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Evaluating the Visitor Experience at Nandan Park: An Empirical Investigation of Key Attributes

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ABSTRACT

The goal of this research is to identify key attributes that can be used to evaluate Nandan park from the visitors' perspective. One hundred and seventy eight respondents were selected by simple random sampling procedure for the study. A multivariate analysis technique like "Factor Analysis" was used to identify the factors.The results shows that space and food, refreshment and amusement, cleanliness and security, quality and comparison, behaviour and safety, price and less artificial have emerged important factors for selecting Nandan park.

Keywords: Amusement Parks, Attributes, Visitors Experience, Factor Analysis .

INTRODUCTION

It was started in 1999 with a group of ten young, forward looking bright non-resident Bangladeshis living in UK and two entrepreneurs from Bangladesh. Under the inspirational leadership of the group's Chairman and CEO, Mr. Masrur Choudhury, this group decided to pool resources to invest in a project in Bangladesh. They started with a real-estate company to sell residential plots for non-resident Bangladeshi living in UK and USA. Because of the spectacular success of the project, they were encouraged to set up a larger project, and in the process decided to set up an amusement park called Nandan Park Ltd at Saver near Chandra Dhaka. Further success followed and they entered into a joint venture with the largest park operator of India, Nicco parks & Resorts Ltd.

Nandan park was inaugurated on 03rd October -2003. Nandan Park is now country's largest and only family entertainment centre, which is attracting largest crowd every day.

Most of the rides and amusements are for the first time in Bangladesh like Cable Car, Water Coaster, Tilt-A-Whirl, Ice-Land, Musical Dancing Fountain, Wave pool and so on. This park is specially designed for wholesome family day out amusement and the rides have been carefully chosen so that everybody of the family can take the ride without being scared. Visitors, for the first time, have been experiencing snowfall (Ice-Land) in Dhaka.

The park is spread over 135 Bighas of land and there are plenty of greenery to spend the time in an eco-friendly and refreshing ambience. Water Park was inaugurated on May-2004. Water Park consists of Wave Pool, Wave Runner, Ladies & Gents Curve Slides, Kids Pool, Multi Play Zone, Rain Dance, Waterfall & Mist(Nandan Park,2011). The goal of this research is to identify key attributes that can be used to evaluate Nandan park from the visitors' perspective.

REVIEW OF RELATED LITERATURE

So far we know, a large number of research studies, articles relating to various aspects of amusement park have been published home and abroad. However, critical reviews of some of the important research studies/articles have been made in this study. Thach and Axinn (1994) found that consumers' perceptions of product features is influenced by the context of the features: both the absolute and relative importance of features in overall attractiveness and satisfaction appear to be contextual. Core conditions amusement parks must meet are cleanliness and the presence of nice scenery; water rides and roller coasters are also important, as is an uncrowded family atmosphere. Other features vary in importance. Kemperman et al(2003*)* introduced an ordered logit model that allows one to predict the time visitors spend on each of the activities available in a theme park. The model is estimated from experimental design data based on visitors' choices and time use for various hypothetical scenarios of activity availability in an existing theme park in the Netherlands. The findings provide information on the importance of the elements in the park in terms of visitor time use. Moutinho(1988) analyzed theme park visitors' behavior among the Scots in order to assist the development of strategic and tactical plans. The attitudinal data, collected through a questionnaire, included three sets of variables — consumers' choice criteria, informational sources, and importance of park attributes. The results indicate that fun rides, little waiting, and good climate/environment were the most important choice criteria. Friends and family members played a critical role in providing information, while television and radio advertising were also revealed as important sources of information.

McClung(1991) identified factors influential in the selection of a theme park and by determining the characteristics of visitors versus non-visitors analyses attraction and theme preferences. Telephone questionnaires were administered to 3039 households randomly selected from 10 eastern US metropolitan areas. Factor analysis provided insights into attraction and theme preferences. Strategies are suggested to position theme park effectively.Bigne et al (2005) analysed how visitor emotions in a theme park environment influence satisfaction and behavioural intentions. Emotions consist of two independent dimensions, i.e. pleasure and arousal. Two competing models were tested. The first model is derived from the environmental psychology research stream as developed by (An Approach to Environmental Psychology, MIT Press, Cambridge, 1974), where the visitor's arousal generates pleasure and, in turn, approach/avoidance behaviour. This emotion-cognition model is supported by Zajonc and Markus (1984). The second model to be tested is based on Lazarus' (Emotion and Adaptation, Oxford University Press, New York, 1991) cognitive theory of emotions. In this latter model, emotions are elicited by visitors' disconfirmation of the theme park. Using confirmatory factor analysis, it was supported that the cognitive theory of emotions better explains the effect of pleasure on satisfaction and loyalty. Additionally, consumers' willingness to pay more for the service is more likely to be induced by disconfirmation than by satisfaction alone. Managerial implications concerning the cognitive–affective sequence of satisfaction are discussed.Cochrane (2006) analyzed the behavior and perceptions of users of protected areas in Indonesia are affected by cognitive interpretations of nature. While Westerners are influenced by historico-philosophical constructions of wilderness of a biocentric derivation and demonstrate behavior on a knowledge-seeking/active nexus, Indonesians and other Asians share more anthropocentric/recreational attitudes, tempered with collectivist societal values. A study in Bromo Tengger Semeru National Park illustrated these differences. Conclusions are that leisure provision in protected areas in South East Asia requires stronger contextualization, an alternative one, and better market awareness if the economic and conservation benefits of tourism are to be maximized. Habib(2010)identified key attributes that can be used to evaluate Fantasy Kingdom from the visitors' perspective.Thus it appears from the preceding discussions that visitors' attitudes towards amusement park has not been addressed in Bangladesh. It would, therefore, not be unjustified to state that present study is the first of its kind in Bangladesh and can be used for guidelines for the similar studies in years ahead.

