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Potential Visitors of Mirpur Zoological Garden as an Outdoor Recreation Area of Dhaka, Bangladesh

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Abstract: The study describes the potential visitors of Mirpur Zoological garden, an outdoor recreation area of Dhaka, Bangladesh. The maximum number of visitors was found in the age of below 30 years (72%) and older age groups represents only 28%. Sixty three percent male and 37% female constitute the visitors group in the study area. Literate person constitutes about 93% and student represents 38% visitors in the study area. About 40% visitors are employed. Most of the visitors (62%) were found visiting in family groups and the least numbers (5%) were visiting alone. Maximum visitors (45%) have come from medium family and the lowest numbers (18%) were from rich family. Maximum number of visitors (36%) visit the area with a cost of 51-100 Tk. Maximum visitors (76%) of the study area is city dwellers. Highest number of visitors (71%) preferred to get recreation in the holidays. It was found that most of the visitors (40%) visit the garden more than twice, 33% visit the garden twice and the least number (26%) visitors have not visited the area before. Maximum visitors (67%) stay at the zoological garden for 2-3 h and only 3% visitors stay in the garden for whole day.

Key words: Visitors, outdoor recreation, zoological garden

INTRODUCTION

Recreation is basically an aesthetic commodity in its attributes. One does not consume sight seeing^[1]. The term recreation is subject to a great variety of interpretations like acquisition, planning, development and administration of recreational area for people of various recreational interests. The term recreation may be further expressed as act of recreating, or state of being recreated; refreshment of the strength and spirits after toil, diversion play^[2]. Outdoor recreation is the leisure time activity undertaken in a relatively non urban environment characterized by a natural setting for the primary purposes of enjoyment and physical or mental well being^[3]. The recreation is producing on the site (Garden, park, etc.) and as such the consumer must nearly always travel to the area. Restoration of an area to scenic beauty (e.g. zoological garden) will contribute in addition to the psychological, aesthetic and physical benefits on the community involved. The implementation of recreational facilities will provide additional employment and cash income to the local community^[4]. Outdoors recreation can be viewed as voluntary, on site activity engaged in for pleasure that is to some degree depends on a natural setting^[5]. The demand for outdoor recreation is similar to other goods and services we purchase. The main differences are the lack of

market determined price and the immobility of most resources used for recreational purposes^[6].

The zoological garden can be a vital spot for student as well as teachers in order to familiarize practically with animals, which can provide all real facts. Scientists estimate that over the next 25 years more than a million species of plants and animals will become extinct. Most of these extinctions will occur in the tropics where the pressure of poverty and population growth is high. Here zoological garden can be the place of gene conservation. Today, due to increase in leisure time, scientific and technical improvement, upholding of living standard, mental and physical exhaustion exerted, people not only hope for outdoor recreation but also demand it as a part of their daily need^[7]. Dhaka zoological garden is the main source of outdoor recreation and education for the people of Bangladesh, especially for the city dwellers. Dhaka is the capital city of Bangladesh. Now huge people live in Dhaka and density of population is increasing day by day. Recreational area for large mass of population of Bangladesh is very limited. This problem is very severe at Dhaka due to its limited area with overwhelming population. Mirpur Zoological garden is an important recreational area for city dwellers as well as for other peoples of Bangladesh. But no reliable or published information is available about this area and for other

recreational areas too. So this research was conducted to determine the potential visitors of Mirpur Zoological garden as a recreational area, which will help the planner to provide an effective plan for its management and improvement.

