Abstract

The relationships between socio-demographic and trip characteristics and tourists’ satisfaction with their park experiences are still relatively poorly understood. An objective of this study was to determine whether these relationships could be isolated and quantified in the experiences of 727 domestic and international tourists in the Panama Canal Watershed (PCW).

Results determined that variations in both global satisfaction and item-specific satisfaction of PCW tourists were largely unrelated to variations in socio-demographic and trip characteristics, with the notable exceptions being group type, country of origin and the tourist’s native language. There were significantly higher satisfaction levels among both international (as opposed to domestic) visitors and those in guided tour groups (as opposed to independent travellers). Moreover, tour group visitors had consistently higher satisfaction levels than independent travellers both with interpretive and non-interpretive services and setting attributes, regardless of whether they were domestic or international tourists.

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INTRODUCTION AND CONTEXT

This paper reports selected findings from a study conducted during high-use season at tourist sites within the Panama Canal Watershed (PCW). The aim of the paper is to examine whether socio-demographic and trip variables are associated with levels of global visitor satisfaction as well as satisfaction with specific components of the experience, both interpretive and non-interpretive. While previous research has explored such relationships in the context of selected tourist experiences, this study is significant in its scope (over 700 independently and randomly sampled visitors at five sites over a three month period) and its focus on experiences of both domestic and international visitors to protected areas in a less developed (though not considered a “developing”) country.

The PCW is an area of 3,300 square kilometres in the Republic of Panama. In addition to the historical, cultural and economic importance of the PCW to the country, it is one of the highest biodiversity zones in all of Americas, and is renowned in particular for its unusually abundant and colourful bird life. For all of these reasons, the PCW offers an appealing range of nature-based tourism experiences both for Panamanians and international visitors from more than 30 countries. These opportunities include areas of very high visitor use (e.g., viewing of the Panama Canal Locks) and areas of medium to low use (such as nature trails at Soberanía National Park).

Tourists represent a strategically important audience within the PCW. Annually, more than one million Panamanian and international tourists visit the PCW both in private groups and via commercially guided tours (IPAT 1999). For this reason, a survey of visitors was undertaken to determine (1) the types of tourists who visit five popular nature-based tourism sites in the PCW; (2) the patterns and characteristics of their uses of these sites both currently and in the past, (3) their satisfaction with the interpretive and non-interpretive services currently available at these sites, and (4) how improvement or expansion of current interpretive services in the PCW tourist destinations might enhance their on-site experiences as well as more effectively target these tourists with messages on sustainable watershed management. This paper presents the findings pertaining to PCW tourists’ satisfaction with the on-site interpretive and non-interpretive services offered, along with the empirical relationships between the eight socio-demographic and trip variables and tourists’ service-specific and global satisfaction levels.

REVIEW OF LITERATURE

A review of literature (Geva & Goldman, 1991; Wang, Hsigh & Huan, 2000; Yuksel, 2000; Cole, Crompton, Willson, 2002) reveals that many visitor satisfaction surveys adopt a direct approach to assessing satisfaction. Respondents are asked to assess their satisfaction with specific services and setting attributes or “components” as well as their overall or “global” satisfaction. Given that there can be differences in levels of satisfaction with particular components, such measures can provide insight as to what drives satisfaction and, of relevance to the present paper, can provide an opportunity to explore whether satisfaction levels with particular service attributes are related to socio-demographic and/or trip characteristics.

This paper, while not reporting directly on the contributions of such service components to global satisfaction, builds on these studies by including satisfaction measures of eleven components of the experience, grouped into five interpretive (visitor centres, brochures, maps, presentations by

\(^1\) Pedro Miguel Locks, Camino de Cruces Trail in Soberanía National Park, Plantation Road, Miraflores Locks, and San Lorenzo Protected Area
area staff, and exhibits) and six non-interpretive (car parks, camping areas, fishing, swimming, toilets, trails) services.

Tourists’ experiences and levels of satisfaction have been found to be influenced by visitors’ background characteristics, such as their own past travel experience, background knowledge, and learning capabilities. Socio-demographic characteristics have also been found to be associated with differences in satisfaction levels (Hughes, 1991; Mossberg, 1995; Yu & Weiler, 2000). For example, Mossberg (1995) found that tourists’ previous travel experience and socio-demographics influence tourists’ satisfaction with the performance of their tour leaders.

