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How diverse is the youth tourism market? An activity-based segmentation study

Abstract

The youth tourism market has already taken on high relevance, due to its considerable size, its rising trend, resilience and likelihood to explore new destinations. Although this market is highly active during tourism trips, some heterogeneity is noted regarding the kind of tourism activities carried out. However, the research on youth visitors' segmentation based on activities has been widely neglected. This study extends the research carried out in this field, undertaking an activity-based segmentation of youth visitors. The segments identified are compared regarding tourism motivations and relevant dimensions of tourism experience (e.g. social interaction, emotions and satisfaction). A hierarchical cluster analysis was used to segment the market, and clusters were compared using ANOVA, Kruskal-Wallis and χ^2 tests. Four clusters emerged: culture lovers, fun lovers, sun and beach lovers and nature lovers. Statistically significant differences were found among the four clusters identified concerning socio-demographics, travel motivations, interaction with locals and other visitors and other features of travel behaviour. Important implications for improving the tourism experience of youth visitors with different activity profiles are discussed. In this context, the findings provide relevant insights for creating more appealing tourism trips for the four market segments identified.

Key words*: activity-based segmentation; youth tourism market; motivations; travel behaviour; interactions; emotions.*

Introduction

It is recognized that youth visitors represent an important tourism market. In 2008, youth visitors accounted for about 20% of international tourist arrivals (WTO, 2008). In 2011 youth visitors accounted for around 190 million international trips per year and it is estimated that these trips will reach 300 million international trips per year in 2020 (UNWTO & WYSE Travel Confederation, 2011). Moreover, young visitors are travelling more frequently, are very likely to explore new destinations and tend to be less prevented from travelling due to constraints such as natural disasters or political problems (Richards, 2007; UNWTO & WYSE Travel Confederation, 2011). It is also very important to satisfy the needs of this market, since these visitors are in the first stage of their travel career and their travel trends may mark their future travel behaviour.

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This market also tends to carry out many activities during tourism trips (Frändberg, 2010; Richards, 2007), although research reveals some heterogeneity regarding their engagement in various activities (Eusébio & Carneiro, 2012; Frändberg, 2010; Heung & Leong, 2006; Kim & Jogaratnam, 2003; Pearce & Son, 2004; Ryan & Zhang, 2007; Thrane, 2008; Xu, Morgan & Song, 2009). This suggests that the activity-based segmentation of this market would be of utmost importance. However, activity-based segmentation of youth visitors has been neglected. No studies have been found that analyse the association between activities carried out and important dimensions of the youth tourists' experience, such as social interactions and emotions.

The present paper aims to fill this gap through an empirical study on activity-based segmentation of youth visitors, where the relationship between activities and relevant dimensions of the tourism experience is analysed. Therefore, the paper identifies difference between segments of youth visitors with different profiles regarding activities carried out, namely travel motivations, interaction with locals and other visitors, and effects of this interaction, emotions, and other features of the travel behaviour, socio-demographic profile, satisfaction and loyalty. This study therefore makes an important contribution for designing strategies to provide enriching tourism experiences to young visitors with different activity profiles.

This paper begins with a literature review regarding activities carried out by the youth tourism market, the relevance of activity-based segmentation and factors that may be related to activities carried out by youth visitors. Then, the methodology of the empirical study is reported and the findings of the study are presented and discussed. Special attention is given to the identification of youth visitor segments based on activities and also to the analysis of differences among these segments. Finally, conclusions of the study and implications for those engaged in tourism development are presented.

Literature review

In the youth tourism market, some differences regarding participation in tourism activities are noticed. The present literature review aims to discuss the relevance of carrying out activity-based segmentations of this market and to analyse the factors associated with a greater likelihood that youth people will participate in different kinds of tourism activities.

The youth tourism market and the relevance of activity-based segmentation

Some research on the youth market reveals that young people are likely to be highly active during tourism trips, with a high propensity to undertake various activities (Xu *et al.*, 2009). Going to beach and activities related to beach destinations, such as sunbathing, are some of the activities more frequently undertaken by young visitors (Frändberg, 2010; Kim & Jogaratnam, 2003; Thrane, 2008; Xu *et al.*, 2009). Sightseeing is also at the top of activity preferences of this market (Frändberg, 2010; Kim & Jogaratnam, 2003; Shanka, Ali-Knight & Pope, 2002). Visiting cities and shopping are also widely undertaken by young people on tourism trips, although not as frequently as the other activities mentioned above (Thrane, 2008; Xu *et al.*, 2009). However, although the above mentioned trends

are observable, studies also suggest the existence of some heterogeneity among the youth tourism market regarding activities carried out. This seems to be especially true regarding some activities such as sports, cultural activities and nature activities, which are widely carried out by some young visitors, but are rarely undertaken by others (Frändberg, 2010; Kim & Jogaratnam, 2003; Thrane, 2008; Xu *et al.*, 2009). The studies previously mentioned highlight the existence of different profiles of young people concerning activities carried out, thus revealing the importance of segmenting the youth tourism market based on tourism activities and better analysing the characteristics of these segments with different likelihoods of carrying out specific activities.

Market segmentation is very useful for identifying homogenous clusters of visitors with similar characteristics that deserve different marketing approaches, including a different marketing mix (Blackwell, Miniard & Engel, 2001; Kotler, Armstrong, Saunders & Wong, 1999). It also contributes to the greater efficiency in satisfying consumers by focusing on specific needs of the target markets. Several kinds of segmentation have been identified (Blackwell *et al.*, 2001; Kotler *et al.*, 1999) including: (i) sociodemographic (e.g. based on age, gender); (ii) psychographic (e.g. based on motivations, lifestyle); (iii) behavioural (e.g. based on activities undertaken such as use of products, usage rate and expenditure); and (iv) geographical (e.g. based on place of residence). The majority of the segmentation studies of the youth tourism market have been based on psychographic variables, most frequently on motivations (e.g. Cini, Leone & Passafaro, 2012; Prayag & Hosany, 2014; Ryan & Zhang, 2007). Only a scarce number of researchers segmented young visitors using other criteria, such as age (e.g. Dotson, Clark & Dave, 2008), gender (e.g. Xu *et al.*, 2009), nationality (Xu *et al.*, 2009) and type of destination visited – domestic or foreign destination (e.g. Kim & Jogaratnam, 2003; Thrane, 2008).