MATERIALS AND METHODS

Study site: Mirpur Zoological Garden is situated at Mirpur in Dhaka, Bangladesh. The zoo is under the Ministry of Fishery and Livestock. The total area of Mirpur Zoological Garden is about 214 acres. The zoo remains open everyday of the year including holidays from 8 am to 6 pm. Now there are 576 mammals of 70 species, 903 birds of 103 species and 99 reptiles of 14 species. The necessity for establishment of zoological garden in the province of East Pakistan was felt at the very inception of Pakistan in the year 1947, as there was no such garden in the province^[8]. This was receiving attention of the government since 1950. A resolution covering the decision of the government for establishment of a Zoological-cum-Botanical garden in the suburbs of Dhaka was notified under department of Agriculture, Co-operation and relief (Animal husbandry) No. 1403-AH; dated Dhaka, the 26th December 1950. Later, an advisory board was constituted vide food and Agriculture Department, Notification No. 244, dated on establishment and management of Zoological-cum-Botanical garden at Dhaka^[9]. The Director of livestock services was its Member-Secretary. In the year 1964, on Advisory Committee with the Minister of Food and Agriculture Department as its chairman was constituted by the Government for planning and implementation of zoological garden at Dhaka vide notification No. XI L-5/64/279 dated 6th August 1964. The curator of the zoological garden was its Member-Secretary. The Government was pleased to reconstitute the Advisory Committee with late Mr. Abdul Hamid Chowdhury, S.K., Speaker of East Pakistan Assembly as its Chairman vide notification No. XI L-5/65/507 dated Dhaka, the September 1965. The site for zoological garden at Mirpur, which is about 10 miles away from Dhaka, was selected and duly approved in the year 1960^[8]. But due to various procedural difficulties effect from 27th August 1964. Since then rapid progress is being made on the zoo project work. At the initial stage of the proposed project of the zoo it started functioning with 78 staff with different categories. The employees continued to draw their salaries from the revenue department on yearly sanction basis. The ECNEC approved the greater project of Dhaka zoo on 17th November 1976 with the sanction of Tk.135.215 million.

The duration of the project was for 8 years. It started from last July 1975 and ended on 30th June 1983.

To collect data and information an opinion poll was conducted in the Mirpur Zoological garden, Dhaka. This was because most of the recreation seekers are willing to pass their spare time in the Zoological garden. However, some of the visitors are also visiting other recreational areas available in Dhaka. Information was also gathered from different officials in the Dhaka Zoo such as curator, zoo officers, veterinary surgeon and other staff of the zoological garden because no published information was available. Visitors survey method was conducted for valuation of outdoor recreation. A total of 223 respondents were interviewed representing different socio-economic and occupational groups. The selection of respondents was done randomly to avoid serious biasness. The respondents were interviewed with a properly structured questionnaires designed for this purpose. Data were collected from visitors mainly to know the visitor's category, age groups, educational status, occupational status, economics of the visitors and visiting category of visitors.

RESULTS

Age and sex: The total visitors of the surveyed area were 223, of which 63% of the visitors were male and the rest were female (Table 1). Majority of the visitors belong to the younger age groups (<30 years) which is about 72%. Older age groups (>30 years) represents only 28%.

Education: Table 2 shows the educational status of the visitors in the study area. Ninety three percent of the

Table 1: Distribution of visitors in the study area depending on age and sex

	Age groups (year)							
Sex	<10	11-20	21-30	Sub-total	31-40	41-50	>50	Sub-total
Male								
N=140 (62.78)	23	32	47	102	19	7	12	38
Female								
N=83 (37.22)	11	17	30	58	15	4	6	25
Total	34	49	77	160	34	11	18	63
N=223	(15.25)	(21.97)	(34.53)	(71.75)	(15.25)	(4.93)	(8.07)	(28.25)

Note: N=Total population, Figures in parenthesis indicates percentage values

Table 2: Educational status of visitors in the study area

Level of education	Number	Percentage	Total
Illiterate	16	7.18	7.18
Primary	45	20.18	92.82
Secondary	60	26.91	69.51
Higher Secondary	50	22.42	
Graduate	42	18.83	
Post-graduate	10	4.48	23.31
Total	223	100.00	100.00

Table 3: Occupational status of visitors in the study area

Occupation	Number	Percentage	Total
Service	68	30.49	39.01
Business	19	8.52	
Student	84	37.67	60.99
Unemployment	52	23.32	
Total	223	100.00	100.00