Another set of variables associated with differences in satisfaction levels is the origin, nationality or culture of the tourist. For example, previous research (Yuksel, in press) has found that there are differences between domestic and international visitors’ evaluation of service delivered in shops. In a study by Armstrong and colleagues (1997), hotel guests from different cultures had different expectations for hotel services. Specifically related to interpretation, Ham and colleagues (1992, 1993) have analysed a number of factors that differentiate between domestic and international tourists’ satisfaction with on-site interpretive services.

Past studies have also found that previous visits to a tourism destination are associated with higher visitor satisfaction, partly because satisfaction often leads to repeat visitation (Geva & Goldman, 1991; Yuksel, 2001; Tian-Cole, Crompton & Willson, 2002). Studies conducted by Gyte & Phelps (1989), Yuksel (2001) and Crompton & Willson (2002) found that visitors with past experiences to the visited place are more likely to be satisfied.

Very little research has been undertaken on visitor satisfaction in non-Western and in less developed countries, and given the apparent differences in socio-demographic characteristics and levels of travel experience, there is a conspicuous gap in comparisons between international and domestic tourists in these countries. There does not appear to be any published research exploring differences in satisfaction with interpretive versus non-interpretive elements of the experience in the context of protected areas in less developed countries.

Based on these and other studies, data on nine socio-demographic and trip variables were collected to explore differences in PCW visitors’ reported satisfaction with the eleven specific interpretive and non-interpretive services and setting opportunities mentioned earlier, as well as differences in their global (overall) satisfaction. The socio-demographic and trip variables included respondent’s gender, age, education level, income, country of origin, native language, number of previous visits, group size, and group type (family, friendship, mixed family-friendship, or tour group).

METHODS

A bilingual (Spanish and English) questionnaire, designed according to Dillman’s (1978) “Total Design Method,” was used to collect the data. Before data collection commenced, several drafts of the questionnaires were reviewed by the national tourism authority, the protected area management agency and two bilingual social scientists. In addition, the data collectors were trained both in sampling and questionnaire distribution and retrieval methods so that standardization of procedures could be enhanced. The results of these efforts produced a data collection instrument and procedures that strengthened both the validity and reliability of the data. After pre-testing, the final 10-minute self-completed questionnaire was personally administered at five sites in the PCW.
A combined sample of 773 randomly selected tourists were approached, of which 94 percent completed the questionnaire, yielding a final usable sample size of 727. Systematic random sampling of both days of the week and visitors on these days over a three-month period minimised sampling bias and facilitated the generalisability of the findings to the population of PCW visitors.

Low refusal rates were encountered at each of the five sites, resulting in response rates ranging from a low of 76% at one site to a high of 100% at two sites. Nonetheless, information was collected from non-respondents to allow for testing for non-response bias on three variables: age, gender, and the visitor’s overall satisfaction. There were no statistically significant differences between respondents and non-respondents.

Respondents were asked to indicate their overall level of satisfaction with their experience on a 5-point scale ranging from “very dissatisfied” to “very satisfied,” with a mid-point of “neither satisfied nor dissatisfied.” Using the same rating scale, visitors were also asked to rate their level of satisfaction with the eleven interpretive and non-interpretive services they may have utilised while at the site. Responses are reported here both in terms of percentage of respondents who were satisfied and very satisfied, and using mean scores.

Socio-demographic and trip variables were measured largely by multiple-choice style questions with nominal or ordinal response choices (reported here using percentage of responses in each category), and in some cases with open-ended responses yielding interval-level data (summarised in this paper using mean scores).

Data were coded for analysis using SPSS software (version 9.0). Univariate analyses involved frequency distributions for nominal-level and ordinal-level variables and computation of measures of central dispersion for interval- and ratio-level variables. Bivariate analyses involved Chi-square where two nominal-level variables were involved and analysis of variance (ANOVA) where interval- or ratio-level measures were compared across categories of a nominal-level independent variable. For ANOVA, Levene’s test for equality of variances was used to determine whether pooled or separate variance estimates would be used in computing F.

RESULTS AND DISCUSSION

Socio-demographic and Trip Characteristics of PCW Tourists

Looking first at results of the univariate analyses, PCW tourists were evenly divided by gender (51% male and 49% female). The overall mean age of respondents was 34.7 years. PCW tourists on the average had completed almost 16 years of formal education (15.7 years) which corresponds to a university undergraduate degree. The generally high education level of PCW tourists corroborates a previous finding at another Central American protected area, Masaya Volcano National Park in Nicaragua, where the mean education of visitors was also about 16 years (Ham and Whipple 1998).

