



# Measurement of visitors' satisfaction with public zoos in Korea using importance–performance analysis



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## HIGHLIGHTS

- Convenient and safe viewing environment was important to zoo visitors.
- Zoo visitors were satisfied with the price of admission and safety.
- The least satisfactory zoo attributes were related to animal welfare and education.
- Improving zoo environment and animal welfare was important for overall satisfaction.

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## ABSTRACT

Understanding the demands and satisfaction levels of zoo visitors becomes indispensable to sustain a flow of visitors in the increasingly competitive tourism market. This research assessed the importance and performance of the service and facilities attributes in order to measure visitor satisfaction using an importance–performance analysis (IPA). Results of the questionnaire survey of 697 visitors at six public zoos in Korea indicated that convenience and safety in observing animals were important to visitors, and children were a particularly significant motivator for zoo visits. Although attributes related to animal welfare and information-seeking had low importance and low performance in the IPA results, they were identified as the key determinants affecting overall satisfaction in the regression analysis. In order to enhance visitors' satisfaction levels, more efforts are required to improve zoo environment and animal welfare, in addition to developing diverse educational programs that can maximize the intrinsic nature and quality of zoos.

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## 1. Introduction

Zoos have been popular recreational destinations for gathering with family and friends, and many people find psychological comfort through enjoying the natural world and interacting with animals (Holzer, Scott, & Bixler, 1998; Ryan & Seward, 2004). The reasons behind people's desire to visit zoos may be explained by the biophilia hypothesis, which centers on the instinctive bond between human beings and other living organisms (Sakagami & Ohta, 2010; Wilson, 1984). Although entertainment has traditionally been perceived as the primary role of zoos (Turley, 1999), most modern zoos increasingly embrace conservation and research in their mission statements (Miller et al., 2004). In addition, zoos have become important venues for environmental education by fostering an appreciation of biodiversity and an awareness of

stewardship (Hunter-Jones & Haywood, 1998). These changes in perceptions and the roles of zoos in the West have influenced countries in Asia, including Korea. Recently, public interest in animal rights and welfare has been growing, and concern for zoo animals is evident in Korea. As such, Korean zoos began to develop and maintain standards for animal enclosures and animal welfare in their collections, as well as efforts to improve animal environment and welfare (Cho, Choe, Kim, Han, & Kim, 2009; Lim, 2012).

Despite a shift in emphasis from entertainment toward conservation and education, zoos still need to attract visitors in order to keep operating and ensure profitable growth in a competitive market (Dibb, 1995). Since the primary motivation for zoo visits is recreation and enjoyment (Puan & Zakaria, 2007; Sickler & Fraser, 2009), the service quality of zoos is necessary to satisfy the demands and expectations of today's visitors. Competition in the recreation and entertainment industry is constantly increasing, enabling visitors to choose from a variety of attractions if zoos fail to provide satisfactory experiences and entertainment (Tomas, Crompton, & Scott, 2003). Korean zoos, in particular, are facing

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multifaceted challenges because of the country's relatively short period of modern zoo history. Recent dramatic changes in visitors' perceptions about zoos' roles and increasing interest in the welfare of zoo animals has pressured zoos to maintain high standards of service and provide a variety of educational programs. In reality, however, many public zoos maintain the traditional menagerie-style exhibits (e.g., barred cages and concrete) due to insufficient budgets for improvement. These outdated facilities and low quality of zoo services fail to meet visitors' expectations and often deter people from visiting zoos. In recent years, public zoos have suffered financially due to a lack of funding from local governments and declining numbers of zoo visitors. Since the most common source of revenue for zoos has traditionally been the paying visitor (Davey, 2007; Hosey, 2008; Turley, 1998), it is necessary for zoos to measure visitors' satisfaction and identify their demands in order to provide a better quality of service.

To date, most studies of zoo visitors have been limited to visitors' motivations (Fraser & Sickler, 2009; Morgan & Hodgkinson, 1999; Packer & Ballantyne, 2002), behaviors (Davey, 2006; Falk et al., 2007; Fernandez, Tamborski, Pickens, & Timberlake, 2009; Ross & Lukas, 2005; Smith, Broad, & Weiler, 2008), and their perceptions and attitudes toward wildlife (Davey, 2007; Finlay, James, & Maple, 1988). A few studies also have investigated the physical design of exhibits (Davey, 2006; Shettel-Neuber, 1988) and zoos' conservation attitudes measured by their educational programs (Adelman, Falk, & James, 2000; Randall, 2011; Swanagan, 2000; Weiler & Smith, 2009). A number of zoo studies have investigated the factors associated with visitor experience and satisfaction. Luebke and Matiassek (2013) found that viewing animals is highly correlated to visitor satisfaction as well as their cognitive and affective reactions. The study, therefore, suggests that zoos need to focus on animal visibility and animal behavior in the planning and management of exhibits. Ryan and Saward (2004) assessed visitor reactions at the Hamilton Zoo in New Zealand and found that viewing animals was the most important attribute. Being able to get close to the wildlife and seeing large, rare species in their natural settings contributed to visitor satisfaction (Moscardo, 2008; Moscardo & Salzer, 2004). Kelling, Allard, Kelling, Sandhaus, and Maple (2012) found that naturalistic playbacks of lion roars enhanced the visitor experience and influenced higher satisfaction with the exhibit.

