**APPLICATION OF VISITOR PERCEPTIONS FOR THE ADVANCEMENT OF DEHIWALA ZOOLOGICAL GARDENS, SRI LANKA**

***T.D. Daraniagala1, E.A.D.N.D. Edirisinghe1\*, L.D.R.M. Bandaranayaka2***

*1Department of Zoology, The Open University of Sri Lanka*

*2National Zoological Gardens, Dehiwala*

**Introduction**

National Zoological Gardens of Sri Lanka is the only place where the highest number of captive animal species are exhibited in cages and enclosures. Design of the zoo, animals, and visitor characteristics can have a significant influence on visitor perception of zoo exhibits (Bitgood et.al., 1988, Shettel-Neuber, 1988). Although the zoo plays important roles in conservation, education, research, recreation and entertainment (Altman, 1998; Reade and Warna, 1996), there is a lack of information on the perceptions and expectations of local and foreign visitors who visit zoos in Sri Lanka. Understanding the impact upon these visitors and their perceptions will provide opportunities to further ensure animal welfare and maintain the role in education and animal species conservation. Therefore, this study will be helpful to fill this existing knowledge gap for keeping baseline data on visitor perceptions. It will also facilitate the gathering of data related to developing the captive environment and the zoo environment in future management plans and also to provide some guidance in designing and improving the facilities and animal exhibits in order to fulfil the roles of zoo effectively.

**Methodology**

This study was carried out in National Zoological Gardens Dehiwala from July to December 2015. National Zoological Gardens is situated in the western province of Sri Lanka in Colombo district and it was founded in 1936. Zoo captive environment includes architecturally-designed animal enclosures such as an aquarium, an herpetarium, bird house, butterfly garden and animal cages. For the present study, simple random sampling method was used, and 1500 visitors were selected including local visitors as well as foreign visitors. Questionnaires including 10 closed and 20 open ended questions were employed to collect data and questionnaires were distributed among selected sample visitors on weekdays, weekends and public holidays to ensure that a wide range of people from different backgrounds were included in the survey. Data were analyzed by MINITAB 14 software. Questionnaires mainly focused on animal cages, enclosures, facilities provided for visitors, purpose of the zoo visit, animal exhibits and animals which they would like to see at the zoo in future and suggestions for improvement of the zoo environment.

**Results and Discussion**

The demographic profile of the zoo visitors showed that the majority of the zoo visitors are females (52.5%) and majority of visitors (45.5%) were in the age category of 15-30 years. (Table 1). Most of the visitors preferred seeing large animals like Elephants and Chimpanzees while the least preference was for reptiles. A high expectation among visitors was identified (78%) to view new animal species like Pandas, gorillas and polar bears in zoo in the future (Fig. 1a). Priority order (Table 2) for the reasons for the visiting the zoo were; for education (35%), seeing animals (33%), and for leisure (21%).Most visitors were dissatisfied with (56%) the space and facilities available for animal cages and enclosures demonstrating doubts about the free movement and the comfort of animals(Fig.1b). A high preference among visitors was also observed on introducing electronic facilities at the entrance by introducing mechanical gates (89%), ticketing machines (88%) and credit card payments (23%) in future. The results also showed that most visitors (58%) were dissatisfied about inadequate infrastructure facilities such as canteens, shelters, benches and residence (Fig.1c). Results also revealed a considerably high tendency of visitors resolving not to revisit the zoo again. (9%) (Table 1)

**Table 1: Demographic Statistics of Visitors in Dehiwala National Zoological Gardens**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Variables** | **Number of visitors** |  **Percentage %** |
| **Nationality** | Sri Lankans | 1347 | 89.8 |
|  | Non- Sri Lankans | 153 | 10.2 |
|  | Total | **1500** |  |
| **Gender** | Male | 713 | 47.5 |
|  | Female | 787 | 52.5 |
|  | Total | **1500** |  |
| **Age (years)** | ≤ 15 | 525 | 35 |
|  | 15-30 | 682 | 45.5 |
|  | 31-40 | 240 | 16 |
|  | ≥ 45 | 53 | 3.5 |
| **Occupation** | Students | **1050**  | 70 |
|  | Teachers | 105 | 7 |
|  | Researchers | 75 | 5 |
|  | Retirees | 150 | 10 |
|  | Drivers | 82 | 5.5 |
|  | Others | 38 | 2.5 |
|  | Total  | **1500** |  |

**Table 2: Demographic Statistics of Visitors in Dehiwala National Zoological Garden**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Variables** | **Number of visitors** | **Percentage****%** |
| **Purpose of visit** | Know about nature | 135 | 9.0 |
|  | Seeing animals/Birding | 495 | 33.0 |
|  | Educational | 525 | 35 |
|  | Pleasure/leisure | 315 | 21.0 |
|  | Others | 30 | 2.0 |
|  | Total | **1500** |  |
|  | Children playing ground | 330 | 22 |
| **Tendency to revisit** | Yes | 915 | 61 |
|  | No | 270 | 18 |
|  | Neutral | 315 | 21 |
|  | Total | **1500** |  |

**Figure 1: Visitor perception on introducing new animal species (a), animal facilities (b) and infrastructure facilities (c) at zoological gardens.**

**Conclusion**

This study revealed that most zoo visitors preferred seeing large animals like elephants and chimpanzees while they paid the least interest to reptiles. The majority of the visitors expressed their disappointment about the absence of animal species like pandas, gorillas and polar bears, poor state of the infrastructure facilities for visitors, inadequate entrance facilities, animal facilities in cages and enclosures expressing their views on animal welfare. Findings also indicated a high tendency of a disinclination to repeat their visit to zoo. This study has been a pioneer source for the policy makers of National Zoological Gardens, Sri Lanka in various aspects. It has provided the data on the opinion of visitors on general and specific matters. Therefore, the management of the National Zoological Gardens should pay more attention to these findings for fulfilling visitor expectations in formulating strategies to improve the zoo for high visitor attraction and for making the zoo an entertaining and educational environment. Raising public awareness about the endangered species and the conservation of biodiversity should also be emphasized.

**REFERENCES**

Altman, J.D (1998). Animal activity and visitor learning at the zoo. *Anthrozoos* 11, 12-21.

# Bitgood, S., Patterson, D. & Benefield, A. (1988) - Relationships between exhibit naturalism, animal visibility and visitor interest in a Chinese Zoo. *Applied animal behaviour,* 96, 93-102.

Reade, R.S. & Warna, N.K., (1996). The modern zoo: How do people perceive zoo animals? *Animal Welfare* 47, 109-118

Shettel-Neuber, J. (1988). Second and third generation zoo exhibits: A comparison of visitor, staff and animal responses. *Environment and Behaviour*, 20(4), 452-473.