As Kotler *et al.* (1999) state, many marketers consider behavioural segmentation to be the best process to initiate market segmentation. In this context, Mumuni and Mansour (2014) advocate that activity-based segmentation approach is more useful than other segmentation processes such as motivation-based segmentation, since activities carried out constitute a more stable variable than motivations.

Although behavioural segmentation is very important in tourism (e.g. Tkaczynski, Rundle-Thiele & Beaumont, 2009), there is a very limited number of activity-based segmentation studies in the tourism field (Choi, Murray & Kwan, 2011; Feinsterwalter & Laesser, 2013; Hsieh, O' Leary & Morrison, 1992; Moscardo, Morrison, Pearce, Lang & O'Leary, 1996; Mumuni & Mansour, 2014; Yan, So, Morrison & Sun, 2007; Sievänen, Neuvonen & Pouta, 2011).

One of the few segmentation studies of visitors based on activities undertaken during tourism trips is the segmentation of international Taiwan visitors carried out by Yan *et al.* (2007), where three clusters of visitors were identified – heritage, shopping and non-specialist visitors. These groups of visitors showed, respectively, more likelihood for visiting heritage relics, for shopping, or for the lack of a clear activity pattern. Another research including activity-based segmentation amongst other variables is that undertaken by Sievänen *et al.* (2011) in three national parks in Southern Finland, concerning the interest of visitors in using rural tourism services. Five groups of visitors were found – 'Countryside and outdoor friends', 'Safari riders', 'Guided visitors', 'Room and rental seekers' and 'Uninterested' – revealing different levels of interest for activities such as safaris, outdoor activities and guided activities. Choi *et al.* (2011) identified three groups of visitors living in provinces of Canada – 'Outdoor lovers', 'Active explorers' and 'Cultural shoppers'. While the 'Active explorers' corresponded to those who more

frequently participated in the majority of the activities considered in the research (with exception of shopping), the major differences between the other two groups were that 'Outdoor lovers' carried out outdoor and sport activities more often and 'Cultural shoppers' undertook shopping, cultural and culinary activities more frequently.

Finsterwalder and Laesser (2013) also identified, through an activity-based segmentation, six groups of Swiss people with different tourism experiences. These groups had different experiences and were labelled accordingly: (i) Average short-haul holiday experiences (associated to multiple activities); (ii) Short repeat healthy winter experiences (related to more passive activities such as reading, watching television and listening to the radio); (iii) New beach experiences (characterized by swimming, bathing, sleeping, relaxing and spending time at the beach); (iv) Short social encounter experiences (associated with reading, trying the local cuisine, strolling, shopping, walking, getting to know other/new people); (v) New place experiences (related to a wide range of tourism activities that permit exploration such as sightseeing, getting to know others and trying local cuisine); and (vi) Seniors' new place experiences (characterized by strolling, shopping, walking, sightseeing for appreciating built sites and trying local cuisine). Mumuni and Mansour (2014) found three clusters of outbound leisure visitors based on activities preferences: 'the conservatives', who do not like entertainment; 'the variety seekers', who like all activities; and "the fun seekers', who prefer shopping and leisure activities.

The aforementioned studies show that tourism activities are an important base of segmentation, revealing segments of visitors with different activity profiles, which reinforces the relevance of developing customised tourism products for each of these segments. The results that emerge from these studies provide important contributions to develop strategies to provide memorable tourism experiences. However, in the youth tourism market, only one published study on activity-segmentation was identified – that of Kim and Jogaratnam (2003). This study, undertaken with students from three universities of the Great Lakes area in the United States, identified only two groups of visitors – a more active group and a more passive group – with the first undertaking all the activities included in the study more frequently. No other activity-segmentation studies on the youth tourism market, identifying groups with different activity profiles, were found. In order to increase knowledge in this field, it is important to identify the profile of youth visitors with different patterns of tourism activities. Therefore, in the next section, a literature review on factors related to activities carried out by youth visitors is presented.

Factors related to tourism activities carried out by youth visitors

Research on the youth tourism market, including few segmentation studies, suggests that youth activity preferences and participation in activities vary according to some socio-demographic variables, travel motivations and travel behaviour features. Some studies (e.g. Kim & Jogaratnam, 2003; Xu *et al.*, 2009) revealed that young males are more active than young females, and are more likely to undertake outdoor and sports activities. In contrast, females show higher preferences for shopping (Xu *et al.*, 2009). Young visitors with lower ages are usually more active, participating more frequently in various activities (Kim & Jogaratnam, 2003). However, some studies (e.g. Frändberg, 2010) suggest that specific activities such as educational and more organized activities tend to be carried out more often by the older of the young students. It also seems that there is difference according to marital status.

For example, Kim and Jogaratnam (2003) reveal that single young people are usually more active than married young people, which is probably partially related to young married people having higher ages and higher constraints, on average, than young singles. No association is found between educational level and activity preferences, probably due to the low range of educational levels of those included in this type of research (Kim & Jogaratnam, 2003).

Research also confirms that some differences may be detected in the pattern of activities carried out in domestic and in international trips. It seems that international trips are more often associated with touring and sightseeing (Kim & Jogaratnam, 2003) or with sunbathing, visiting big cities and shopping (Thrane, 2008). Conversely, domestic trips are more frequently associated with visits to friends and relatives (Thrane, 2008). Additionally, some findings also suggest that nationality may influence preferences for tourism activities. For example, Xu *et al.* (2009) detected several differences between the activity preferences of English and Chinese students. These differences may also be related to cultural differences existing between the two groups under study.

The study undertaken by Frändberg (2010) among young Swedes also reveals that some tourism activities are more likely than others to be repeated by people throughout their youth. In this study, the most repeated activities are, among others: sunbathing, skiing and visiting the family.

Moreover, Heung and Leong (2006) also found some, although only a few, differences in the importance of some tourism activities to students of different areas of study. Arts students, for example, considered it more important to visit historic relevant places, probably due to the expectation of having the opportunity to appreciate places with artistic value or attractive aesthetic environments.

Ryan and Zhang (2007) also reveal the existence of an association between travel motivations and likelihood of undertaking specific activities. In their study, students who wanted to explore places and people were those more likely to do scenic boat cruises and city tours. The study of Eusébio and Carneiro (2012) corroborates that travel motivations may determine activities, specifically interaction with local residents, showing that youth visitors more motivated by cultural enrichment and novelty interact more often with residents during sightseeing and event attendance. This literature review reveals that, in the youth tourism market, research on the relationship between social interaction and tourism activities has been widely neglected. However, several studies (Kastenholz, Carneiro, Eusébio & Figueiredo, 2013; Morgan & Xu, 2009; Tucker, 2003) highlight that social interaction is an important dimension of the tourism experience. Moreover, these studies also reveal that emotions are another relevant dimension of tourism experience. Besides these findings, no studies analysing the relationship between these two important dimensions of the youth tourism experience – social interaction and emotions – and tourism activities carried out were found.

