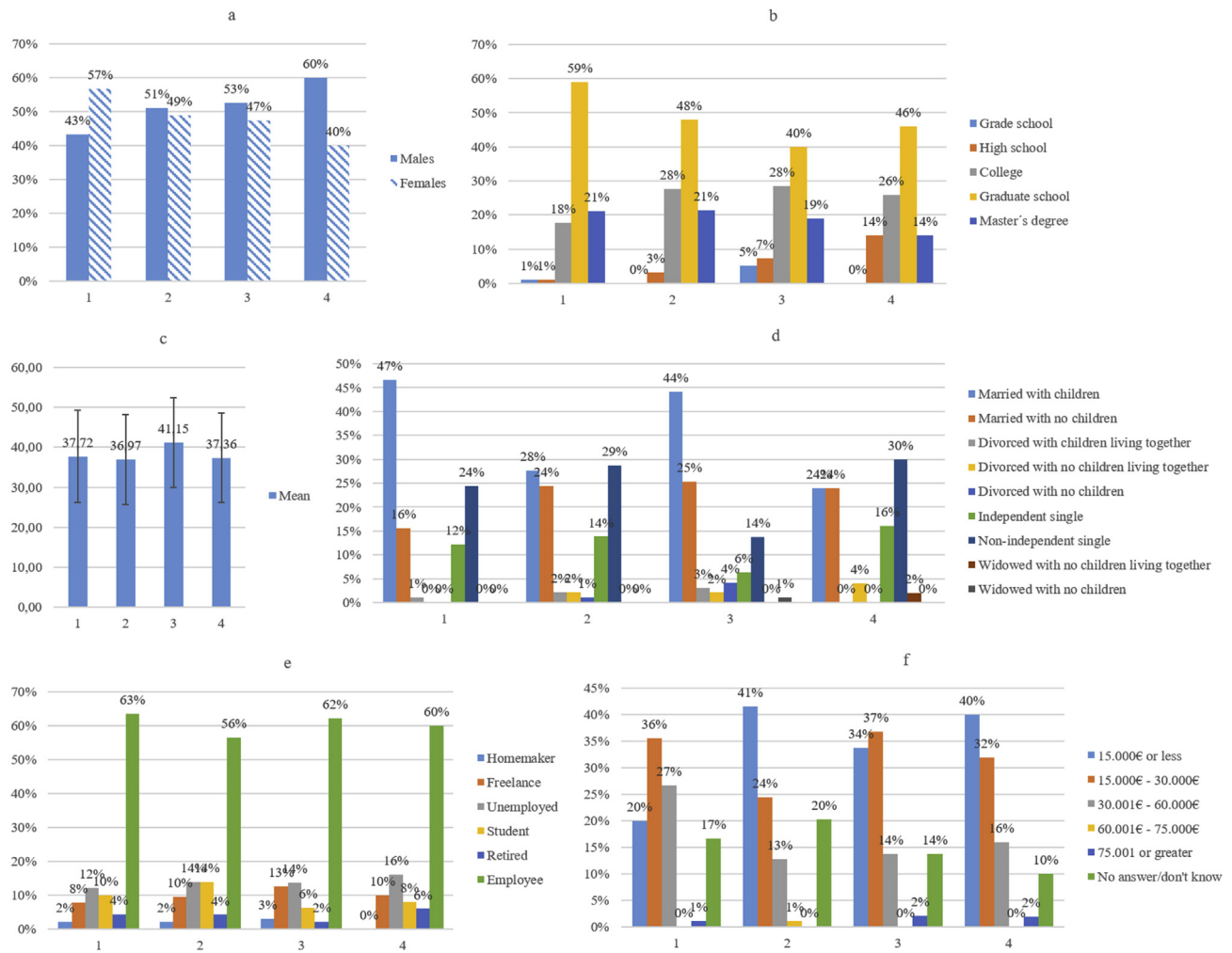
Figure 2. Demographic data of participants per cluster. Gender (Figure 2a), level of education (Figure 2b), age (Figure 2c), position in family (Figure 2d), work status (Figure 2e) and income (Figure 2f).