OBJECTIVES OF THE STUDY

The study has been conducted keeping the following objectives in mind:

- It aims to document attributes and park characteristics perceived to be important by visitors when visiting Nandan park.
- This study aims to rank the level of importance of key attributes and park characteristics.

RESEARCH DESIGN

Sampling Procedure

The sample for the study consisted of 178 visitors. They were selected by simple random sampling procedure.

Questionnaire Development and Pre-testing

To achieve the objectives of the study, a structured interview schedule was developed to collect information from the remaining sample population. Here we introduce 'Likert Scale' for measuring the attitude of the visitors. Initially draft questionnaire was prepared. The initial questionnaire was pre-tested and necessary correction was made before being finalized.

Data Collection

The study is compiled with the help of primary data. Primary data were collected from the visitors on the basis of interview schedule through personal interview. The study was conducted during the period from January 2011 to April 2011. Moreover, the desk study covered various published and unpublished materials on the subject.

Data Analysis

In the present paper, we analyze our data by employing descriptive statistics and factor analysis . For the study, the entire analysis is done by personal computer (PC). A well known statistical package SPSS (Statistical Package for Social Sciences) 17 Version and MINITAB 13 Version were used in order to analyze the data.

Factor Analysis

Factor analysis is a generic term for a family of statistical techniques concerned with the reduction of a set of observable variables in terms of a small number of latent factors. It has been developed primarily for analyzing relationships among a number of measurable entities (such as survey items or test scores). The underlying assumption of factor analysis is that there exists a number of unobservable latent variables (or "factors") that account for the correlations among observed variables, such as, if the latent variables are partialled out or held constant, the partial correlations among observed variables all become zero. In other words, the latent factors determine the values of the observed variables (The University of Texas at Austin 1995).

Each observed variable (y) can be expressed as a weighted composite of a set of latent variables (f's) such as

$y_i = a_{i1}f_1 + a_{i2}f_2 + \text{----------} + a_{ik}f_k + e_i$

where y_i is the i^{th} observed variable on the factors, and e_i is the residual of y_i on the factors.

RESULTS

Gender

Table I shows that 64.6 percent respondents are male and on the other hand 35.4 percent respondents are female.

Age

Table II depicts that 33.7 percent respondents belong to age group between 26 to 30 years, 32.6 percent respondents belong to age group between 19 to 25 years and only 14 percent respondents belong to age group 36 to 40 years.

Educational qualification

Table III shows that 32.6 percent respondents completed up to higher secondary level, 27.5 percent respondents completed postgraduate level and only 14 percent completed technical diploma.

Marital status

Table IV depicts that most of the respondents were single and their percentages were 49.4, 42.7 percent respondents were married and only 7.9 percent respondents were divorced.

Reliability

Table V and VI demonstrates the high internal consistency of the constructs and their stability (Nunnally and Bernstein 1994). In each case, Cronbach's alpha far exceeded Nunnally and Bernstein's (1994) recommendation of 0.7 and Bagozzi and Yi's (1988) of 0.6.Thus, the scales are sufficiently reliable for data analysis.

Total variance explained and eigen value

Table VII shows all the factors extractable from the analysis along with their eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor . Notice that the first factor accounts for 27.732% of the variance, the second 21.8%, the third 16.199%,the fourth 10.774%, the fifth 9.119%, the sixth 6.381% and the seventh 4.986%. . Results also show that there are seven factors that influence to select Nandan park. The factors are: space and food (6.10), refreshment and amusement (4.80), cleanliness and security (3.56), quality and comparison (2.37), behavior and safety (2.01), price(1.40) and less artificial (1.10). Thus, only the factors having latent roots or eigen values greater than 1 are considered significant ; all factors with latent roots less than 1 are considered insignificant and are disregarded(Hair et al , 2003).These factors together explain about 97 percent of the variance indicating higher level of importance of the factors (Table VII).