PCW tourists fall into a wide range of 1999 income categories ranging from about U.S. $3,000 (23%) to more than $80,000 (4%). About one fifth made between $33,000 and $51,000, while 12.5% made more than $51,000, and 3% made $90,000 or more.

PCW tourists come from a wide range of countries (about 30), but two countries predominate, Panama and the U.S.. Panamanians accounted for 59% of the sample, while U.S. tourists accounted for an additional 14%. Not surprisingly, the most common native languages spoken by PCW tourists are Spanish (72%) and English (21%).
About 60% of the tourists were first-time visitors at the site where they were sampled, while about 40% had visited the site at least once during the previous three years. About 25% were visiting for at least the third time, and 16% had visited the site five or more times in the previous three years.

Overall, about 13% of the tourists were travelling with a tour operator, while 87% were travelling in private groups. Of the tourists travelling in private groups, almost half arrived in groups of 2-4 people. Only about 3 percent of the tourists travelled alone. Typical were family-related groups (43%) and friendship groups (26%).

Satisfaction Levels of PCW Tourists

Figure 1: Visitor Satisfaction with Interpretive and Non-interpretive Services

A global satisfaction measure was used to gauge the 727 respondents’ overall satisfaction with their experience (Figure 1). More than 80% reported that they were either “satisfied” or “very satisfied” with their experience. Fewer than 7% reported being “dissatisfied” or “very dissatisfied.” More focused measures of tourist satisfaction with specific services and site settings produced similar results with the majority of users being “satisfied” or “very satisfied” with many of the services offered, including all five of the interpretive services. Overall, the highest-rated services were presentations and exhibits in visitor centres (84% satisfied or very satisfied), explanations by area staff (84% satisfied or very satisfied), brochures about the area (78% satisfied or very satisfied), visitor centres (78% satisfied or very satisfied), car parks (75% satisfied or very satisfied), and maps of the area (74% satisfied or very satisfied).

However, fewer proportions of visitors were satisfied or very satisfied with the quality of the non-interpretive services and opportunities at these sites. For example, only 38% were satisfied or very satisfied with the camping facilities. Only about half of the respondents were satisfied or very satisfied with the fishing areas (51%), the swimming areas (51%), the restrooms (63%) and the trails (66%).

Reports of global satisfaction are often very high without enough variation to examine whether socio-demographic and trip characteristics influence satisfaction. The range of satisfaction levels and the differences between satisfaction with interpretive versus non-interpretive services in this
sample provided an opportunity to explore which socio-demographic and trip variables, if any, were associated with differences in levels of satisfaction.

**Relationships Between Socio-demographic and Trip Variables and Satisfaction Levels of PCW Tourists**

In looking at the socio-demographic profile of respondents, there was variation in the sample with respect to gender, age, income, language spoken, country of origin, and number of previous visits. The relationship between all of these variables and satisfaction could thus be examined. Because of the limited variation in the education variable, analysis of this variable did not continue beyond univariate analysis. The latter two variables, country of origin and number of previous visits, were collapsed into dichotomous variables (Panamanian vs. non-Panamanian, and first time vs. repeat) following univariate analysis to facilitate further analysis of differences with respect to satisfaction levels.

Also, there was variation in terms of the trip characteristics of visitors to the PCW, including the group size and group type (family, friendship, mixed family-friendship, or tour group). The latter variable was collapsed into a dichotomous variable (independent vs. tour group) following univariate analysis to facilitate further analysis of differences with respect to satisfaction levels.

Thus, to explore differences in reported satisfaction levels, comparisons were conducted across eight socio-demographic and trip variables. Specifically, these eight variables were number of previous visits (first versus repeat), gender, age, income, group size, group type (independent versus tour group), country of origin (Panamanian versus non-Panamanian), and respondent’s native language.

For five of these variables, there were no significant differences in levels of satisfaction for global satisfaction and for nearly all the service-specific indicators. Contrary to other studies that have reported higher satisfaction levels for repeat versus first-time visitors, no such differences emerged in this study. Satisfaction levels also did not vary significantly with gender, with one exception, that men did report significantly higher satisfaction than women with respect to fishing areas. Likewise, comparisons of satisfaction levels across the variables of age, income, and group size produced no significant differences.

