

Leisure Travel, Vacations, Constraints and Visitation to Natural Area Attractions: A Comparison of Residents of Barcelona, Glasgow, Los Angeles and Morelia, Mexico

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Introduction

Natural areas, such as national and state parks, forests, wildlife refuges and open space preserves located outside of cities, are important wildlife habitat and some of the most popular tourist attractions. Few studies have compared travel patterns, visitation and travel constraints to natural area attractions among international source markets to learn if there are substantive differences. International comparisons might be useful to determine if natural area use patterns and constraints are unique to certain countries and culturally based, or if they are more universal. Such information could provide leisure travel suppliers and government agencies managing natural areas and tourist attractions with accurate information to more effectively market and manage their services.

Numerous studies have investigated constraints to visitation of recreation and natural areas (Carr and Williams, 1993; Driver & Peterson, 1986; Dwyer 1994; Jackson, 1988; Johnson & Bowker, 1999; Norman, 1991; Pinhey & Iverson, 1994; Sonmez & Graefe, 1998; Tierney, Dahl, Chavez, Apt & Mok, 2000). Norman (1991) identified over 25 common barriers to outdoor recreation. McLeod (1993) suggested that ethnic “minorities” may be more willing to visit recreation areas if there were more people of their ethnicity working at a recreation site. Findings of these studies were used to identify salient outdoor recreation constraints and use patterns in an earlier study comparing vacation travel patterns of Hong Kong and Los Angeles residents (Tierney, Chavez, Apt and Mok, 2000). But more data for more countries are needed, especially related to natural areas, to see if differences exist.

This research sought to determine if residents of four major metropolitan areas in Europe and North America take leisure trips, vacation and visit natural areas (NAA) as frequently and what constraints prevent them from visiting natural areas. A key research question was: Are there cross-country similarities in vacation patterns and visitation to natural area attractions, or do the social and cultural environments in these five areas contribute to differences in natural area visitation and barriers?

Method

The overall research design was to build upon prior research and expand earlier studies to international study sites. Prior to the current research an extensive survey of Los Angeles residents examining leisure travel and use of and constraints to visiting natural areas (e.g., national and state forests and parks) was conducted by Tierney, Dahl and Chavez (1998). The general approach used in current research was to revise and simplified the Los Angeles survey and administer it to a sample of residents of Barcelona, Spain, Glasgow, Scotland and Morelia, Mexico (near Mexico City), employing a team of resident, bilingual recreation experts in each city. These cities were selected because they all have large, adjacent public natural areas, ethnically diverse populations and they would provide a diverse international perspective.

In the original Los Angeles research respondents were first asked if they took a recreational or leisure trip away from their home during the summer (May-August). If they took a trip, respondents were asked if they took a vacation and the type of vacation from among eight alternatives. Vacations were described as “work free periods of 4 or more consecutive days where most time was spent in leisure activities.”

The surveyor next asked persons who took a leisure trip if they visited a nature area on a leisure trip the prior summer. Visits to undeveloped natural areas were defined in the Los Angeles study as “trips to places located outside of cities where you visited natural areas, such as national or state parks, forests, nature preserves or protected areas. These areas could have campgrounds and cabins, access roads, visitors centers or trails.” In Barcelona, Glasgow and Morelia the definition was expanded to include “scenic rural areas with an occasional farm.” This addition was made, after discussions with research partners in Spain and Scotland, to match the public's image of natural areas in these areas.

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Respondents were asked to agree or disagree with 18 statements about constraints to visiting natural areas, developed from past research (Driver & Peterson 1986; Norman 1991; Tierney 1992, Tierney, Chavez, Apt & Mok 2000). Demographic data collected included respondent age, education, gender, education, neighborhood income status and if the respondent or a parent was born in the survey country. Neighborhood income status was assigned either a high, medium or low level based on identified neighborhood characteristics that were provided by the resident research partner. Respondent education levels were matched between the various cities in consultation with the resident research partner to ensure definitional consistency.

Data for the Los Angeles part of the research came from Tierney, Dahl, and Chavez (1998) who utilized a telephone survey of Los Angeles City and County adult residents. A stratified random sample was developed to over-sample and acquire large enough sample sizes from four ethnic groups: whites, African Americans, Asian Americans and Hispanic Americans. The interviews were available in English, Spanish and Mandarin. Respondents were asked if they took a recreational or leisure trip away from their home from May through August.