Table 2. One-way ANOVA and Bonferroni tests comparing personality dimensions between clusters.

Variable	Mean				P-value	P-value for pairwise comparison					
	Cluster 1	Cluster 2	Cluster 3	Cluster 4		1 vs 2	1 vs 3	1 vs 4	2 vs 3	2 vs 4	3 vs 4
Novelty seeking	19.256	18.713	19.137	20.600	.056	1.000	1.000	.329	1.000	.041	.210
Exploratory excitability	21.167	21.936	19.832	17.800	.000	.733	.044	.000	.000	.000	.004
Harm avoidance	25.811	26.638	24.642	23.920	.000	1.000	.344	.063	.004	.001	1.000
Reward dependence	26.600	24.734	24.179	22.500	.001	.196	.033	.001	1.000	.187	.626
Persistence	25.700	24.032	24.779	20.220	.000	.027	.687	.000	1.000	.000	.000
Self-directedness	19.544	17.266	19.989	20.720	.001	.048	1.000	1.000	.008	.004	1.000
Cooperativeness	18.389	17.745	19.000	21.500	.000	1.000	1.000	.003	.530	.000	.029
Self-transcendence	21.333	15.543	18.916	17.560	.000	.000	.102	.012	.005	.562	1.000

Table 3. One-way ANOVA and Bonferroni tests comparing responses to own elaborated questionnaire between clusters.

Variable	Mean				P-value	P-value for pairwise comparison					
	Cluster 1	Cluster 2	Cluster 3	Cluster 4		1 vs 2	1 vs 3	1 vs 4	2 vs 3	2 vs 4	3 vs 4
Improvisation and experiencing	7.533	7.712	6.832	6.160	.000	1.000	.144	.002	.025	.000	.411
Trends and social media	5.244	3.074	3.084	3.020	.000	.000	.000	.000	1.000	1.000	1.000
Uncertainty and innovation	8.389	8.575	7.895	6.200	.000	1.000	.211	.000	.021	.000	.000

Table 4. Summary of the multinomial logistic regression analysis predicting cluster membership.

Cluster	Variable	Coefficient	s.e.	p-value	95% C.I.
2	Married with children	2.412	.378	.020	1.151–5.055
	Non-independent single	1.321	.435	.522	.564–3.097
	Incomes: 15.000€ or less	.327	.394	.005	.151–.707
	Improvisation and experiencing	1.017	.094	.856	.846–1.222
	Trends and social media	.747	.058	.000	.667–.837
	Uncertainty and innovation	1.147	.128	.285	.892–1.475
3	Married with children	1.385	.358	.363	.686–2.796
	Non-independent single	3.015	.479	.021	1.179–7.709
	Incomes: 15.000€ or less	.279	.404	.002	.126–.616
	Improvisation and experiencing	.871	.088	.117	.732–1.035
	Trends and social media	.778	.058	.000	.694–.871
	Uncertainty and innovation	.926	.122	.525	.729–1.175
4	Married with children	3.011	.488	.024	.686–2.796
	Non-independent single	.617	.537	.371	1.179–7.709
	Incomes: 15.000€ or less	.346	.491	.031	.126–.616
	Improvisation and experiencing	.959	.113	.711	.732–1.035
	Trends and social media	.794	.077	.003	.694–.871
	Uncertainty and innovation	.525	.149	.000	.729–1.175
Cluster of reference: 1					
3	Married with children	.574	.346	.109	.291–1.132
	Non-independent single	2.283	.432	.056	.980–5.319
	Incomes: 15.000€ or less	.845	.339	.643	.440–1.660
	Improvisation and experiencing	.856	.082	.057	.730–1.004
	Trends and social media	1.041	.055	.472	.934–1.160
	Uncertainty and innovation	.807	.113	.057	.647–1.006
4	Married with children	1.248	.485	.647	.483–3.229
	Non-independent single	1.224	.504	.689	.455–3.290
	Incomes: 15.000€ or less	1.061	.445	.895	.443–2.539
	Improvisation and experiencing	.943	.108	.586	.763–1.165
	Trends and social media	1.063	.075	.416	.917–1.232
	Uncertainty and innovation	.458	.143	.000	.346–.606
Cluster of reference: 2					
4	Married with children	2.173	.454	.087	.893–5.292
	Non-independent single	.536	.521	.231	.193–1.488
	Incomes: 15.000€ or less	1.241	.433	.617	.532–2.899
	Improvisation and experiencing	1.101	.101	.339	.904–1.342
	Trends and social media	1.022	.074	.772	.8847–1.181
	Uncertainty and innovation	.568	.131	.000	.439–.733
Cluster of reference: 3					