However, statistically significant differences in levels of satisfaction were found on three of the variables: group type (independent versus tour group), country of origin (Panamanian versus non-Panamanian), and respondent’s native language (Spanish versus English), as discussed in the following paragraph and illustrated in Table 1.

To explore the differences in global satisfaction among guided tour visitors and independent travellers, a one-way ANOVA (Table 1) was performed. For every service except swimming areas, guided tour visitors reported significantly higher satisfaction levels than did visitors travelling independently. Not surprisingly, therefore, the global satisfaction of tour group visitors was also significantly higher than that of independent visitors. Thus, type of group (tour group versus independent traveller) emerged as an important discriminator between higher and lower satisfaction levels.
Table 1: Comparison of Satisfaction Levels of Respondents in Tour Groups Versus Independent Travellers.

<table>
<thead>
<tr>
<th>Type of service rated</th>
<th>Tour group mean (n=95)</th>
<th>Independent* travellers mean (n=632)</th>
<th>Significance (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentations/exhibits in a visitor centre</td>
<td>4.64</td>
<td>4.12</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Explanations by area staff</td>
<td>4.49</td>
<td>4.17</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Brochures about the area</td>
<td>4.41</td>
<td>3.93</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Maps of the area</td>
<td>4.37</td>
<td>3.81</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Visitor centres</td>
<td>4.52</td>
<td>3.84</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Car parks</td>
<td>4.24</td>
<td>3.84</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Fishing areas</td>
<td>4.05</td>
<td>3.25</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Camping areas</td>
<td>4.00</td>
<td>3.10</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Swimming areas</td>
<td>3.40</td>
<td>3.29</td>
<td>NS²</td>
</tr>
<tr>
<td>Trails</td>
<td>4.46</td>
<td>3.65</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Toilets</td>
<td>4.15</td>
<td>3.43</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>4.54</td>
<td>4.09</td>
<td>p&lt;.05</td>
</tr>
</tbody>
</table>

¹ Independent travellers consisted of visitors in family, friendship, or mixed family-friendship groups.
² NS = not significant

Notably, significant differences in both service-specific and global satisfaction levels also emerged when comparisons were made across respondents’ country of origin and native language. Panamanian visitors were consistently less satisfied than non-Panamanian visitors with almost all the services offered, including the five interpretive services. Other than for camping and fishing, international tourists reported uniformly higher service-specific and global satisfaction levels than Panamanians, and this pattern was repeated when Panamanian and U.S. visitors were compared. Similarly, native English speakers reported higher satisfaction levels for every service except camping and fishing, as well as higher global satisfaction levels. Among non-native English speakers, Swedes also reported a significantly higher global satisfaction level than native Spanish speakers. These findings are not surprising given the different criteria that domestic and international tourists sometime apply in judging their satisfaction with tourist services generally (e.g., Armstrong et al., 1997; Pizam & Reichel,1996; Yuksel, in press), and interpretive services specifically (Ham et al., 1993; and Ham & Sutherland, 1992). Interpretive services in PCW protected areas apparently are directed more to the tastes of the predominantly international tourist market than to Panamanians. While this makes sense from a service and marketing perspective, such findings raise social equity questions about the degree to which a nation’s protected areas should be expected to serve the recreational and interpretive interests of that nation’s citizens.

The consistently higher satisfaction levels both of guided tour visitors and international visitors is potentially mediated by the degree to which Panamanians and non-Panamanians respectively utilise guided tour services. The data revealed that while 79 percent of visitors arriving with tour groups were non-Panamanian ($X^2 = 32, 1$ df, p<.05), both groups make use of tour operators. This finding is corroborated by a separate study of Panama tour operators (Ham & Weiler, 2000b) which found that approximately one fifth of the market was comprised of Panamanians. Thus, although the higher satisfaction levels reported by guided tour visitors may to some extent result from the higher satisfaction levels of international tourists generally, at least some of the variation appears to be due to the nature of the guided experience itself.