A similar but condensed survey to that applied in Los Angeles was utilized in Barcelona, Glasgow and Morelia. Two local recreation experts in Barcelona, Drs. Julian Miranda and Gemma Canoves at Institut Nacional d'Educació Física de Catalunya, were research partners and they translated the survey into Spanish and Catalan, ensured compatibility with the earlier Los Angeles survey and directed data collection in Barcelona. Dr. Katheryn Burnett of the University of Paisley cooperated in sample design and directed data collection in Glasgow. Dr. David Barkin was the lead researcher on the study team in Morelia, directing translation into Spanish and data collection. Wording of some questions was modified slightly to accommodate translation, keeping the same meaning as in the Los Angeles study but attending to the unique cultural norms in Barcelona, Glasgow and Morelia.

The data collection method in Barcelona, Glasgow and Morelia was also modified from the LA approach based on probable low response rates and bias with using a telephone survey method. Personal interviews and a systematic sampling approach were utilized, similar to what had been successfully employed in earlier Hong Kong research (Tierney, Chavez, Apt and Mok 2000). The survey used a systematic sample of districts that represented three high-to-low socio-economic levels in the metropolitan area. Once income districts were identified, then neighborhoods were selected which were representative of the district. Finally, trained surveyors visited every other residence in the selected neighborhoods and attempted to administer the personal interview. Very low income neighborhoods were excluded from sampling in Morelia because their residents have a very low likelihood of travel due to severe financial constraints. Data were collected in fall and winter of 1999. A total of 1,814 surveys were completed, with 894 in Los Angeles, 310 in Barcelona, 354 in Glasgow and 256 in Morelia.

Data were analyzed and basic comparisons were made between the cities using univariate descriptive statistics and multivariate tests. Chi square tests were utilized to compare and test for differences between categorical variables. Factor analysis was utilized to identify a small number of constraint factors that represented significant relationships among all constraint items listed. Factor analysis used the principle factoring method with equimax rotation.

A final objective of the research was to determine if likelihood of visiting natural areas is statistically different for the four study sites, after adjusting for differences in socio-economic variables. Logistic regression was selected for this test because it is a multivariate procedure and the dependent variable of visiting natural areas was categorical. The initial regression model included the independent variables of respondent education level, neighborhood income status, age, respondent or parent born in survey country and gender. The dependent variable was visitation to a natural area. Variables that were initially entered into the model that proved to not be significant were removed from the equation until only variables with significance levels of 0.05 or less remained. Interpretation of statistical results was done in consultation with the resident expert team members.

Results

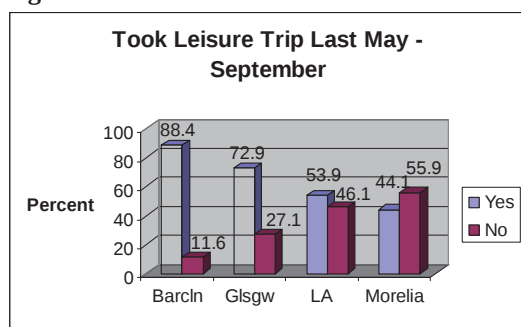
International research comparisons present large challenges but this study attempted to increase validity by using researchers who live in the study areas and are familiar with leisure travel and natural area visitation in their regions. Despite efforts to make the research as comparable as possible, the findings may be affected by some differences in translations of survey wording, data collection methods and interpretation of results.

Respondents had some significant socioeconomic differences. Table 1 shows that education level varied greatly between study sites. Glasgow, Los Angeles and Barcelona, compared with Morelia have a higher percentage of respondents that were college graduates or had some graduate school. A greater number of Barcelona and Los Angeles respondents were high income, while Glasgow had the least number of high income respondents. Over 97% of Morelia respondents or their parents were natives, compared with 52% of Barcelona respondents. Morelia respondents were much more likely to be females compared to the other study sites.

