Exploring visitors' desired benefits in Paklenica National Park, Croatia: Development, validation and management implications of measurement instrument

Demir Barić, Facultad de Ciencias del Mar y Ambientales, Departamento Historia, Geografía y Filosofía. Grupo de Investigación en Gestión Integrada de Áreas Litorales, Universidad de Cádiz, Spain, demir.baric@alum.uca.es

Petra Anić, University of Rijeka; Department of Psychology, Faculty of Humanities and Social Sciences, Croatia, panic@ffri.hr

Marko Tončić, University of Rijeka;Department of Psychology, Faculty of Humanities and Social Sciences, Croatia, mtoncic@ffri.hr

Ana Macías Bedoya, Facultad de Ciencias del Mar y Ambientales ;Departamento Historia, Geografía y Filosofía. Grupo de Investigación en Gestión Integrada de Áreas Litorales; Universidad de Cádiz, Spain, ana.macias@uca.es

Introduction

In recent decades, a number investigations that addressed visitors' desired benefits in protected areas have attracted considerable attention from various research teams (Ballantine & Eagles 1994; Pierskalla et al. 2004; Weber & Anderson 2010). Despite the differences in methodological approaches and the statistical techniques employed, the key findings revealed that the desire to enjoy and admire nature, learning about cultural and natural features, escaping and solitude, social affiliation and personal achievement were considered as the most important benefit sought to bring visitors to protected areas.

The main purpose of this study was to develop a simple and cost-effective measurement instrument to monitor visitors' desired benefits in Paklenica National Park in Croatia. Precisely we used a literature-driven approach to test the relevancy of five hypothesized benefit dimensions, composed of eighteen recreational experience items, on the general visitor sample. These were: *Enjoy nature, Novelty and learning, Socializing, Escape and solitude and Personal achievement.*

The specific objectives of this study are:

1. To test the data fit of the two competing models, orthogonal and correlated.
2. To test the reliability and convergent validity of the proposed measurement scale.

The following hypotheses are developed:

H1. The model with correlated benefit dimensions will fit the data significantly better than the orthogonal one.

H2. The set of measurement items will show satisfactory internal consistency and ability to measure distinct benefit sought by visitors.

Material and method

The population for this study consisted of 342 visitors, 18 years and older, who visited Paklenica National Park (Croatia) during the month of August, 2014. Data were collected from visitors by means of a self-administered questionnaire using a face-to-face approach.

Visitors were requested to rate how important were each of eighteen preselected recreational experiences for their decision to visit the Paklenica National Park. The ratings were operationalized using the 5 – point Likert scale ranging from one (1 - not important at all) to five (5 - extremely important). The recreational experiences items were drawn from previous research that used the REP scale (e.g., (Crilley et al. 2012; Pierskalla et al. 2004).

Confirmatory factor analysis (CFA) and model estimation were conducted with the aid of the "lavaan" package (Rosseel 2012)"type" : "article-journal", "volume" : "48" }, "uris" : ["http://www.mendeley.com/documents/?uuid=fb303371-5deb-4532-8667-714ad190a036"] }], "mendeley" : { "formattedCitation" : "(Rosseel 2012 for the "R" language and the environment for statistical computing (R Core Team, 2013). The first phase involved testing for acceptable model fit (orthogonal vs. correlated). The fit indices were selected with the corresponding recommended values: maximum likelihood $\chi 2$, relative chi-square ($\chi 2$/df), CFI; SRMR; RMSEA. The second phase included testing for reliability and convergent validity (i.e., adequate factor loading).

Results and discussion

The goodness of fit indices revealed that the orthogonal model, to a considerable extent, failed to properly reproduce the data; therefore, it has been rejected. Conversely, although less than perfect, the correlated model showed a satisfactory match to the data in respect to all examined fit indices. The assessment of the model fit, as a part of CFA analysis, supported the study hypothesis (H1), reinforcing the notion of

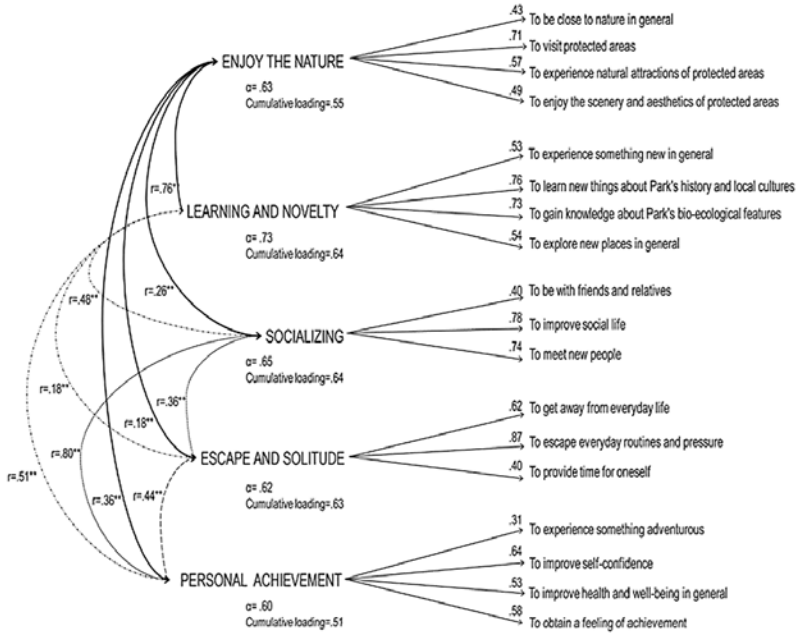

Figure 1. *Inter-correlations, reliabilities and standardized factor loadings for the model with correlated latent benefit dimensions.*

the presence of core benefits sought that are the most important to visitors across different protected natural settings.

With the exception of the latent dimension, *Novelty and learning*, the remainder of the benefit dimensions received moderate but acceptable α values ranging from .60 to .73 (Robinson et al., 1991). All factor loadings exceeded .50, suggesting that the measurement instrument acquired convergent validity (Hair, J., Black, B. Babin, B., Anderson, R. and Tatham 2006). This empirical evidence supported the second study hypothesis (H2), suggesting that measurement items were reliable and capable of measuring the distinct benefits sought by visitors (Figure 1).

Conclusions

This study has demonstrated the practical implication of the literature testing approach in the development and validation of the measurement instrument to identify visitors' desired benefits in protected areas

Although this study has been focused specifically on the management demands of Paklenica National Park, it would also be interesting to consider the potential of a developed measurement instrument in terms of the application to other protected areas. Data obtained from such comparative studies could be used by the wider policy making community as valuable inputs for the development of integrated frameworks for monitoring, evaluating and reporting the management effectiveness of networks of protected areas at the site, or at the national, regional or trans-boundary levels.

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