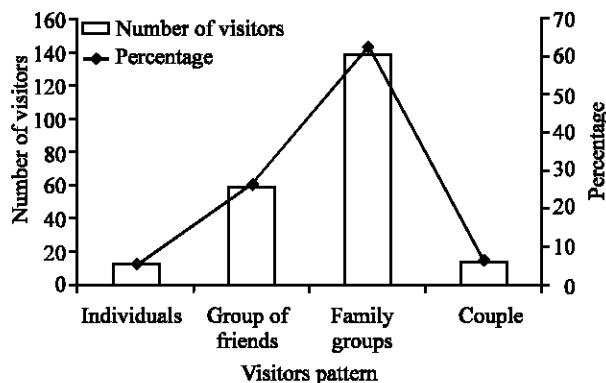


Fig. 1: Visitors pattern of Mirpur zoological garden

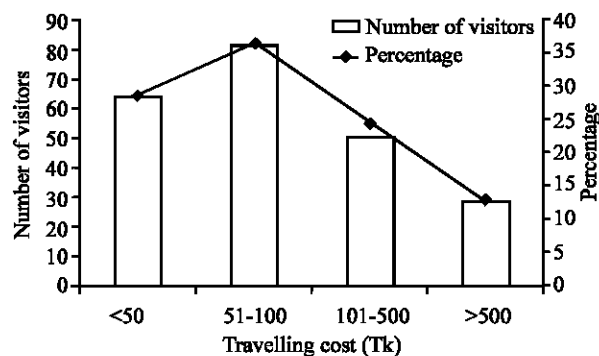


Fig. 2: Traveling costs of visitors of Mirpur zoological garden

visitors are literate and only 7% are illiterate. Among the literate visitors 70% are below the graduate level and 23% are postgraduate.

Occupation and visitors pattern: Results revealed that about 40% visitors are employed and about 61% visitors are unemployed (Table 3). Students represent the highest number of visitors (38%) followed by servicemen (30%). Businessmen represent lowest number of visitors (9%). Figure 1 shows the visitors pattern in the study area. Most of the visitors in the study area are visiting in a group with family members (62%) followed by group of friends (26%) and couple (6%). Individual visitors category represents the lowest number of visitors (5%).

Economics of visitors: Maximum visitors (45%) are come from medium family followed by low-income family (37%)

and rich family (18%) (Table 4). Among different income classes visitors of 4000-5000 Tk/month income classes has the highest value (27%) followed by 2001-3000 Tk/month and 3001-4000 Tk/month (14% each). Figure 2 represents traveling cost of visitors. Most of the visitors (36%) spend 51-100 Tk followed by <50 Tk (29%), 101-500 Tk (24%) and >500 Tk (13%) to visit the study area.

Duration, time, frequency of visit and traveling distances:

Study revealed that 71% visitors preferred to pass their spare time during holidays and the remaining 29% visitors desired to enjoy zoological garden other than holidays (Table 5). It was found that majority of the visitors (40%) visited the zoological garden more than twice followed by 33% visited twice and 26% visiting for the first time. The study indicated that most of the visitors (67%) stay at the zoological garden for 2-3 h followed by <2 h (16%) and 4-5 h (15%). Only 3% visitors stay in the garden for whole day.

Table 6 shows the visitors traveling distance in the study area. It showed that 76% visitors come from a distance range 10 to 49 km. Fifteen percent visitors from 50-89 km distances and 9% visitors from >89 km distances.

DISCUSSION

The results revealed that the visitors in the Dhaka Zoological Garden are varied with age, sex, education and occupation. In general male visitors are higher than female visitors in outdoor recreation^[9] and youth groups are more interested in outdoor recreation^[7,9]. In the present study it was found that the young, energetic males are very much willing to visit the park (Table 1). The lack of safety, deficiency in proper facilities and as well as the backwardness of women in our society might have discouraged them to come for recreation in this park. Educated people are more interested to visit the zoological garden (Table 2). The result also reflects that education can play a vital role in determining the demand for recreational activities at the zoological garden. Considering occupation students can play the leading role to gear-up the recreational activities at zoological garden (Table 3). Ahmed^[7] also repeated that students are the major groups for outdoor recreation. Another work by Ahmed and Rahman^[9] also showed that participation of outdoor recreation increases with increasing education level but decreases after higher secondary level. The result predicts that zoological garden might be a good recreational area for enjoying with family members and group of friends (Fig. 1). Visitors were also asked to find out amount of money they spend or willing to pay from

Table 4: Family income of the visitors in the study area

Category	Income class (Tk/month)									
	Low income family			Medium family				Rich family		
	<2000	2001-3000	3001-4000	4001-5000	5001-6000	6001-7000	7001-8000	8001-9000	9001-10000	>10000
Number of families	5.00	7.00	7.00	14.00	4.00	1.00	4.00	1.00	2.00	6.00
Percentage	8.80	13.72	13.72	27.44	7.84	1.96	7.84	1.96	3.92	11.80
Total (N= 51)	19 (37.24)			23(45.08)				9(17.68)		