Table 1 - Respondent Socioeconomic Characteristics By City (Percent)

Socio-Economic Variable	Barcelona	Study Site Glasgow	Los Angeles	Morelia
Education				
Elementary-Jr High	60.0	31.3	34.8	38.8
High or Trade Sch	21.3	29.3	30.8	58.6
College Graduate	17.1	31.3	22.8	1.8
Grad. or Prof. Sch.	1.6	8.2	11.7	0.9
Income Status				
Low	45.2	12.4	30.3	31.6
Medium	11.6	74.6	34.5	38.7
High	43.2	13.0	35.1	29.7
Born In Country				
Yes	51.9	80.0	68.5	97.3
No	48.1	20.0	31.5	2.7
Gender				
Male	50.6	52.4	44.6	33.7
Female	49.4	47.6	55.4	66.3

Figure 1 illustrates the percentage of respondents who took a leisure trip of 1/2 day or more in length in the past summer. Simply taking a leisure trip varied greatly, from 44.1% in Morelia, 53.9% in Los Angeles, 72.9% in Glasgow to 88.4% in Barcelona. Findings suggest that European city residents were much more likely to travel for leisure than North American respondents.

Figure 1

Visitation to a natural area is shown in Figure 2. There was substantial visitation to natural areas among residents of all four international cities who took a leisure trip, but the percentage of visitation varied widely. Residents of Barcelona were most likely to visit natural areas (71.5% visited) followed by Morelia (65.2%), Los Angeles (32.4%) and Glasgow (30.7%). Noteworthy are Morelia respondents who did travel were more likely than not to visit a natural area.

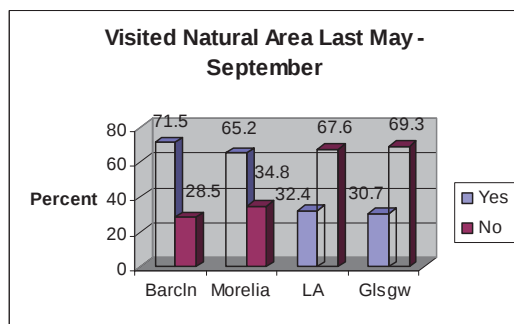
Figure 2

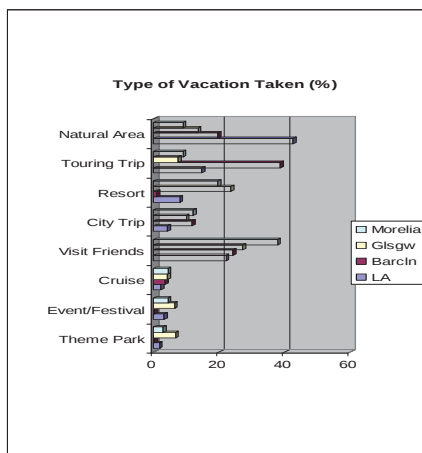
Table 2 illustrated that among respondents who took a leisure trip almost all persons from Barcelona (97.5%) took a vacation of four or more consecutive days, while about two thirds of Los Angeles and just over half of individuals from Morelia took a vacation (58.4%). This again shows the strong travel tendencies of European respondents.

Table 2 – Survey Site*Took Vacation Crosstabulation

			Took Vacation		Total
			Yes	No	
Survey Site	Los Angeles	Count	327	155	482
		% within Survey Site	67.8%	32.2%	100.0%
	Barcelona	Count	265	9	274
		% within Survey Site	96.7%	3.3%	100.0%
	Glasgow	Count	242	17	259
		% within Survey Site	93.4%	6.6%	100.0%
	Morelia	Count	66	47	113
		% within Survey Site	58.4%	41.6%	100.0%
Total	Count	900	228	1128	
	% within Survey Site	79.8%	20.2%	100.0%	

The most popular types of vacations among persons who took a vacation are shown in Figure 3. A vacation to visit friends or relatives, a vacation to a natural area or a touring vacation were the overall most popular types. More than 42% of Los Angeles respondents vacationed in natural areas and this is over twice as high as any other study site. Only about 10% of Morelia vacationers visited a natural area.