Although the research previously presented leads to important findings, there is still a limited number of studies on the youth tourism market using activity-based segmentation or where the association between activities carried out and other variables are analysed. Therefore, more research is required to confirm the associations already found in some studies and to extend previous research, aiming to analyse the relations between activities carried out and other important dimensions of the tourism experience. This paper aims to analyse the heterogeneity in the youth tourism market regarding tourism activities carried out during a trip. Based on the literature review presented above, the following hypotheses were identified for testing:

- Hypothesis 1: There are homogenous groups in the youth tourism market regarding tourism activities carried out during a trip.
- Hypothesis 2: These homogenous groups will differ in their: (i) socio-demographic profile; (ii) travel motivations; (iii) travel behaviour; (iv) interactions with locals and other visitors; (v) effects of interactions perceived by the youth tourists; (vi) emotions felt during the trip; and (vii) overall satisfaction and loyalty.

Research methodology

In order to gather the data required to test the hypotheses, a questionnaire-based survey was undertaken. In the following sections the constructs and questionnaire design, the sampling approach, the data methods used in this research and the socio-demographic profile of respondents will be presented.

Constructs and questionnaire design

The questionnaire used in this research was drawn up based on a literature review and includes questions organized into five groups: (i) screening questions to identify respondents suitability for participation in this research; (ii) travel motivations and travel behaviour; (iii) interaction with locals and with other visitors; (iv) evaluation of the trip and (v) socio-demographic characteristics. Only the students who had been on at least one leisure and recreation trip in the last three years could participate in this research.

The first part of the questionnaire included questions related to gender and area of study. Then, respondents were asked to select the leisure and recreation trip undertaken in the last three years with the longest duration. All the other questions were related to this trip. The second part included questions related to tourists' motivations and travel behaviour (length of stay, type of destination visited, country of destination, number of previous visits, composition of the travel group and tourism activities carried out during the trip). To measure student tourists' motivations, a seven-point *Likert* scale (1 = "completely disagree" to 7 = "completely agree") with 19 items was developed based on a literature review (e.g. Crompton, 1979; Eusébio & Carneiro, 2012; Kim, Oh & Jogaratnam, 2007; Morgan & Xu, 2009; Thrane, 2008; Xu *et al.*, 2009). The questions related to travel behaviour were designed based on the International Recommendations for Tourism Statistics 2008 (UN & UNWTO, 2010). Finally, 21 tourism activities, selected from the literature about activities carried out by young tourists (e.g. Eusébio & Carneiro, 2012; Kim & Jogaratnam, 2003; Richards, 2007; Xu *et al.*, 2009) were used to measure tourism activities undertaken by students surveyed in this research.

Interaction with locals and other visitors was measured using both the frequency of interaction in various places and the frequency of several types of interactions. First, in line with other studies in this field (e.g. Carneiro & Eusébio, 2012; Eusébio & Carneiro, 2012; Pizam, Uriely & Reichel, 2000; Weaver & Lawton, 2001), the students interviewed had to report the frequency of interaction, both with locals and with other visitors, in seven places (monuments, events, food & beverage establishments, other commercial establishments, discos, clubs and bars, nature places and in the street), using a seven-point scale (ranging from 1 = "very rarely" to 7 = "very frequently"). Second, the frequency of 12 types of interaction with locals and other visitors, based on studies in this area (e.g. De Kadt,

1979; Reisinger & Turner, 1998), were assessed using the same seven-point frequency scale (1 = "very rarely" to 7 = "very frequently").

In order to evaluate the trip carried out by those students interviewed, four types of question were used. First, a scale with 8 items, measured via a seven-point Likert scale (1 = "completely disagree" to 7 = "completely agree"), created based on Reisinger and Turner (2003), was used to assess the perceptions of the students regarding the effects of social contact with locals and with other visitors. Second, Mehrabian and Russell's (1974) typology of emotions was used to assess the emotions of students interviewed during the trip carried out. Eighteen items were used to measure the three dimensions – Pleasure (relaxed-bored; happy-unhappy; annoyed-pleased; satisfied-unsatisfied; melancholic-contented; and despairing-hopeful), Arousal (calm-excited; aroused-unaroused; dull-jittery; stimulated-relaxed; frenzied-sluggish; sleepy-wide awake) and Dominance (controlling-controlled; in control-cared for; influenced-influential; autonomous-guided; submissive-dominant; and awed-important). Each item was evaluated using a seven-point scale with separating bipolar descriptors (Soriano & Foxal, 2002). Third, in line with other studies (e.g. Eusébio & Carneiro, 2012), overall satisfaction with the trip was measured via a single item, using a seven-point scale ranging from 1 = "very dissatisfied" to 7 = "very satisfied". Finally, consistent with other studies (e.g. Eusébio & Vieira, 2013) an attitudinal approach was used to evaluate destination loyalty. Two items – intentions to return to the same destination and intentions to recommend it to family and friends – measured on a seven-point scale (ranging from 1 = "very unlikely" to 7 = "very likely"), were used. The last group of questions evaluates the socio-demographic profile (e.g. place of residence, age, marital status) of the students surveyed in this research.

In order to analyse the validity and reliability of the questionnaire, two approaches were used. First, a group of researchers in this domain of knowledge reviewed the questionnaire to analyse suitability, readability and ambiguity. Further, a pilot test was conducted with 15 university students, who had taken a leisure/recreation trip in the last three years. The inputs obtained in the pilot test were incorporated into the final version of the questionnaire.

Sampling approach and data collection

To segment the youth tourist market based on tourism activities carried out during a trip, a survey of university students was conducted at the University of Aveiro, located in the central region of Portugal. In 2013, 12,190 students from three areas of studies – social sciences, natural sciences and engineering, attended studies at this university. A stratified sampling approach, based on gender and area of study, was used to design the sample. A total of 440 university students (3.6% of the total population) were identified to be surveyed. In total, 399 valid questionnaires were obtained, corresponding to a response rate of 91%.

