

## VISITOR SEGMENTATION FOR PROTECTED NATURAL AREAS USING PHYSICAL ACTIVITY PRACTISED. A CASE OF STUDY

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Synopsis:

Identifying visitor characteristics is essential for a better impact management in protected areas. Visitor behaviour, preferences, motivation and particularly activities meanwhile visiting protected areas are baseline information required. In this sense, benefits of segmentation demand have been widely demonstrated. The purpose of this article is to analyse whether activities, and especially physical activities, could be considered as an optimal demand segment in natural areas. Structured surveys were administered to 1600 visitors of Alt Pirineu Natural Park (Spain) in order to study the visitor activities and their behaviour, preferences and motivations

Abstract:

### AIM OF THE INVESTIGATION

Identifying visitor group characteristics is essential for better management in protected areas. The purpose of this article is to analyse whether activities, and especially physical activities, can be considered as an optimal demand segment in protected natural areas in order to help sport use management in these areas.

### THEORETICAL BACKGROUND

Protected natural areas are very important settings for a wide range of recreational, physical and sport activities that enhance individual health and wellbeing, providing opportunities for social interaction and generating economic benefits associated with on- and off-park visitor services and tourism activity (Manning, 1999). Managing protected natural areas requires gathering and monitoring information about visitor motivations, expectations and experiences (Pouta, Siavänen & Neuvonen, 2004). Importantly, protected area managers must meet visitor expectations without compromising or neglecting the natural and cultural heritage resources, which are the primary reason for protecting the site. This balance is often highly contested and depends on

individual or group values with different interpretations of an appropriate and priority use. The benefits of typological studies or segmentation of demand for planning and managing protected natural areas have been widely demonstrated (Frochot, 2005; Farías, 2011). However, the application of such studies may prove problematic at times, particularly when one attempts to identify or replicate the segments ex post in order to keep track of them periodically or to design management strategies. Our proposal introduces a particular type of market segmentation based on physical activity practiced in natural areas, which is easier to identify and replicate than other segments and respects the main principles of market segmentation (Kotler, 1994; Dolnicar, 2004).

#### METHODOLOGY

Structured surveys were administered to 1600 visitors of the Alt Pirineu Natural Park (Spain). The questionnaire was distributed proportionally between 16 controlled accesses or sampling points according to the number of visitors using them at the time when the fieldwork was carried out. Stratified sampling was based on available data on use patterns in the park, derived from the number of visitors in the same period, recorded/monitored by pressure sensors. The field work was carried out during a calendar year in order to maximize the seasonal representativeness of the sample. Peak visiting periods were recorded and consequently the highest number of interviews were carried out at that time.

A descriptive and multivariate statistical analysis (multiple discriminant analysis [MDA]) was made using the PASW Statistics Processor (SPSS Statistics 18). Firstly, it was applied to the whole sample (1600 visitors), including all recreational and physical activities studied: staying at the place of arrival, recreational hiking, hiking, mountaineering, mountain biking, snow activities, mushroom-picking, off-road driving with a motorbike or quad, and other activities. Secondly, it was applied only to the visitors who did moderate or high-level exercise during their visit to the park, referred to in this study as “active visitors”. Active visitors include those performing hiking, mountaineering, mountain biking, snow activities and mushroom-picking. Finally, the last stage of analysis was only performed within the “active visitors” groups. A  $\chi^2$  test and a Spearman rank correlation were used for generic differentiation of the active visitor groups.

#### RESULTS

The results obtained in the current fieldwork revealed that about 62.4% of visitors usually practice some physical activities during their visit to the protected natural area. Similar values were obtained in previous studies carried out in protected areas of Spain and Europe (Múgica, 1993; Muñoz, 2008; Farías, 2011; Rodríguez & Kastenholtz, 2010; Tamme & Ravis, 2011).

The results obtained in the application of MDA demonstrated that segmentation of physical activity groups could be considered as a good option for segmenting demand. Whereas the results obtained in the MDA on the whole visitor sample (1600 cases) showed that only 51.3% of the grouped cases are correctly classified (including those who stayed at the place of arrival [34.8%, 63 cases of 181], recreational hiking [34.6%, 100 cases of 289] and off-road driving [49.5%, 64 cases of 131]), the figure increased to 78.1% when MDA was applied only to visitors doing physical activities with a moderate or high

level of exercise (999 cases). Of 90 variables considered in the second MDA, 33 were associated with group segmentation: socioeconomic profile, 10 variables of 16 (62.5%); frequency of visits, 2 of 5 (40%); transport access, 2 of 6 (33.3%); length of stay in the park and the area, 2 of 5 for both (40%); accommodation, 5 of 12 (41.6%); information about the park, 1 of 10 (10%); motivation, 6 of 27 (22.2%); and trail type visited, 2 of 4 (50%).

## DISCUSSION AND IMPLICATIONS

Although a deeper future analysis is necessary to corroborate the data obtained in this study, the results found in this work are a good starting point for the consideration of physical activity as an optimal segment demand in protected natural areas.

Segmentation based on physical activities may also have additional advantages: 1) it may be easier to implement new programmes of awareness-raising, information, advertising or promotion for these particular segments; 2) the information may be used to contact associations or federations that promote and also often regulate protected natural areas because of their expertise (Ariño, 2008); and 3) the segments of demand may be related to or associated with specific environmental impacts and it may therefore be easier to publicise and design tailor-made programmes to minimize environmental impacts (Pickering, Hill, Newsome & Leung, 2010).

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