N= Total population, Figures in parenthesis show percentage values, 60 Tk= 1US\$

Table 5: Visiting time, frequency of visits and duration of staying the visitors in the study area

Category	Visiting time		Frequency of visits			Duration of staying (h)			
	Holydays	Free time without holydays	Once	Twice	More than twice	<2	2-3	4-5	Whole days
	Numbers	120.00	50.00	59.00	74.00	90.00	35.00	149.00	33.00
Percentage	70.59	29.41	26.46	33.18	40.36	15.69	66.83	14.79	2.69

Table 6: Visitors traveling distance in the study area

Traveling distance (km)	Number of visitors	Percentage	Total
<10	40	17.94	75.79
10-29	100	44.84	
30-49	29	13.01	
50-69	24	10.75	
60-89	10	4.48	
>89	20	8.98	8.98
Total	223	100.00	100.00

the recreation they get into the zoo. From economic point of view the study area is the major source of recreation for medium class people (Table 4). Bangladesh is a developing country and a large percentage of people belong to the medium class for whose zoological garden is an important area for recreation. It might also be due to the presence of large mass of medium class people in Dhaka city and on the other hand higher class people may have the tendency to go abroad for recreation. Traveling costs influenced the visitor's intention for recreation in the sense that it minimized the visitors dem and whenever cost is higher and visitors participated when the costs are within their ability. In this study a reciprocal relationship between visitors and traveling costs is found (Fig. 2). Generally, we know mass gathering of people is seen in any recreational areas during holidays. This is not exceptional in context of our country (Table 5). In the Zoological Garden it reflects that more visit followed less recreational demand and vice-versa. This Zoological Garden is comparatively smaller than other garden of the world. So most recreationists wished to stay inside the Zoological garden for 2-3 h only. Most of the visitor came from the city area rather than other district (Table 6), which ensured maximum participation in the shortest traveling time. Studies on peoples participation in outdoor recreation found that it revitalizes human sprit, restores persons initiatives of life, produces feeling of well being, satisfaction, creativeness and physical conditions^[5,10-12]. So from this study it can be concluded that Mirpur Zoological garden might be a potential outdoor recreational area not only for the people of Dhaka but also for the people of other regions.

REFERENCES

1. Pant, M.M., 1992. Forest Resource Management. UNDP/FAO Project BGD/85/011 Chittagong Field Document, 2: 324-325.
2. Sarker, S.U., 1992. Parks and Wildlife Management. UNDP/FAO Project BGD/85/011 Chittagong, Field Document, 52: 45-46.
3. Outdoor Recreation Resources Review Commissions (ORRRC), 1962. Outdoor recreation for America, ORRRC Report to Congress. Government Printing Press, Washington D.C., pp: 246.
4. FAO., 1978. Forestry for Local Community Development. FAO Forestry Paper No. 7, Rome, pp: 40.
5. Wenger, K.F., 1984. Forestry Hand Book. John Willy and Sons, New York, pp: 1335.
6. Clawson, M. and J.L. Knetsh, 1996. Economics of Outdoor Recreation. John Hopkins Press, Baltimore, pp: 328.
7. Ahmed, M.R., 1993. Outdoor recreation potentials of the foy's lake area, Chittagong. Bangladesh J. For. Sci., 22: 30-36.
8. Anonymous, 1979. Dhaka Zoo Guide Book: Dhaka, Bangladesh, pp: 8-17.
9. Ahmed, M.R. and M.M. Rahman, 1997. Visitors participation in outdoor recreation activities at Bhawal National Park with respect to some socio-economic variables. Bangladesh J. For. Sci., 26: 37-42.
10. Brockman, F.C. and L.C. Merriam, 1979. Recreational Use of Wild Lands. McGrew Hill, New York, pp: 337.
11. Douglas, W.R., 1982. Forest Recreation. Pergamon Press, New York, pp: 354.
12. Torkildsen, G., 1992. Leisure and Recreation Management. E. and FN Spon, London, pp: 463.