Finally, the questionnaire was administered over two weeks in May 2013. Taking into account the type of information required (personal data and perceptions), the questionnaires were completed during a class, after an explanation of their contents by researchers and always in the presence of researchers.

A total of 399 completed questionnaires were obtained. The sample was almost balanced in terms of gender (53.8% of the respondents were female and 46.1% male) and very young in terms of age (the average age was 21 years). The majority of the students interviewed were single (97.9%) and 63.9% were undergraduate students.

Data analysis

The SPSS software (Statistical Package for the Social Sciences version 21) was used to analyse the data. First, three Principal Component Analyses (PCAs), with a varimax rotation, were used to identify dimensions of travel motivations, interactions with locals and with other visitors, and effects of these interactions. Several indicators, such as: anti-image correlation matrix, communalities, Kaiser-Meyer-Olkin (KMO) test, Bartlett Test of Sphericity and Cronbach's alpha, were used to assess the quality of the PCA solutions obtained. The mean of each factor was obtained by calculating the average of the items included in the factor. In order to segment the students according to their tourism activities, a hierarchical clustering procedure with Squared Euclidean Distance as a similarity measure was used. Five agglomerative algorithms were used to develop clusters (single linkage, complete linkage, average linkage, centroid linkage and Ward's method). Ward's method was selected because it produced the best solution (the most meaningful, interpretable and distinguishable segments) when compared to other solution algorithms. The selection of the clusters identified was made based on the analysis of the dendrogram and of the agglomeration schedule. Finally, bivariate analyses were used to compare the clusters identified. Chi-square tests were employed to compare the clusters on qualitative variables (nominal or ordinal). ANOVA and Kruskal-Wallis tests were used to compare the clusters on quantitative variables. When ANOVA assumptions were not met the Kruskal-Wallis test was used. In the case of the ANOVA, Sheffe Post Hoc tests were used to identify specific differences between the clusters.

Results and discussion

In order to characterize the youth market analysed, first the profile of the sample will be presented regarding travel motivations, travel behaviour, interactions with locals and other visitors, effects of interactions perceived by tourists, emotions, satisfaction and loyalty. Second, the results of the cluster analysis which was undertaken to identify homogenous groups of youth tourists regarding tourism activities carried out during a trip, will be discussed. Finally, this section ends with the profile of the homogenous groups identified.

Travel motivations

Consistent with other research in this field (e.g. Eusébio & Carneiro, 2012; Morgan & Xu, 2009), "be in a different environment" (mean = 5.70), "learn new things" (mean = 5.59), "carry out different activities" (mean = 5.52), "view the scenery" (mean = 5.50) and "get to know other cultures" (mean = 5.27), emerged as the most important travel motivations of the respondents (Table 1).

In order to group the items used to assess travel motivations, a PCA was performed (Table 1). Four items were excluded from this analysis due to their low communalities. Four dimensions of motivations emerged, labelled as follows: F1: *Knowledge*; F2: *Challenge*; F3: *Escape* and F4: *Novelty*. The means of these factors confirm the results mentioned above in terms of items, revealing that F4: *Novelty* (mean = 5.64) and F1: *Knowledge* (mean = 5.08) are the most important dimensions. Moreover, the structure of factors extracted was consistent with some published studies that analysed the travel motivations of the youth market (e.g. Eusébio & Carneiro, 2012).

Table 1
PCA of students' travel motivations

Motivation[a)]	Mean	Communalities	F1: Knowledge	F2: Challenge	F3: Escape	F4: Novelty
Interact with local residents	4.59	0.686	0.768			
Get to know other cultures	5.27	0.643	0.758			
Meet other people	4.97	0.540	0.597			
Carry out different activities	5.52	0.514	0.544			
Expand knowledge	5.07	0.500	0.531			
Have an experience that involves thrills, take risks	3.81	0.637		0.766		
Develop physical abilities	3.55	0.631		0.741		
Learn more about oneself	4.00	0.599		0.728		
Have an experience that involves surprise	4.63	0.563		0.532		
Be in a calm environment	4.51	0.707			0.797	
Be close to nature	4.78	0.718			0.775	
Rest	5.11	0.564			0.714	
View the scenery	5.50	0.667			0.645	
Be in a different environment	5.70	0.707				0.810
Learn new things	5.59	0.702				0.739
Variance explained (%)			18.62	16.09	15.15	12.27
Comulative variance (%)			18.62	34.71	49.86	62.13
Cronbach's alpha			0.789	0.743	0.741	0.667
Mean			5.08	3.97	4.98	5.64
KMO = 0.884 Bartlett's test of sphericity = 1943.252 (p = 0.000)						

[a)] 7-point Likert scale from 1 "strongly disagree" to 7 " strongly agree".

The four factors obtained explained 62.13% of the total variance of the data. The communalities of all items included in this analysis were equal to or higher than 0.50 and all factors had relatively high reliability coefficients, ranging from 0.667 (in a factor with only two items) to 0.789. Moreover, Bartlett's Test of Sphericity (1943.252 with p-value = 0.000) suggested the presence of correlations among the variables. The Kaiser–Meyer–Olkin (KMO) statistic of 0.884 revealed a good factor solution, indicating the data's suitability to perform this analysis.

Interactions with locals and other visitors

In general, as suggested in several studies (e.g. Eusébio & Carneiro, 2012; Jaworski, Ewen, Thurlow & Lawson, 2003; Kastenholz *et al.*, 2013, Pearce, 1998; Reisinger, 2009; Sinkovics & Penz, 2009; Yoo & Sohn, 2003) the social interactions in tourism is frequently brief. In the majority of the trips, the

tourists usually stay at the destination for short periods, limiting the opportunities to develop strong relationships with locals and with other tourists. The results presented in Table 2 corroborate the results obtained in previous studies, revealing that the frequency of interaction, both with locals and with other visitors, is relatively low (Eusébio & Carneiro, 2012). In this study, higher interaction (greater than 4.00) occurred with residents in food and beverage establishments (mean = 4.32) and in the street (mean = 4.18), with other visitors in discos, clubs and bars (mean = 4.10) and with residents also in discos, clubs and bars (mean = 4.07). However, the frequency of interaction during events and while sightseeing was particularly low (lower than 3.50). Moreover, types of interaction with residents where there was closer contact (e.g. "was invited to local residents' home", "shared meals with residents" and "exchanged gifts with residents) were very limited (mean lower than 3.20).