5.1. Touristic profiles

First, four touristic profiles were obtained based on their lifestyles: *The Socials, The Activists, The Cautious* and *The Adolescents*. These profiles present differences in their AOIs. Their scores in items about society, politics, environment, attitude to personal problems, saving, do-it-yourself and visit to beautiful places help us to distinguish *The Adolescents,* who scored low in these topics, form the other three groups. *The Socials* can be distinguished from the other profiles for their high scores in fashion, night life, shopping and social media items. The four profiles scored different in personal success, religion, cinema, reading and TV items. *The Socials* and *The Activists* can be distinguished from *The Cautious* and *The Adolescents* for their high scores in sport, cultural activities and music items. *The Socials* and *The Cautious* can be distinguished from *The Activists* and *The Adolescents* for their high scores in job, home milieu and future items. *The Socials* and *The Cautious* can be distinguished from *The Activists* these at the same time from *The Adolescents* for their hg scores in family and aspirations items. Finally, *The Socials* can be distinguished from *The Activists and The Cautious* and these at the same time from *The Adolescents* for their high scores in friendship, responsibility and innovation items. Attending to these results, we could conclude that *The*

Socials and *The Adolescents* constitute groups with more marked lifestyles, while *The Activists* and *The Cautious* present less pronounced lifestyles and share AOIs with the other profiles.

5.2. Personality differences among profiles

Second, significant statistical differences in personality among profiles were found (see Figure 3). Novelty seeking, defined as the propensity to actively respond to novel stimuli that lead to the search for reward and escape from punishment (Cloninger et al., 1993), was significantly different among *The Activists* (low score) and *The Adolescents* (high score). As stated in earlier studies, novelty seeking is a concept close to variety seeking, since it refers to the "intention to choose either a different restaurant among familiar alternatives (alternation) or a new alternative (novelty seeking)" (Ha and Jang, 2013, p. 156). Legohérel et al. (2015) found that variety seekers prefer local products than standardized hotels and food. The results suggest that, while *Activists* show a higher interest in culture and responsibility, *Adolescents* seem to pay more attention to material aspects. This might suggest that novelty seeking is a materialistic preference for new objects, in place of new experiences.
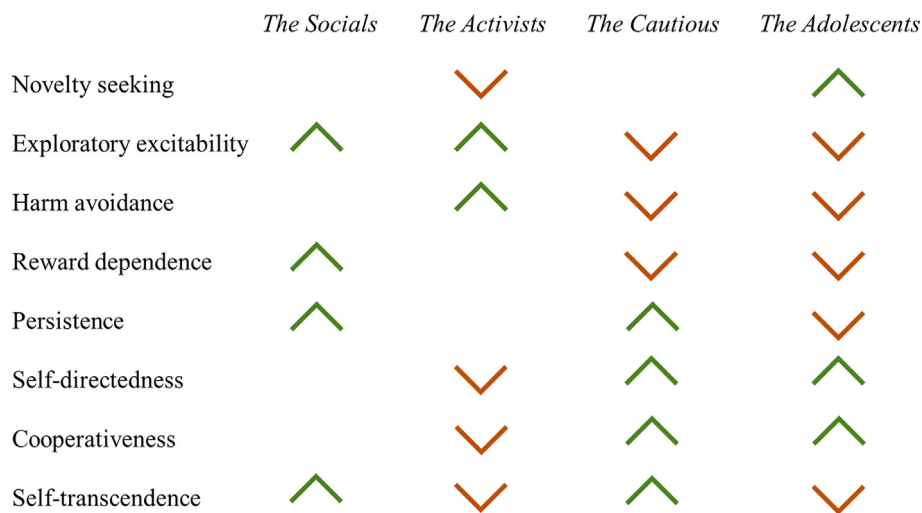
	The Socials	*The Activists*	*The Cautious*	*The Adolescents*
Novelty seeking		⌄		⌃
Exploratory excitability	⌃	⌃	⌄	⌄
Harm avoidance		⌃	⌄	⌄
Reward dependence	⌃		⌄	⌄
Persistence	⌃		⌃	⌄
Self-directedness		⌄	⌃	⌃
Cooperativeness		⌄	⌃	⌃
Self-transcendence	⌃	⌄	⌃	⌄