Figure 3



The results from factor analysis of constraints to visiting natural area for all four cities are shown in Table 3. This figure shows the factor matrix with factor loadings for the entire sample. A coefficient of 0.40 or greater was considered significant. Analysis produced four constraint clusters. Factor 1 is called *Unwelcome and Unmotivated* and for this type of respondent they have many significant constraints to visiting natural area. Factor 2 is referred to as *Lack Companions, Nearby Areas and Finances* and it is most correlated with no suitable areas nearby, no companions to travel with and financial obligations as constraints. Factor 3, referred to as *Time Constrained and Areas Too Crowded*, has significant loading on the barriers of time constraints and nearby areas being too crowded. Factor 4 is called *Normally Visit* and these are persons who usually visit natural areas, but did not during the study period. These represent the most basic constraints identified by all respondents. They are a mixture of barriers related to facility characteristics, such as crowding, but most of these are related personal social factors, like no companions to travel with or time constraints.

**Table 3. Factor Matrix With Factor Loadings
All Cities Combined**

	Factor			
	1	2	3	4
No suitable nearby areas	0.481	0.551	-0.071	-0.018
No companions	0.482	0.487	0.128	-0.002
Time constraints	0.332	-0.002	0.617	-0.265
Discriminated against	0.611	-0.149	0.184	-0.186
No interest in visiting	0.475	0.259	-0.353	-0.019
Do not feel welcome	0.635	-0.215	-0.157	-0.279
Nearby areas too crowded	0.482	-0.072	0.409	-0.121
Financial obligations	0.501	0.432	0.148	-0.074
Lack info	0.581	-0.033	-0.014	0.174
My friends do go	0.443	0.301	-0.006	-0.162
Travel is uncomfortable	0.491	0.181	-0.348	-0.207
Lacked transportation	0.514	-0.345	-0.197	-0.061
Want ethnic workers	0.467	-0.292	-0.041	0.372
Areas not safe	0.454	-0.321	-0.279	-0.061
Normally visit	0.355	-0.092	0.284	0.666
Not healthy enough	0.389	0.111	-0.351	0.217

Filled cells show those with significant factor loading of 0.4 or greater

Separate factor analysis was conducted for the four cities to determine if basic constraints to visiting natural areas varied among them, compared to the overall study constraints. Table 4 shows that each study site had at least one unique constraint combinations, compared to the overall barriers already identified for the entire study. *Feeling discriminated against and natural areas are not safe*; and *no interest in visiting natural areas* were unique constraint factors for Los Angeles respondents. *Natural areas are not safe*; and *feeling discriminated against* were unique to Barcelona respondents, compared to the combined respondents from all four cities. For Glasgow a factor analysis revealed *not healthy and without transportation* was a unique combined constraint factor. In Morelia, *financial and transportation constraints*; *would visit if more workers of my ethnicity were in natural areas*; and *natural areas are not safe* were unique combined constraint factors compared to the combined respondents from all four cities.

Table 4. Unique Combined Constraint Factors By City

City	Constraint Factors
Barcelona	Natural areas not safe, feel discriminated against
Glasgow	Not healthy, lacked transportation
Los Angeles	Feel discriminated against, areas not safe, no interest in visiting
Morelia	Financial situation, more ethnic workers wanted, lacked transportation, areas not safe

The results of the Logistic Regression analysis are shown in Table 5. The variables of respondent *gender* and if *they or their parents were born in the survey country* were found not to be significantly related to visitation to natural areas. However, the variables of *household income status* and *education* were significantly and positively related to likelihood of visiting natural areas. These results suggest that a respondents age, gender and if they or their parents were born in country of residence did not impact natural area visitation. However, findings suggest that income and education along with cultural or other factors unique to each study site did influence if respondents visited a natural area. Results show visitation to natural areas varies by site, even after accounting for differences in socio-economic characteristics.

**Table 5. Significance Level Of Independent Variables In
Logistic Regression Model Of Natural Area Visitation**

Independent Variable	Significance Level
Survey Site	0.000
Household Income Status	0.000
Education	0.003
Age	not sig.
Gender	not sig.
Parents/Respondent Born In Country	not sig.

Conclusions

International research comparisons present large challenges but this study attempted to increase validity by using similar survey instruments translated into four different languages by researchers who live in the study area and are

familiar with leisure travel and natural area visitation in each of the study regions. Survey responses were also translated and reviewed by bilingual recreation experts in each country to ensure accuracy. Despite efforts to make the research as comparable as possible, the findings may be affected by some differences in survey wording, data collection methods and interpretation of results.