Table 2
PCA of the students' interactions with locals and with other visitors

Frequency and types of the interactions[a]	**Mean**	**Communalities**	**F1: Socialization with residents**	**F2: Social contact with other visitors in tourism facilities and in the street**	**F3: Socialization with other visitors**	**F4: Social contact with residents in tourism facilities**	**F5: Social contact in cultural contexts**	**F6: Social contact with residents to obtain information**
Was invited to local residents' home	2.28	0.750	0.844					
Shared meals with residents	2.29	0.731	0.795					
Exchanged gifts with residents	1.84	0.668	0.745					
Practised sports with residents	2.17	0.532	0.679					
Participated in celebrations with residents	3.17	0.723	0.638					
Interaction with other visitors in food and beverage establishments	3.87	0.706		0.743				
Interaction with other vistors in other commercial establishments	3.42	0.653		0.722				
Interaction with other visitors in nature places	3.76	0.730		0.715				
Interaction with other visitors in discos, clubs and bars	4.10	0.766		0.681				
Interaction with other visitors in the street	3.21	0.485		0.497				
Exchanged information about the place with other visitors	3.19	0.615			0.812			
Had the opportunity to get to know other visitors	3.86	0.734			0.748			
Shared meals with other visitors	3.62	0.675			0.720			

Table 2 **continued**

Frequency and types of the interactions[a]	**Mean**	**Communalities**	**F1: Socialization with residents**	**F2: Social contact with other visitors in tourism facilities and in the street**	**F3: Socialization with other visitors**	**F4: Social contact with residents in tourism facilities**	**F5: Social contact in cultural contexts**	**F6: Social contact with residents to obtain information**
Participated in recreational activities with other visitors	3.23	0.615			0.678			
Interaction with residents in discos, clubs and bars	4.07	0.762				0.820		
Interaction with residents in food and beverage establishments	4.32	0.732				0.768		
Interaction with residents in other commercial establishments	3.85	0.631				0.554		
Interaction with residents in events	2.82	0.711					0.740	
Interaction with other visitors in events	2.94	0.709					0.661	
Interaction with residents at monuments	2.81	0.700					0.625	
Interaction with other visitors at monuments	3.03	0.726					0.609	
Interaction with residents in the street	4.18	0.627						0.701
Interaction with residents in nature places	3.53	0.659						0.603
Obtained information about this place from local residents	3.78	0.435						0.526
Variance explained (%)			14.31	13.18	11.69	9.73	9.44	9.22
Comulative variance (%)			14.31	27.49	39.18	48.91	58.36	67.57
Cronbach's alpha			0.858	0.823	0.839	0.779	0.791	0.607
Mean			2.50	3.68	3.33	4.10	2.93	3.83
KMO = 0.846 Bartlett's test of sphericity = 3696.062 (p = 0.000)								

[a] 7-point type Likert scale from 1 "very rarely" to 7 "very frequently".

To identify interaction dimensions, a PCA with Varimax rotation was performed (Table 2). The results from this analysis (KMO, Bartlett's test of sphericity, communalities, factor loadings, total variance explained and Cronbach's alpha) reveal that the PCA meets the requirements specified for this type of analysis.

Six factors emerged with eigenvalues greater than one, explaining 67.57% of the total variance in the sample (Table 2). The first (F1: *Socialization with residents*), captures interactions with residents where

there is close contact (e.g. "was invited to local residents' home", "shared meals with residents"). The second factor (F2: *Social contact with other visitors in tourism facilities and in the street*), represents the frequency of interaction with other visitors in various tourism facilities (e.g. food and beverage establishments, discos, clubs and bars) and in the street. The third factor (F3: *Socialization with other visitors*) captures the interaction experiences with other visitors where there is close contact (e.g. "exchanged information about the place with other visitors", "shared meals with other visitors"). The fourth factor (F4: *Social contact with residents in tourism facilities*) contains items related to the frequency of interaction with locals in tourism facilities (e.g. discos, clubs and bars and food and beverage establishments). The fifth factor (F5: *Social contact in cultural contexts*), captures the frequency of interactions, both with locals and other visitors, at events and monuments. The last factor (F6: *Social contact with residents to obtain information*) reveals the interactions of youth tourists with locals to increase their knowledge about the tourism destination visited.

Globally, the analysis of the factors' mean clearly shows that the youth tourists interviewed interacted more with residents in tourism facilities and to obtain information than in other contexts. Moreover, the interactions in cultural contexts, both with locals and with other visitors, as well as the social contact associated with more close interactions with residents (F1: *Socialization with residents*) were very limited, corroborating the studies that have revealed low host-tourism interactions in tourism (e.g. Kastenholz *et al.*, 2013; Reisinger, 2009; Yoo & Sohn, 2003).

Effects of the interactions with locals and other visitors perceived by youth tourists

Literature published about social contact in tourism (e.g. Reisinger & Turner, 2003) highlights the importance of the tourist-host interaction to the enhancement of tourists' and hosts' attitudes towards each other. Simultaneously, given that the tourist-host contact is frequently superficial, the tourists' and hosts' perceptions of each other may be highly distorted. In this context, it is important to analyse the perceptions of the youth tourists who were surveyed regarding the effects of their interactions with locals and other visitors. Table 3 shows the results of a PCA carried out to identify the dimensions of the effects of interactions. The PCA meets all the requirements specified for this type of analysis. KMO was 0.831, the Bartlett's test was 1380.671 (p-value = 0.000), all communalities were higher than 0.55 and all factor loadings were higher than 0.7. In terms of reliability the two factors obtained had a Cronbach's alpha higher than 0.70 and the two factors explained 68.54% of the total variance of the sample. From this analysis two factors emerged: F1: *Positive effects* and F2; *Negative effects*. Despite the limited social contact reported by the students interviewed, the positive effects perceived were greater than the negative effects. The students reported mainly that the interaction contributed to their "cultural enrichment" (mean = 4.69), "development of positive attitudes" (mean = 4.60), "development of respect and understanding" (mean = 4.53) and "improved ability to interact" (4.50). Regarding the negative effects perceived, "development of superficial relationships" (mean = 2.74) was the most perceived. These results revealed that the benefits perceived outweigh the costs and, as pointed out by Reisinger and Turner (2003), the interaction can be perceived as rewarding. In this case, the interaction in the future will tend to be higher (Reisinger & Turner, 2003).

