360º INSTITUTIONAL PROJECT

HOW ACTIVE ARE PEOPLE IN PNA? THE INFLUENCE OF VISITOR'S PROFILE, PREFERENCES AND TRIP CHARACTERISTICS ON THE LEVEL OF PHYSICAL ACTIVITY. CATALONIA – SPAIN

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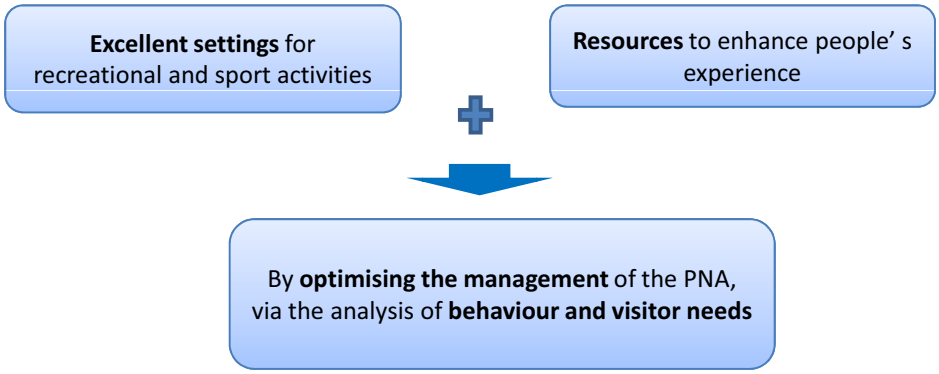
with the support of all research groups of INEFC – Lleida. Spain
GREJE, GISEAFE, GRID, DECUBIEF, DICFE, MOVIMENT HUMÀ AND SISTEMES COMPLEXOS

1. Background

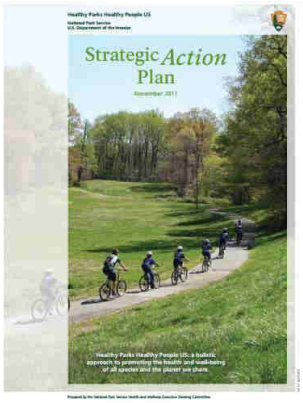
Physical activities in protected natural areas

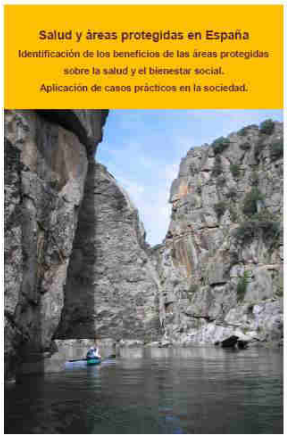
- **Protected Natural Areas (PNA) can contribute to promote physical activity levels (PA)** and subsequently improve the health and wellbeing of visitors (Bedimo-Rung, Nowen and Cohen, 2005; Cohen et al., 2007; Librett, Henderso, Godbey and Morrow, 2007; Boyles and others , 2011).



1. Background

Initiatives





Although there are some interesting initiatives which that PNA visits can **encourage physical activity** (PA) improving the **health** and **wellbeing** of visitors **there are a lack of information to help managers to work around this field, specially in EU and Spain**

2. Aim of the study

The purpose of this study was to:

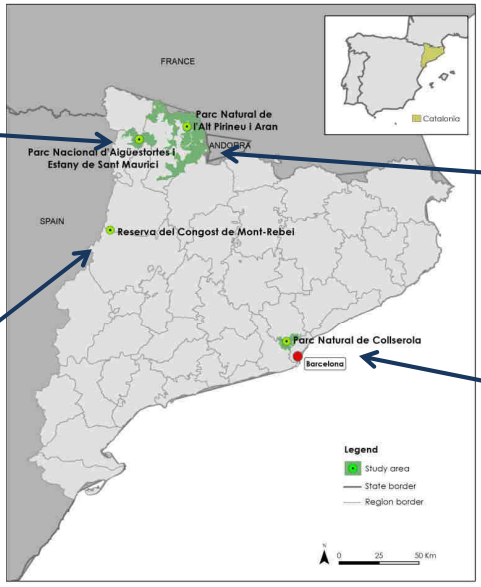
- ✓ Examine the influence of visitors characteristics (i.e., socio-demographics, recreational behavior, etc.) on their physical activity intensity (MET) in order to define strategies that help managers to promote physical activity use of Natura 2000 areas