Figure 3. Differences among clusters in personality dimensions (only significant differences are shown).

Exploratory excitability was originally part of the novelty-seeking dimension, but it has been demonstrated that they should be treated as different measures. While novelty seeking is more related to impulsivity, exploratory excitability assesses the tendency to search the environment for novel stimuli and the rapidity of cognitive processing (Pérez, 2009). Exploratory excitability was significantly different across all the clusters, *The Socials* and *The Activists* having high scores, and *The Cautious* and *The Adolescents* having low scores. The main differences among the groups (high vs. low exploratory excitability) is in their interest in cultural activities and sports, which generated more interest among *The Socials* and *The Activists*. These groups have the highest levels of education of the sample.

Harm avoidance, understood as the tendency toward displaying an inhibitory response to aversive stimuli, that is, to avoid punishment and non-reward situations (Cloninger et al., 1993), differed significantly among *The Activists* (high score), *The Cautious* (low score) and *The Adolescents* (low score). Harm avoidance has been studied in the field of risk taking/risk aversion in tourism. Álvarez and Asugman (2006) found that tourists could be segmented according to their attitude toward risk, and identified two profiles: the explorers, who are more spontaneous in their vacation style; and the planners, who are more risk-averse and are attracted to package holidays. In the present study, participants with high harm avoidance scores showed interest in sports and cultural activities, while individuals with low harm avoidance scores showed interest in religion, fashion, and social media.

Reward dependence, understood as the tendency to maintain or resist stopping certain behaviors due to the attraction of a potential reward (Cloninger et al., 1993), was significantly different among *The Socials* (high score), *The Cautious* (low score) and *The Adolescents* (low score). These groups (high vs. low reward dependence) differ in their interest in fashion, sports, cultural activities, and social media, which is higher in *The Socials*. This cluster has more females and a higher level of education than *The Cautious* and *The Adolescents*. Seeking rewards is considered a motivational dimension in tourism, since benefits derived from traveling are considered reinforcements and ways to escape daily routine. Iso Ahola (1982); Šimková and Holzner (2014).

Persistence is defined as the tendency to maintain behaviors under intermittent reinforcement (Cloninger et al., 1993). This is significant among *The Socials* (high score), *The Cautious* (high score) and *The Adolescents* (low score). In this case, *The Socials* and *The Cautious* share interests related to responsibility and concern for the future, while The Adolescents showed low interest in these aspects.