Table 3
PCA of the students' perceptions of the effects of their interactions with locals and with other visitors

Effects of interaction[a]	Mean	Communalities	F1: Positive effects	F2: Negative effects
Development of respect and understanding	4.53	0.776	0.866	
Development of positive attitudes	4.60	0.752	0.865	
Improved ability to interact	4.50	0.719	0.845	
Cultural enrichment	4.69	0.659	0.812	
Reduction of prejudice	3.65	0.613	0.702	
Development of feelings of inferiority	1.79	0.718		0.847
Increased stress	1.95	0.659		0.810
Development of superficial relationships	2.74	0.587		0.727
Variance explained (%)			42.79	25.75
Comulative variance (%)			42.79	68.54
Cronbach's alpha			0.886	0.724
Mean			4.40	2.17
KMO = 0.831 Bartlett's test of sphericity = 1380.671 (p = 0.000)				

[a)] 7-point Likert scale from 1 "strongly disagree" to 7 " strongly agree".

Emotions

Given that the emotional aspects of consumption play an important role in consumer choice behaviour (Goossens, 2000), the emotions during the trip carried out by the students were assessed through the typology of emotions of Mehrabian and Russell (1974). The three dimensions identified (Pleasure, Arousal and Dominance – PAD) had a high reliability level (Cronbach's alpha for all dimensions is greater than 0.75). The results in Table 4 clearly show that pleasure emotions were the most while dominance emotions were the least experienced. However, the three types of emotions analysed were felt with some intensity since their average (on a seven-point scale) was higher than four. The students interviewed felt happy and satisfied with the leisure trip carried out (Pleasure dimension). Moreover, they also felt excited, stimulated, alert and active (Arousal dimension). Finally, with less intensity, the students also felt in control and free to act during the trip undertaken (Dominance dimension).

Table 4
Students' emotions with the trip carried out

Emotions	Mean	Std. Deviation	Cronbach's alpha
F1: Pleasure	5.79	1.158	0.884
Unhappy-Happy	6.25	1.026	
Unsatisfied- Satisfied	5.84	1.590	
Melancholic-Contented	5.86	1.453	
Bored-Relaxed	5.68	1.508	
Despairing-Hopeful	5.22	1.490	
Annoyed-Pleased	5.93	1.498	
F2: Arousal	5.42	1.035	0.776
Calm-Excited	5.75	1.464	
Relaxed-Stimulated	4.95	1.779	
Dull-Jittery	5.76	1.497	
Sleepy-Wide Awake	5.47	1.434	
Unaroused-Aroused	5.43	1.468	
Sluggish-Frenzied	5.13	1.442	
F3: Dominance	4.67	1.001	0.783
Controlled-Controlling	4.12	1.388	
Influenced-Influential	4.26	1.280	
Guided-Autonomous	5.13	1.473	
Awed-Important	4.84	1.433	
Submissive-Dominant	4.47	1.252	
Cared For- In Control	5.18	1.523	

Identification of youth tourist segments based on tourism activities

The youth tourism market is heterogeneous concerning tourism activities (Eusébio & Carneiro, 2012; Frändberg, 2010; Heung & Leong, 2006; Kim & Jogaratnam, 2003; Ryan & Zhang, 2007; Thrane, 2008; Xu *et al.*, 2009). In this context, a segmentation study of the youth tourism market based on tourism activities was performed. A four-cluster solution was retained, by examining the agglomeration schedule, dendrogram and group sizes (Table 5). The results of chi-square tests concerning tourism activities clearly reveal significant differences between clusters. Based on these differences the clusters were labelled as: cluster 1 – *culture lovers*; cluster 2 – *fun lovers*; cluster 3 – *sun and beach lovers* and cluster 4 – *nature lovers*. Visiting theatres, museums, historic sites and monuments and attending cultural events were trip activities more carried out by *culture lovers* than by other clusters. *Fun lovers* tended to carry out a large range of activities and were more likely to perform recreational and entertainment activities (e.g. visiting amusement parks, discos pubs and bars, gardens, shopping centres and casinos) than other segments. The *sun and beach lovers* cluster was the cluster that was most likely to go to the beach when compared with other clusters. Finally, *nature lovers* were more likely to carry out activities that provide close contact with nature (e.g. visiting protected areas, observing nature).

In order to further identify the profile of the four clusters obtained, each cluster was cross-tabulated with external variables, using Chi-square, ANOVA, Scheffe and Kruskal-Wallis tests as stated in the methodology section. Socio-demographic characteristics, travel motivations, perceived effects of the interaction, emotions felt, global satisfaction, loyalty and other travel behaviour variables (e.g. familiarity with the destination, travel group, type of destination and country of destination) were the variables used (Tables 6 and 7).

Table 5
Profile of clusters regarding tourism activities (Chi-square tests)

Profile of clusters - tourism activities carried out	**Total sample** (N = 396) (100%)	**Cluster 1 Culture lovers** (N = 82) (20.7%)	**Cluster 2 Fun lovers** (N = 132) (33.3%)	**Cluster 3 Sun and beach lovers** (N = 116) (29.3%)	**Cluster 4 Nature lovers** (N = 66) (16.7%)	**Chi-square tests**
	% by column	% by column	% by column	% by column	% by column	Chi-square (p-value)
Golf	1.8	0.0	1.5	4.3	0.0	[a]
Visiting theatres	13.6	**28.0**	16.7	7.8	0.0	29.32(0.00)
Visiting amusement parks	32.6	23.2	**44.7**	**40.5**	6.1	36.59(0.00)
Visiting museums	40.2	**96.3**	41.7	11.2	18.2	161.57(0.00)
Visiting discos, pubs and bars	51.5	53.7	**61.4**	55.2	22.7	27.80(0.00)
Visiting gardens	54.5	**75.6**	**86.4**	19.8	25.8	147.03(0.00)
Visiting historic sites	53.0	**92.7**	**65.2**	24.1	30.3	112.11(0.00)
Visiting shopping centers	42.7	50.0	**65.9**	30.2	9.1	9.61(0.02)
Visiting casinos	12.6	4.9	**22.0**	12.9	3.0	20.43(0.00)
Visiting protected areas	37.9	12.2	**62.1**	6.9	**75.8**	143.52(0.00)
Visiting historic villages	25.0	18.3	**34.8**	6.9	**45.5**	43.80(0.00)
Going to the beach	52.0	12.2	**59.8**	**68.1**	57.6	68.19(0.00)
Bicycle riding	13.9	13.4	12.9	7.8	**27.3**	13.66(0.00)
Attending religious events	5.8	4.9	8.3	5.2	3.0	[a]
Attending fairs and exhibitions	23.2	25.6	**31.1**	15.5	18.2	9.61(0.02)
Observing nature	51.8	25.6	**81.1**	25.9	**71.2**	109.01(0.00)
Practising water sports	21.7	2.4	**27.3**	25.9	**27.3**	22.69(0.00)
Walking on trails	25.3	13.4	**43.9**	5.2	**37.9**	60.86(0.00)
Camping	14.9	3.7	12.1	10.3	**42.4**	50.31(0.00)
Visiting monuments	45.2	**82.9**	**53.0**	23.3	21.2	88.23(0.00)
Attending cultural events	28.5	**40.2**	34.8	21.6	13.6	18.05(0.00)

Note: only the values corresponding to people who said "yes" are presented.