The principal objectives in this study were:

- ✓ Segment visitors according to the intensity of PA did during their visit in the PNA
- ✓ Examine the influence of visitor's profile, preferences and trip characteristics on segment membership
- ✓ Provide a series of constructive management implication of research findings

3. Methodology

Aigüestortes National Park



Alt Pirineu Natural Park

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Serra de Collserola Natural Park

3. Methodology

Questionnaire

- **Sample:** 480 on-site structured interviews. 120 for each PNA
- **Time period :** May to Juny 2017
- **Access points and work days:** one by PNA on Saturday and Sunday

Dimensions	Variables
Socio- demographic profile	Place of residence
	Age
	Gender
	Level of education
	Occupation
	Level of knowledge Status protection
Visiting behavior or trip preferences	Group composition
	Access to the Park
	Frequency of visit
	Decision moment to select trail or area to visit
	Length of visit
	Number of member per group
Motivation, preferences and other questions	Motivations
	Benefits
	Heath perception
	ClassAF

Table 1. Dimensions and variables considered

4. Results

General characteristic of visitors

Socio-demographics

- Majority from **Barcelona province** (57.9%) although PNA situated in different locations
- Highest proportion of **male, but not in excess** (55%)
- Middle to senior **age** (65.2% between 31 to 60 years old)
- **High level of Education** (56% tertiary education)
- Employers (44.5%) and the 81.9% know the status of protection of the area

Trip characteristics

- Access to the Park by **car (55.6%)**
- **53.1% repeated visitors** (more than four time during the last two years)
- Staying in the PNA around **7 hours**
- Usually accompanied with a friends (36.5%) or **partner (26.5%). Average 6 person per**

4. Results

Segmentation procedure

- Compendium of Physical Activities (PAs) and MET consumption (Ainsworth et al., 2000)
  Sedentary (≤ 1.5 MET); Light (1.5 to 3 MET); Moderate (3 to 6 MET); Vigorous (>6 MET).

Activities	Total sample		Code	MET	Category/Segments
	n	%			
Staying to entrance	51	9.2	9055	1.5	**Sedentary (10.6%)**
Walking	173	36.0	17552	2.5	**Light (38.3%)**
Bicycling	9	1.9	01018	3	
Hiking	147	30.6	17082	5.3	**Moderates (34.3%)**
Picking Mushrooms	15	3.1	8246	3.5	
Mountaineering	8	1.7	17040	7.3	**Vigorous (16.6%)**
Running	35	7.3	12020	7	
Mountain bike	39	8.1	1009	8.5	
Others	10	2.1	--	--	--

4. Results

Segment characteristics

Segment difference in socio-demographic characteristics

Variables	Sedentary n=51 (10.96%)	Light n=180 (37.5%)	Moderate n=161 (33.5%)	Vigorous n=78 (16.3%)
Place of residence				
Barcelona	27.5%	52.2%	60.9%	**80.8%**
Lleida	**41.2%**	19.7%	14.3%	9.0%
Age groups				
31 to 40 years	14.0%	**22.0%**	15.2%	**24.7%**
41 to 50 years	**30.0%**	**26.0%**	24.1%	**31.2%**
51 to 60 years	**20.0%**	18.5%	22.2%	18.6%
Gender				
Male	58.8%	**42.9%**	53.8%	**82.1%**
Level of education				
University and more	**55.1%**	56.7%	55.6%	**60.2%**
Work				
Student	18.4%	11.9%	12.6%	**7.7%**
Government employer	**22.4%**	11.9%	16.4%	9.0%
Level of knowledge PNA				
Yes	**58.8%**	**80.6%**	**86.9%**	**89.7%**