To test this hypothesis, the global satisfaction levels of Panamanians in guided tour groups and those travelling independently were compared, as were the global satisfaction levels of non-
Panamanians in the two respective groups. Results (Table 2) support the hypothesis that the higher satisfaction levels reported by guided tour visitors were not due simply to the higher satisfaction of international tourists, generally. Visitors in guided tours were significantly more satisfied with their overall experience than independent travellers regardless of whether they were Panamanian or non-Panamanian. In addition, ANOVA comparing the global satisfaction levels of Panamanian (4.27) and non-Panamanian (4.62) tour group visitors revealed a non-significant difference (F=1.57, p>.05), as did a comparison Panamanian (3.90) and non-Panamanian (4.14) independent travellers (F=0.81, p>.05). Thus, it is group type rather than country of origin that accounts for differences in between satisfaction levels.

Table 2: Comparisons of Global Satisfaction of Panamanians and Non-Panamanians Depending on Whether they were in a Tour Groups or Independently.

<table>
<thead>
<tr>
<th>Type of group</th>
<th>Tour group global satisfaction mean (n=95)</th>
<th>Independent(^1) travellers global satisfaction mean (n=632)</th>
<th>Significance (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panamanians</td>
<td>4.27</td>
<td>3.90</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Non-Panamanians</td>
<td>4.62</td>
<td>4.14</td>
<td>p&lt;.05</td>
</tr>
</tbody>
</table>

\(^1\) Independent travellers consisted of visitors in family, friendship, or mixed family-friendship groups.

CONCLUSIONS AND IMPLICATIONS

The socio-demographic and trip profile data indicate that a wide range of tourists visit the PCW. Unlike many tourist satisfaction studies, there is variation in these visitors’ levels of satisfaction with service and site attributes, although this variation is less apparent when looking only at global satisfaction measures.

Looking at the relationships between socio-demographic and trip variables and the satisfaction measures, a major finding from this research is that satisfaction levels are statistically related to only three of the eight socio-demographic and trip variables (type of group, country of origin, and tourist’s native language). Variables found to be significant in previous visitor satisfaction research such as previous travel experience and first time versus repeat visitors were found to be non-significant in this study of tourists visiting protected areas. On the other hand, significantly higher satisfaction levels were associated with both international (as opposed to domestic) visitors and those in guided tour groups (as opposed to independent travellers). However, the hypothesis that the tour group effect was magnified by the dominance of international tourists in guided tour groups was not supported. Tour group visitors had consistently higher satisfaction levels than independent travellers both with interpretive and non-interpretive services and setting attributes, regardless of whether they were domestic or international tourists.

These findings suggest that group type, and specifically visiting as part of a guided tour, is positively related to visitor satisfaction with a range of services and experience attributes. Whether this is a function of the quality of the tour guide, or interaction with group members, or some other aspect of the guided tour, cannot be determined from this study’s analysis and would be a fruitful avenue for further research. However, previous research on guided tours certainly supports the notion that it is the presence and quality of the tour guide that most influences visitor satisfaction with guided tours. As discussed elsewhere (e.g., Ham & Weiler, 2003; Weiler & Ham, 2001), the degree to which a guide influences the tourist’s experience remains an important question for further research.
The extent to which satisfaction with particular experiential components drives global satisfaction, while the subject of recent studies (Yuksel, 2000; Cole, Crompton, Wilson, 2002), needs to be further pursued. In particular, an analysis of the relationships between satisfaction with the interpretive and non-interpretive components of the visitor experience, and particularly in the context of protected areas, has not been investigated. A recent meta-analysis of protected area management agency research in Australia by Griffin and Vacaflores (2004) suggests that there are differences in what visitors say are determinants of their satisfaction with their visit and what they say are dissatisfiers. For example, some visitors report that a substandard level of service (particularly with respect to toilets) can be an important determinant of dissatisfaction. Visitors also report that interpretation is an important determinant of satisfaction mainly in icon parks or parks where wildlife is an important drawcard. Good quality directional signs, maps and walking tracks were often cited by visitors as important determinants of satisfaction. Visitor centres were not usually identified by visitors as being important determinants of satisfaction (Griffin and Vacaflores, 2004: 25-32). What is not clear, however, is the extent to which visitors’ stated reporting of the relative importance of these attributes can be empirically demonstrated through statistical analysis of how satisfaction levels of these attributes contribute to visitors’ global satisfaction with their experience. Investigation of these relationships, particularly within the context of protected areas, would be of tremendous benefit to those charged with allocating limited funds and managing these resources in ways that maximise visitor satisfaction.
REFERENCES


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