Scree plot

The scree plot is a graph of the eigenvalues against all the factors. The graph is useful for determining how many factors to retain. The point of interest is where the curve starts to flatten. It can be seen that the curve begins to flatten between factors 8 and 9. Note also that factor 8 has an eigenvalue of less than 1, so only seven factors have been retained(Figure I).

Varimax Rotated Factor Matrix

Principal component factor analysis with rotated factor loadings (Table VII) was performed on the survey data. Principal Component Analysis (PCA) is the commonly used method for grouping the variables under few unrelated factors. Variables with a factor loading of higher than 0.5 are grouped under a factor. A factor loading is the correlation between the original variable with the specific factor and the key to understanding the nature of that particular factor (Debasish 2004). Table VIII provides the rotated factor loadings against the 22 observed variables. Moreover, Factor analysis using Varimax rotation finds seven derived factors. Factor I named as 'space and food' consisted of six variables. The names of the variables are wider space (0.867), variety of food (-0.860),entertainment(0.856), staff's knowledge about the park's features(-0.834), fun (0.760) and no other alternative(-0.716). Factor II named as 'refreshment and amusement'. The factor is constituted by four variables including child refreshment (0.960), amusement(0.917), quality of rides(0.775) and mental refreshment(0.724). Factor III named as 'cleanliness and security'. . The factor is constituted by four variables including new venture (-0.873), cleanliness of the park(0.833), security(0.715) and large number of rides(0.528). Factor IV named as 'quality and comparison'. This factor consists of two variables. The variables are quality of food (0.970), and compare other amusement park(0.856). Factor V included three item scales and was named as 'behavior and safety'. This factor is measured by friendly and courteous staff(0.928) , ride safety(0.756)and layout of the park(-0.638). Factor 6 named as 'price'. This factor consists of two variables. The variables are higher price of admission (-0.912) and avoiding afraidness(0.907). Factor VII named as 'less artificial'. This factor is formed by only one variable- less artificial with factor loading of 0.883.

CONCLUSIONS AND RECOMMENDATIONS

From the above analysis, it is clear that space and food, refreshment and amusement,cleanliness and security, quality and comparison, behaviour and safety, price and less artificial have emerged important factors for selecting Nandan park. From the factor analysis, it identified seven factors, which are responsible for selecting Nandan park. These seven factors can be used as guideline for the concerned investors. Among the seven factors, space and food are the most important factor for selecting Nandan park because it reveals higher eigen values than any other factors.

Investors should understand the various factors that influence visitors' choice behavior. The attributes that are affecting the selection of Nandan park revealed in

the study should be given due consideration by respective investors. The findings of the study may be used as an index for an improvement in their services for wider acceptance and formulating marketing strategies accordingly. Also the findings of this investigation have implications for consumer research by both academics and practitioners.

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APPENDICES

Table I: Respondents gender identity

Gender	Frequency	Percent
Male	115	64.6
Female	63	35.4
Total	178	100.0

Table II: Age of the respondents

Age group	Frequency	Percent
19-25 Years	58	32.6
26-30 Years	60	33.7
31-35 Years	35	19.7
36-40Years	25	14.0
Total	178	100.0

Table III: Educational qualification of the respondents

Educational Background	Frequency	Percent
High School	20	11.2
Higher Secondary	58	32.6
Technical diploma	25	14.0
Graduate	26	14.6
Postgraduate	49	27.5
Total	178	100.0

Table IV: Marital status of the respondents

Marital Status	Frequency	Percent
Single	88	49.4

Married	76	42.7
Divorced	14	7.9
Total	178	100.0

Table V: Overall scale reliability

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.723	.751	22

Table VI: Scale reliabilitv of observed variables

Observed Variables	Cronbach's Alpha if Item Deleted
Wider Space	.690
Avoiding Afraidness	.724
Less Artificial	.710
Child Refreshment	.690
Mental Refreshment	.696
Amusement	.676
Fun	.715
New Venture	.747
No Other Alternative	.733
Compare with Other Amusement Park	.713
Entertainment	.694
Large Number of Riders	.698
Friendly and Courteous Staff	.712
Ride Safety	.678
Cleanliness of the Park	.706
Variety of Food	.752
Layout of the Park	.729
Quality of Rides	.715
Higher Price of Admission	.739
Security	.691
Quality of Food	.702
Staff's Knowledge about the Park's Features	.749

Table VII: Eigen values of each factors

	Initial Eigenvalues		
Factor	Total	% of Variance	Cumulative %
Space and Food	6.101	27.732	27.732
Refreshment and Amusement	4.796	21.800	49.532
Cleanliness and Security	3.564	16.199	65.731
Quality and Comparison	2.370	10.774	76.506
Behavior and Safety	2.006	9.119	85.625
Price	1.404	6.381	92.006
Less Artificial	1.097	4.986	96.992

Extraction Method: Principal Component Analysis.