4. Results

Segment characteristics

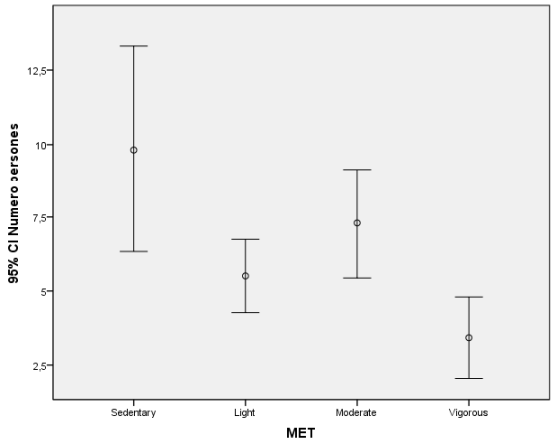
Segment differences in trip behaviour

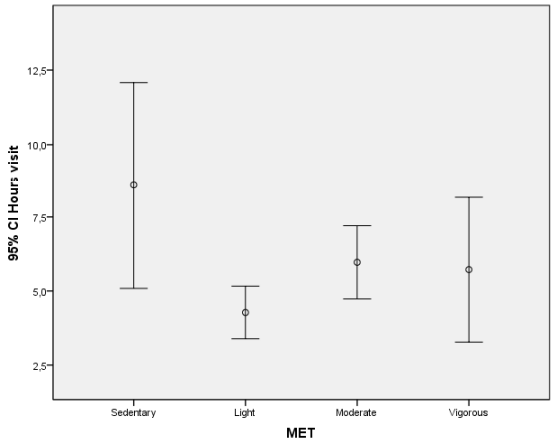
Variables	Sedentary n=51 (10.96%)	Light n=180 (37.5%)	Moderate n=161 (33.5%)	Vigorous n=78 (16.3%)
Composition of the group				
Alone	2.0%	4.5%	3.7%	**32.1%**
Partner	**25.5%**	**23.0%**	**36.%**	16.7%
Family	**21.6%**	**28.7%**	13.0%	7.7%
Friends	**33.3%**	**38.2%**	**36.0%**	**37.2%**
Access				
Car	74.5%	55.9%	58.4%	38.5%
Mountain bike	7.8%	3.4%	0.6%	**29.5%**
Walking	3.9%	7.8%	**12.4%**	17.9%
Frequency				
First time	9.8 %	13.9%	6.2%	5.2%
More than four times	**51.1%**	**46.1%**	**47.2%**	**86.7%**
Decision moment to select trail to visit				
Before visit	**63.3%**	**71.1%**	**75.6%**	**74.4%**

4. Results

Segment characteristics

Segment differences in trip behaviour





4. Results

Segment characteristics

Segment differences in health and PA

Variables	Sedentary n=51 (10.96%)	Light n=180 (37.5%)	Moderate n=161 (33.5%)	Vigorous n=78 (16.3%)
Health				
Good	45.1%	51.1%	45.3%	43.6%
Very Good	37.3%	23.9%	29.8%	32.1%
Excelent	**11.8%**	**12.2%**	**16.1%**	**23.1%**
ClassAF				
Sedentary	**9.8%**	**6.7%**	**8.1%**	**-- %**
Minimally active	13.7%	26.1%	14.9%	11.5%
Lightly active	15.7%	23.3%	11.2%	15.4%
Moderately active	**58.8%**	39.4%	58.4%	61.5%
Highly active	**2.0%**	**4.4%**	**7.5%**	**11.5%**