Self-directedness is understood to be the behavioral regulation and adaptation to situations according to individually chosen goals and

values, and cooperativeness is related to the acceptance of other people (Cloninger et al., 1993). Although these are different concepts, the differences among the clusters are similar. *The Activists* had a low score in self-directedness and cooperativeness, while *The Cautious* and *The Adolescents* showed high scores in these dimensions. These results are opposite to the scores obtained by these profiles in harm avoidance. Participants with low scores in self-directedness and cooperativeness showed interest in sports and cultural activities, while individuals with high scores in self-directedness and cooperativeness showed interest in religion, fashion, and social media.

Self-transcendence refers to the concern for absolute ideals, such as goodness and universal harmony (Cloninger et al., 1993). This concept, associated with spirituality, scored highly among *The Socials* and *The Cautious*, while *The Activists* and *The Adolescents* had low scores. The main differences among the groups (high vs. low self-transcendence) are related to their interest in their jobs, home milieu, and the future; these aspects generated more interest in *The Socials* and *The Cautious*. These profiles tend to be married with children and have annual incomes of between 15.001€ and 30.000€, while most of the *Activists* and *The Adolescents have* annual incomes lower than 15.000€. Lee and Sparks (2007), following the theoretical structure of values of Schwartz (1992), showed that individuals with high self-transcendence valued conformity, benevolence, universalism and self-direction. These results suggest that personality traits and lifestyle have a strong relationship, accepting hypothesis 1.

5.3. Profile prediction

Third, we studied whether if the responses of the 3-item questionnaire developed by the authors together with the demographic characteristics of the subjects could predict the profile membership of the subjects. The present study suggests that trends in social media in tourism and the level of uncertainty and innovation sought during a trip, together with the demographic variables "Married with children", "Non-independent single" and "Incomes: 15.000€ or less", are statistically significant predictors of the cluster in which the participants fit. Conversely, improvisation and experiencing was not a significant item for predicting the cluster of the participants. These outcomes provide a new basis for tourism segmentation, as these predictors might be used as "quick touristic classifiers", accepting hypothesis 2.

6. Conclusions and marketing implications

The increase in the number of tourists to urban areas in recent years has been enormous, and has important implications for the financial well-

being of cities such as Valencia. Thus, understanding tourists' decision-making processes has gained in importance, since the adaptation of destinations to their visitors' needs has become a decisive factor for tourists' destination choice. This complex decision-making process is based mostly on cognitive and emotional aspects. These processes are influenced both by context and by the previous experiences of the individuals.

Hitherto, tourist destinations have been widely analyzed from the point of view of their offers but, in an increasingly globalized world, individuals seek personalization and customization in many aspects of their lives. Thus, we have focused on those aspects of human behavior that directly affect decision-making in entertainment and tourism. The findings of the present study suggest that marketing communication and promotion activities in Valencia should be tailored for different groups of national visitors. Furthermore, the role of personality in this lifestyle segmentation provides a deeper understanding of the segments, which enables to customize marketing strategies not only in the field of AOIs, but also in more extensive and cross-situational spheres of their lives. In addition, we have made a first assessment of how to evaluate potential tourists in a simple and non-invasive way, so that destinations might be able to design offers suitable for their national visitors, based on their answers to few questions.

The results presented in this article can be applied as a representative sample of the characteristics of the national tourism that visits Valencia, as well as a methodology to be replicated in other countries from an international point of view. It can be used in different contexts from both marketing practices and for research purposes.

7. Limitations and future investigations

This study has some methodological limitations. First, the selection of respondents was influenced by their willingness to participate in the study. Second, the design of the questionnaire was based on the authors' criteria, which may have omitted some critical aspects of personality. In future investigations we intend to improve the questionnaire by including further items that can predict the clusters to which participants belong.

Declarations

Author contribution statement

Elena Parra Vargas: Conceived and designed the experiments; Wrote the paper.

Carla de-Juan-Ripoll and Marta Bueno Panadero: Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Mariano Alcañiz: Conceived and designed the experiments.

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Data availability statement

Data will be made available on request.

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The authors declare no conflict of interest.

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No additional information is available for this paper.

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