[a] The assumptions of chi-square test were not observed.

Profile of the youth tourists segments identified

Cluster 2 – *fun lovers* is the largest cluster identified (33.3% of the total sample), while cluster 4 – *nature lovers* (representing only 16.7% of the sample) is the smallest cluster. Several differences among the clusters in travel motivations, frequency and nature of interactions and effects of interactions were found. The *culture lovers* and the *fun lovers* were more motivated by novelty and increasing their knowledge when compared with other clusters, while for *nature lovers* and *fun lovers,* escape activities, such as being in a calm environment or being close to nature, were more important than for the other two clusters.

As far as interaction with locals and with other visitors is concerned, the clusters identified revealed different profiles (Table 6). The *fun lovers* were those who interacted most in almost all contexts, both with locals and with other visitors. However, in cultural contexts, the *culture lovers* were, conjointly with the *fun lovers*, those who reported a higher frequency of interaction. Moreover, regarding the interaction effects perceived, for all clusters identified the positive effects were higher than the negative effects. However, the *fun lovers* was the segment that reported more positive effects and the *sun and beach lovers* were those who reported more negative effects. Comparing these results with the frequency of interaction, the *fun lovers* – those reporting more satisfaction with interaction – were those who interacted most in almost all contexts, while the *sun and beach lovers* were the ones who interacted least. Thus, a relationship between frequency of interaction and effects of interaction seems to exist, corroborating previous literature (e.g. Reisinger & Turner, 2003).

Regarding other trip characteristics (Table 7), statistical differences among the clusters were observed in terms of familiarity with the destination, travel group, type of destination and country of destination. For *culture lovers*, as expected, the familiarity with the destination (repeat visitation) was lower, because these visitors are mainly motivated by novelty and by increasing knowledge. Moreover, the city was the type of destination more visited by young tourists of this cluster and they were more likely to carry out international trips, when compared with the other clusters. The *sun and beach lovers* revealed a higher familiarity and the beach, as expected, was the type of destination most sought. The *nature lovers* emerged as the segment that most frequently travelled with family, and that was most likely to carry out more domestic trips, mainly to the countryside.

Table 6
Profile of clusters (ANOVA and Kruskal-Wallis tests)

Profile of clusters	**Total sample** (N = 396) Mean	**Cluster 1 Culture lovers** (N = 82) Mean	**Cluster 2 Fun lovers** (N = 132) Mean	**Cluster 3 Sun and beach lovers** (N = 116) Mean	**Cluster 4 Nature lovers** (N = 66) Mean	**ANOVA** F value (p-value)	**Kruskal-Wallis Test** χ^2 (p-value)
Motivations							
F1: Knowledge	5.08	**5.36**	**5.38**	4.68	4.87		24.26(0.00)
F2: Challenge	3.97	3.68	4.04	3.98	4.17	1.97(0.12)	
F3: Escape	4.98	4.46[1]	**5.30**[2]	4.77[1]	**5.32**[2]	11.40(0.00)	
F4: Novelty	5.65	5.76[1, 2]	**5.92**[2]	5.39[1]	5.42[1]	5.76(0.00)	

Table 6 **continued**

Profile of clusters	Total sample (N = 396) Mean	Cluster 1 Culture lovers (N = 82) Mean	Cluster 2 Fun lovers (N = 132) Mean	Cluster 3 Sun and beach lovers (N = 116) Mean	Cluster 4 Nature lovers (N = 66) Mean	ANOVA F value (p-value)	Kruskal-Wallis Test χ^2 (p-value)
Frequency and nature of interactions							
F1: Socialization with residents	2.50	2.21	2.76	2.48	2.40		4.87(0.18)
F2: Social contact with other visitors in tourism facilities and in the street	3.69	3.30[1]	**4.04**[2]	3.66[1, 2]	3.46[1, 2]	4.06(0.01)	
F3: Socialization with other visitors	3.30	3.20[1, 2]	**3.77**[2]	3.11[1, 2]	3.02[1]	4.58(0.00)	
F4: Social contact with residents in tourism facilities	4.11	4.17[1, 2]	**4.37**[2]	4.00[1, 2]	3.64[1]	2.84(0.04)	
F5: Social contact in cultural contexts	2.94	**3.31**[2]	**3.30**[2]	2.47[1]	2.43[1]	9.00(0.00)	
F6: Social contact with residents to obtain informations	3.84	3.69	**4.14**	3.56	3.93	3.17(0.02)	
Effects of the interactions							
F1: Positive effects	4.41	4.61	**4.82**	4.03	3.97		19.55(0.00)
F2: Negative effects	2.17	2.18[1, 2]	2.18[1, 2]	**2.42**[2]	1.73[1]	4.43(0.00)	
Emotions							
F1: Pleasure	5.79	5.79	5.90	5.55	6.00		6.78(0.08)
F2: Arousal	5.41	5.49	5.45	5.27	5.48		0.58(0.90)
F3: Dominance	4.67	4.70	4.69	4.59	4.73		2.68(0.44)
Length of stay	9.50	7.65	12.65	8.34	7.53	1.64(0.18)	
Number of previous visits	3.94	3.06	3.89	4.59	3.40	0.71(0.55)	
Overall satisfaction	6.10	6.16	6.11	6.04	6.08	0.28(0.84)	
Likelihood of repeating the trip	5.42	5.22	5.47	5.31	5.77	1.76(0.16)	
Likelihood of recommending the trip	5.87	6.01	5.93	5.70	5.89	1.08(0.36)	
Socio-demographic profile: age	21.42	21.74	21.30	21.00	21.98	1.84(0.14)	

[1,2] Existence of statistical significant differences between the clusters. The number of the superscript indicates the group to which each cluster belongs (p-value of 5%).