4. Results

Segment characteristics

Segment differences in Motivations and preferences

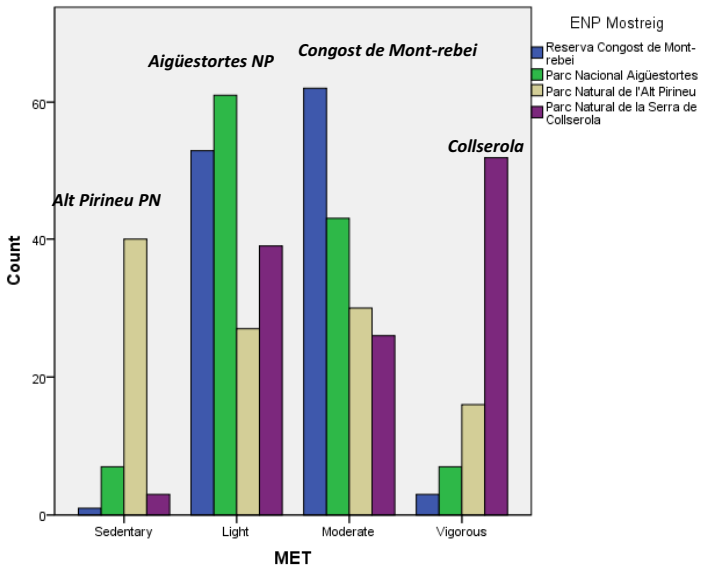
Variables	Sedentary n=51 (10.96%)	Light n=180 (37.5%)	Moderate n=161 (33.5%)	Vigorous n=78 (16.3%)
Motivation				
Physical	3.71	3.98	**4.38**	**4.71**
Physiological	**4.35**	**4.33**	**4.31**	**4.27**
Social	**4.31**	**4.23**	4.09	3.19
Spiritual	3.37	3.68	3.87	3.67
Environmental	**4.35**	**4.44**	**4.62**	**4.42**
Intelectual	2.88	3.26	3.16	2.41
Financer	2.63	3.07	3.20	2.87
Benefits				
Physical	3.73	4.28	**4.46**	**4.72**
Physiological	**4.25**	**4.57**	**4.55**	**4.64**
Social	**4.35**	**4.48**	**4.35**	**3.55**
Spiritual	3.27	3.83	3.97	3.69
Environmental	**4.29**	**4.53**	**4.69**	**4.51**
Intelectual	2.96	3.16	3.23	2.24
Financer	2.69	3.37	3.53	3.58

(1=no important , 5 = very important)

4. Results

Segment characteristics

Segment differences in PNA visited



4. Discussion and conclusions

Profiling the segments

Segment 1: Sedentary Intensity

- ✓ **Mid aged (41-60) and high level** of educational studies
- ✓ Higher proportion from **Lleida**
- ✓ Government worker and **low level of knowledge** about the status of protection of the area
- ✓ Preferable visit**: partner, family and friends groups indistinctively**
- ✓ **Improvisation** to select trail to visit regarding other groups
- ✓ **Social** issue more important in terms of motivations and benefits

VS

Segment 2: Vigorous Intensity

- ✓ **Wide range of ages (31-50)**
- ✓ Major proportion of **man**
- ✓ **Barcelona** more common place of residence
- ✓ **Students and high level of knowledge**
- ✓ Preferable visit: **alone and friends**
- ✓ **Selection of the area or trail to visit more planed**
- ✓ **Physical** such as more important motivations and benefits

5. Discussion and conclusions

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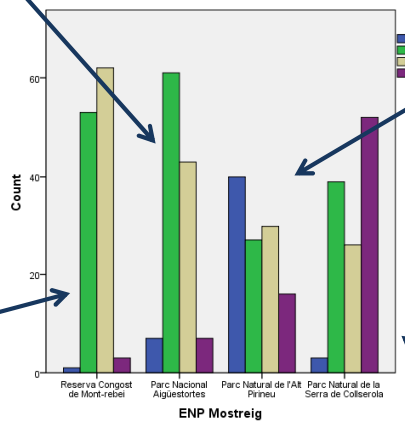

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5. Discussion and conclusions

Interesting points…

➢ The results obtained are in accordance to other research in the field :

- For instance, Mowen, Kaczynski & Cohen (2012), that about a **50.8% of protected areas visitors do some moderate and vigorous physical activity during their visit in the protected area** (41% and 9.8%, respectively) **demonstrating the potential contribution of this type of areas as a promising place** to satisfy current physical activity requirements.

- Differences in socio-demographics visitors' characteristics and other behaviour were observed according to the physical activity-intensity visitors group, especially in **place of residence, age, education, occupation , length to visit in the park (hours), composition group, motivation, preferences and PA habits.**

- Findings revealed that **in terms physical activity level visitors do not represent homogeneous group and must to manage differentially**

Further research

Examine how physical **activity-intensity varies in protected areas with differences features and amenities** and how programming and areas activity and supporting facilities can optimize protected areas-based physical activity for all visitors.

4. References

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