This study identified leisure travel and vacation pattern differences, use differences, and barriers to visiting natural area attractions between Barcelona, Glasgow, Los Angeles and Morelia residents. Over half of the respondents in Morelia and Los Angeles did not even take a ½ day leisure trip outside their city during the preceding summer. This suggests there is a lack of interest and/or serious travel constraints in these two areas which are limiting pleasure travel to any destination. European residents are much more likely to travel than were North American respondents. Almost nine of ten Barcelona respondents took a leisure trip away from home during the summer, compared to one in four Morelia respondents.

Almost all Barcelona and Glasgow respondents who took a leisure trip also went on a vacation, compared to Los Angeles and Morelia respondents. This suggests leisure and vacation travel is more of a cultural norm and socioeconomic conditions are more conducive to travel in Barcelona and Glasgow, than in the North American cities surveyed. For example, in Barcelona and other cities in Spain the average citizen gets 30 days paid vacation in addition to three other 5-day holiday periods per year. The average in Los Angeles is about two weeks paid vacation, a week holiday and then several long weekends. This more abundant vacation pattern for Barcelona residents certainly is shown in the study results.

There was wide spread interest in visiting natural areas among residents of the four study cities. However, when respondents who took a leisure trip were asked if they visited a natural area, nearly three quarters of Barcelona and about two thirds of Morelia and only about one third of Los Angeles and Glasgow respondents visited a natural area during the prior summer. These are significant differences in actual visitation to natural areas and can not be accounted for by socioeconomic factors alone. Findings show a high interest level in visiting natural areas among Morelia respondents who traveled, in comparison to pleasure travel among that study areas general population. However, overall study findings may be troubling to resource agency staff looking for support in designation of new or protection of existing natural areas because less than one-third of Los Angeles and Morelia respondents visited them during the busiest travel season. Visitors are more likely to support stewardship proposals that are non-visitors.

Los Angeles respondents were much more likely to take a natural area vacation than respondents from other study sites. This may be due in part to management policies in Spain and other areas of Europe that prohibit overnight camping within most designated natural areas, in contrast to protected areas around Los Angeles where there are numerous public campgrounds..

Factor analysis illustrated that the most common constraints to visiting natural areas were respondents feeling *unwelcome, unmotivated, no companions, no nearby areas, financial constraints, time constraints* and *nearby areas too crowded*. Factor analysis of individual cities showed that respondents from three of the four study sites also cited *natural areas are not safe* as a serious constraint. These findings support the idea of “universal” constraints to visiting natural areas and provide a starting point for further study on this subject. However, unique cultural and resource factors at each study city were shown to influence the propensity to visit natural areas. For example, Los Angeles and Morelia respondents were more likely to cite *feeling discriminated against* and *wanting more ethnic workers* in natural areas. Glasgow and Morelia respondents cited a *lack of transportation*. The latter results suggest there are unique cultural and resource factors that influence the propensity to visit natural areas.

Regression analysis findings demonstrated the large impact of income and education on likelihood of natural area visitation. But study site was a significant predictor of visitation to natural areas even after accounting for differences in respondent age, education, income, gender and country in which they or their parents were born. These findings also imply that unique cultural values and or resource conditions at the four study sites influenced national area visitation patterns.

Study results can be used by protected natural area managers to foster visitation where appropriate and within capacity. It appears that in some cities there are many more non-visitors than visitors to natural areas. Findings strongly suggest that active outreach is needed to a substantial portion of the public, outside of European cities, who have some interest in visiting natural areas but are constrained by identified factors and either do not travel outside their city of residence or do not visit protected areas. Natural resource agencies may face problems with political support for management proposals or be limited in creation of new protected natural areas in the future without aggressive outreach. Private tourism companies who offer natural resource based programs can utilize study findings for tailoring their services to increase effectiveness.

This research shows a large number of cross-cultural similarities in leisure travel and tourist use of natural areas through a comparison of four international cities with nearby natural resources of comparable size and scope. But it also

demonstrates how the cultural context produces significant differences in visitation constraints and use of natural area attractions.

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