In terms of socio-demographic profile (Tables 6 and 7) only statistical differences regarding gender were observed, revealing a higher proportion of females in the *fun lovers* segment, when compared with other clusters. Conversely, *sun and beach lovers* was the cluster encompassing a higher proportion of males. Additionally, no statistical differences among the clusters regarding emotions felt, overall satisfaction and loyalty to the destination visited were found. Pleasure emotions were the most felt by all clusters, while the dominance emotions were the least experienced (Table 6). All the segments revealed a high degree of satisfaction with the trip (a mean higher than six on a seven-point scale) and a strong intention to recommend the destination to friends and relatives. Regarding loyalty to the

destination it is important to notice that all segments reported a greater likelihood of recommending the trip than of repeating the trip.

Table 7
Profile of clusters (Chi-square test)

Profile of clusters - socio-demographic characteristics and travel behaviour	Total sample (N = 396) (100%)	Cluster 1 Culture lovers (N = 82) (20.7%)	Cluster 2 Fun lovers (N = 132) (33.3%)	Cluster 3 Sun and beach lovers (N = 116) (29.3%)	Cluster 4 Nature lovers (N = 66) (16.7%)	Chi-square tests
	% by column	% by column	% by column	% by column	% by column	χ^2 (p-value)
Travel behaviour						
Familiarity*						
First visit	63.8	**76.8**	68.9	51.3	59.1	15.95(0.00)
Travel group*						
Alone	7.4	11.1	9.3	4.4	4.5	4.58(0.21)
With family	40.5	24.7	43.9	43.0	**48.5**	11.09(0.01)
With friends	53.2	59.3	45.8	55.3	56.9	4.63(0.20)
With other people	9.7	12.3	13.8	6.1	4.6	6.74(0.08)
Package tour	24.3	18.3	23.5	28.7	25.8	2.94(0.40)
Type of destination						
Beach	43.0	12.2	40.2	**69.3**	41.3	
Countryside	19.2	2.4	23.6	11.4	**46.0**	147.24(0.00)
City	37.8	**85.4**	36.2	19.3	12.7	
Country of destination						
Portugal	48.2	14.8	45.5	**57.8**	**78.5**	64.64(0.00)
Foreign country	51.8	**85.2**	54.5	42.2	21.5	
Socio-demographic characteristics						
Gender						
Male	46.1	45.0	37.7	**57.0**	45.3	9.22 (0.03)
Female	53.9	55.0	**62.3**	43.0	54.7	
Place of residence (type)						
Village	17.3	17.7	15.6	14.7	24.6	
Town	20.5	11.4	22.1	22.9	24.6	9.18(0.16)
City	62.1	70.9	62.3	62.4	50.8	
Education leve						
Undergraduate students	64.1	61.0	70.5	59.5	62.6	3.75(0.29)
Master and PhD students	35.9	39.0	29.5	40.5	36.4	

*Only the values corresponding to people who said "yes" are presented.

Conclusions and implications

This study provides relevant contributions, not only because it highlights the pertinence of adopting activity-based segmentation in the youth market but as it also reveals the existence of important relationships between activities and important tourism experience dimensions. The findings suggest that the youth tourism market can be divided into four homogenous segments based on trip activities: *culture lovers*, *fun lovers*, *sun and beach lovers* and *nature lovers* (hypothesis 1 was verified). The profiles of these segments revealed statistically significant differences in gender, travel motivations, interactions with locals and with other visitors, perceived effects of the interaction, travel group, type of trip (domestic or international) and type of tourism destination. These results partially confirm hypothesis 2 and contribute significantly to an improved understanding of each youth tourism segments and consequently to better targeted market actions.

The findings of this research have some important theoretical and practical implications. One of the theoretical implications, as suggested by the literature (e.g. Kim & Jogaratnam, 2003; Ryan & Zhang, 2007), is related to the relationship between activities carried out during a trip and both gender and travel motivations. The results of this study corroborate other tourism research, showing that tourism activities are significantly related to both gender and travel motivations. Another important theoretical implication is related to social contact and tourism activities. The research in this domain is very scarce. The results obtained show that interaction with locals and with other visitors is also related to tourism activities carried out during a trip. Moreover, the segments that reported a greater interaction were those that perceived more benefits of these interactions. Furthermore, another important theoretical implication is associated with the results obtained regarding emotions experienced by the segments, where no statistical differences among clusters were detected, with all groups of young tourists presenting considerably high levels of arousal and even higher levels of pleasure. Finally, an important conclusion of this research that reinforced the results obtained in other studies (e.g. Mehmetoglu, 2007) was the few statistical differences among the clusters regarding socio-demographic characteristics, revealing that developing segmentation strategies based only on socio-demographic variables is not useful for all contexts.

Regarding practical implications, the results obtained highlight that different segments in terms of trip activities require different marketing strategies. Findings suggest that it would be relevant to create trips to cities located in foreign countries, designed for *culture lovers* youth visitors, encompassing cultural activities that permit an increase of knowledge (e.g. opportunities to attend cultural events, visits to historic sites, museums and monuments) and offering opportunities of social contact with residents and other visitors in cultural contexts (e.g. monuments and events). It would also be important, for example, to develop domestic trips to the countryside, specially designed for *nature lovers* youth visitors travelling with friends or family, including activities that promote contact with nature in calm destinations (e.g. visits to protected areas, activities of nature observation, visits to historic villages, camping) which also permit an escape from usual environments. Hence, those responsible for the development of tourism destinations where the youth market is a target market may use the clusters' profile identified in this research in order to adjust the supply of tourism products and to choose the best communication and distribution channels.

Despite the theoretical and practical relevance of the results obtained in this research, some limitations should be reported. First, a time gap between the trip carried out and the administration of the questionnaire may have influenced the results. Moreover, the scope of this study is limited to one group of the youth tourism market (university students). Therefore, cross-national studies are recommended. Additionally, given the relevance of the youth tourism market and the limited research about the topics analysed, further research is required, for example, in order to better understand the needs and wants of this market when travelling. Longitudinal studies are also important to analyse differences in the youth tourist segments identified, based on tourism activities across time on travel motivations, interactions, emotions and other travel behaviour variables. Finally, the approach used in this research could also be usefully applied in other tourism markets providing valuable comparative information.

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