Table VIII: Rotated Component Matrix[a] of observed variables and factors

	Factor						
Observed Variable	Space and Food	Refreshment and Amusement	Cleanliness and Security	Quality and Comparison	Behavior and Safety	Price	Less Artificial
Wider Space	.867	.205	.203	.324	-.038	.046	.182
Variety of Food	-.860	-.304	.217	.304	.048	.160	-.028
Entertainment	.856	.300	.087	.172	.248	-.218	-.122

Staff's Knowledge about the Park's Features	-.834	-.012	.224	-.022	.082	-.470	.162
Fun	.760	.210	.351	.077	-.190	-.016	-.460
No Other Alternative	-.716	.253	.193	.155	.363	.289	-.058
Child Refreshment	.113	.960	-.028	.025	.152	.127	-.100
Amusement	.226	.917	.110	.138	.089	-.071	.219
Quality of Rides	.099	.775	.293	-.264	-.440	.200	-.013
Mental Refreshment	.360	.724	.155	-.190	.033	-.121	.432
New Venture	.309	.077	-.873	.255	-.072	-.197	-.062
Cleanliness of the Park	.244	.203	.833	-.106	.133	-.106	-.177
Security	-.067	.651	.715	-.098	.143	.109	.119
Large Number of Riders	-.012	.315	.528	.389	.397	.310	.276
Quality of Food	.050	-.095	-.059	.970	.156	-.106	-.063
Compare Other Amusement Park	.003	-.017	-.358	.856	.051	.093	.302

Friendly and Courteous Staff	-.194	.123	.202	.071	.928	.141	-.137
Ride Safety	.235	.082	.360	.477	.756	.029	.092
Layout of the Park	.256	.237	.353	.168	-.638	-.256	-.503
Higher Price of Admission	.265	-.063	-.167	.253	-.009	-.912	.012
Avoiding Afraidness	.115	.054	-3.177E-5	.212	.248	.907	.198
Less Artificial	-.103	.341	.038	.262	-.067	.139	.883

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

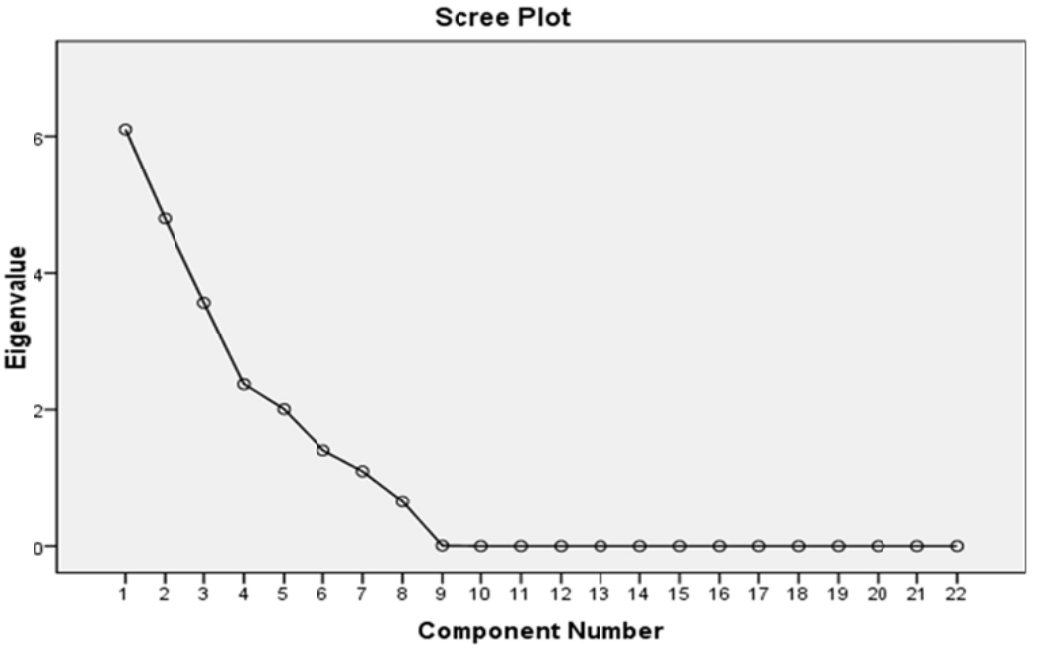


Figure I: Scree plot of factors or unobserved variables