Other studies have focused on satisfaction with the zoo's physical attributes and available services (Karanikola, Tampakis, Tsantopoulos, & Digbasani, 2014; Vaníček, 2012). For example, Jensen (2007), who applied Herzberg's two-factor theory to the realm of zoos and aquariums, suggested that "hygiene" factors such as parking, eating, and toilet facilities are important because they can have a negative effect on visitors' overall perception of quality, thereby indirectly creating less satisfied visitors. Tomas and Saltmarsh (2012) also proposed that visitors' performance assessments of a destination during their experience influence how they view the destination and their level of satisfaction during the visit. Pearson, Dorrian, and Litchfield (2013) found that satisfaction with the activity level of the orangutans and the size and features of the exhibit influenced visitors' experience. Recently, various research methodologies have been used to explore the satisfaction of zoo visitors. For example, Klenosky and Saunders (2008) introduced the laddering technique as a method of understanding the factors that influence people's decisions to visit a zoological park. Q methodology, a method specifically intended to capture people's subjectivity, was used by Sickler and Fraser (2009), who focused on the construct of enjoyment rather than satisfaction.

While these and other studies have provided valuable information about visitors, the majority of zoo studies have been undertaken in Western countries. Kellert (1996) and Tuan (1968) asserted that caution should be exercised when generalizing

Western findings and applying them to other regions, because differences in cultural values and perceptions may disparately affect visitors' expectations and satisfaction levels. Turner, Reisinger, and McQuilken (2002) stated that different cultural groups place varying levels of importance on tourism services, resulting in different levels of satisfaction with the tourism experience. In particular, differences in philosophical orientation toward nature, animals, and environmental issues are reflected in visitors' experiences and should be considered in the design and management of nature-based tourism (Packer, Ballantyne, & Hughes, 2014). Therefore, more information regarding the demands and requirements for satisfaction of zoo visitors in Asian countries is needed, not only to increase the effectiveness of marketing and management of the zoo industry, but also to enhance the role of zoos as conservation and education centers.

The purpose of this study is to assess the importance and perceived performance of public zoos in Korea by utilizing the importance-performance analysis (IPA) in order to investigate visitors' overall satisfaction. The results of this study can provide basic information to establish strategies to improve the operation and management of zoos. Information obtained from visitor studies can be useful for managers to enhance service quality, thereby increasing the enjoyment and satisfaction levels of future visitors.

## 2. Methods

The study attempted to investigate which zoo attributes satisfy visitors and to identify their expectations and satisfaction with these attributes. A detailed research flowchart is illustrated in Fig. 1.

### 2.1. Study sites

This study was conducted at six public zoos located in the following major Korean cities: Chunju, Gwangju, Cheongju, Daejeon, Seoul, and Gwacheon. Table 1 summarizes the characteristics of each zoo in terms of size, total number of species, and number of annual visitors. The study sites differed greatly on each of the characteristics and amenities. Zoo sizes ranged from 30,000 m<sup>2</sup> (Children's Zoo, Seoul) to 196,000 m<sup>2</sup> (Seoul Grand Park Zoo, Gwacheon). In addition, the total number of species on display ranged from 92 at Children's Zoo to 307 at Seoul Grand Park Zoo. Seoul Grand Park Zoo,

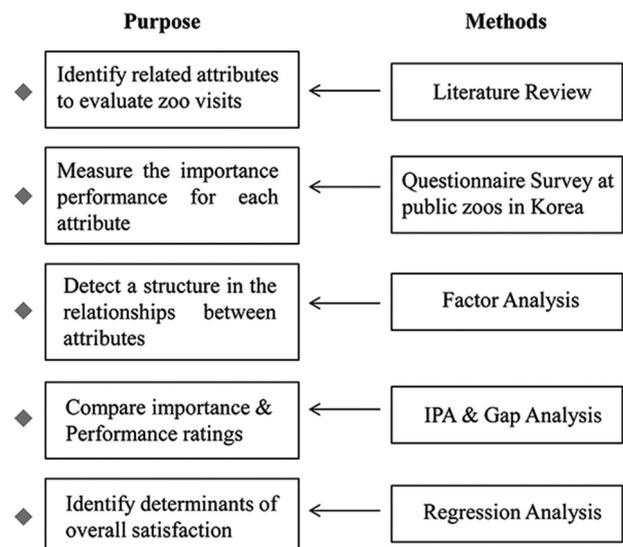


Fig. 1. Research flow chat.

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