

The Relationship between Non-Natural Sounds and Visitors' Nature Appreciation Needs in an Urban Park

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Abstract: *Currently, most of visitors attracted to visit urban park because of the natural surrounding and the environmental benefits. Most times the majority visitors visit the park to fulfill their nature appreciation needs and they have heard many natural sounds and non-natural sounds in an urban park. According to that, the main purpose of this study was to identify the relationship between non-natural sounds and perfect visitor's nature appreciation needs in the urban park. Build up a hypothesis to achieve the above objective. It was, there is a relationship between non-natural sounds and visitors' nature appreciation needs. There was an independent variable name as non-natural sounds (Human Sounds, Machine Sounds, Instrumental Sounds) and there were five dependent variables (feel close to nature, observe the beauty of nature, obtain a feeling of harmony with nature, find quiet places and enjoy the sights, sounds, and smells of nature) name as nature appreciation needs. Potential for Conflict Index (PCI₂) as a stranded method to use the define independent variable and can be extended to include Kaiser Mayer Olkin (KMO) by define the dependent variables. Cluster sampling was used to select sample and questionnaires were used for data collection in "Diyatha Uyana" urban park. Questionnaires were distributed throughout the 150 visitors' in an urban park. The data was analysis of using cross tabulation and chi-square analysis. According to value of gamma could get the findings of this study showed that the independent variable has a strong relationship with visitors' nature appreciation needs.*

Keywords: Non-natural sounds, Nature appreciation needs, Urban park, Environmental Benefits

1. Introduction

Recreation is about activities, pastimes, and experiences which are freely chosen. They are usually undertaken in free time and produce feelings of well-being, fulfillment, enjoyment, relaxation and satisfaction. There are two types of the recreation; indoor and outdoor recreation. Outdoor recreation or outdoor activity is leisure pursuits engaged in the outdoors, often in natural or semi-natural settings out of town. Recreation and leisure are important for living with challenges, taking risks and experiencing new things. The wildlife, recreation can be identified as an important part of outdoor recreation. Though it is found to be somewhat dangerous and adventurous, it is capable of entertaining people in an unprecedented manner.

A park is an area of natural, semi-natural, or planted space set aside for human enjoyment and recreation or for the protection of wildlife or natural habitats. It may consist of grassy areas, rocks, soil and trees, but may also contain buildings and other artifacts such as monuments, fountains or playground structures. Many parks have trails for walking, biking and other activities. Urban parks often have benches for sitting and they may contain picnic tables and barbecue grills.

Visitors are attracted to visit an urban park because of the natural surrounding and the environmental benefits that the site can offer. Ranging from easy strolls to hiking in parks, on trails is among the most common recreation facilities provided in parks. Many people visit urban parks with the hope and expectation of experiencing natural sounds, and noise degrades their chance to experience the cultural, historical, and natural features that parks offer. Visitor's motives into parks in four factors namely; challenge and freedom, nature appreciation, social relationships and escape from the routine (Boxall & Adamowicz, 2002).

The most sounds are natural, human, and mechanical. Such classification types depend upon the correct identification of the sound source. (Schafer, 1994) initially classified sounds into natural, human, sounds and society, mechanical sounds, quiet and silence, and sounds as indicators. Each of these classifications also contained sub classifications. Research indicates that experiencing the restorative sounds of nature is an important reason for visiting urban parks, and despite the growing body of protected areas soundscape focused research, very little attention has been placed on the relationship between natural sounds and visitor's nature appreciation needs.

2. Methodology

As current research is intended to impact of non-natural sounds to fulfill visitors' nature appreciation needs in an urban park. It is necessarily considered as a quantitative research. This study was done subject to the following hypothesis which was formulated with the help of a responsive conceptual framework. Here alternative and null hypothesis are pointed out separately. In the decision making it cannot be proven that the taken is correct. There is a significant relationship between non-natural sounds and visitors' nature appreciation needs. The researcher has formulated a key objective and three specific objectives for this study. Primary data and secondary information were collected to accomplish the key objective and specific objectives. Primary data have been analyzed using cross tabulation and chi square. The primary data was collected using cluster sampling in under quantitative approach. A purposefully designed questionnaire was used as a data collecting method. The questionnaire was of two segments; non-natural sounds and visitors' nature appreciation needs. Non-natural sounds were assessed under three variables and visitors' nature appreciation needs were assessed under five variables. Through this overall process, specific objectives were achieved and it paved the way to reach to the key objective.

2.1 Study Area

When the government nationalized Water's Edge in 2008, it began its transition from private golf course to public space. While the Water's Edge building remains for private functions, the land and water around has been rededicated to nature and public recreation, to great effect. From public walking areas of the weekly Good Market, Diyatha Uyana has become a beautiful addition to the city as a public recreation park. Which is located in Baththaramulla. Because of the scenic beauty of this park it didn't take much time to attract many people towards to the park. Children who accompany their parents to the park will have a wonderful time while their parents shop for their gardening needs.

So "Diyatha Uyana" is one of the places where people consuming the outdoor recreation product mostly. Which is the entrance fee and it can be noted as one of the most crowded recreation place in Colombo especially in weekends. The place is built within the reach of a drive from Colombo and it does not have the hustle and bustle of the city. The hundreds who flock here every day can enjoy some quality time with their loved ones, breathe some fresh air and relax. When moving to the park's natural and environment visitors can get the great experience. According to those factors "Diyatha Urban" park selected for this research as a sample area.

2.2 The Sampling

This study was limited to a selected sample due to the concession of analysis. This research collected data from visitors who came to visit to the Diyatha urban park recreation premises. It is located environmental elaborate and other aesthetics features are being suitable to this study purpose. Finally, "Diyatha Uyana" urban park was selected for the best place to collect primary data on study purpose.

The primary data collected from the "Diyatha Uyana" park and the researcher was collected this data from the very fair sample. Cluster sample was used to selected sample. The questionnaire was given to visitors in Diyatha park who experiencing visiting at the time of data collection. Generally, 150 questionnaires were given to park visitors.

2.3 Pilot Survey

Pilot survey holds a major part of the research. Several pilot surveys were basically done according to the model building. Pilot survey on "Diyatha uyana" urban park was done the operation was started from 9.00 a.m. There were several objectives that had achieved through the pilot survey. Pilot survey had been carried out to test the suitability of the questionnaire to the particular site. Formulated basic questionnaire with 25 questions based on non-natural sounds and visitors' nature appreciation needs was subject to Reliability, and validity test. In this case, 20 questionnaires were given to the visitors. According to the reliability test, Cronbach's Alpha.753 positive values could be obtained. Therefore, the same questionnaire was employed in the research. Then the questionnaires were prepared in order to distribute among the sample. This was done for the purpose of having a better confirmation regarding the reliability and validity of questionnaires.

3. Data Analysis and Presentation

According to survey data as presented in the sample frequency of female is 67 and male frequency is 83 out of 150 participants. That value displays the percentage of females is 44.7% and the percentage of males is 55.3% there is majority of male respondents. The data about the frequency of visiting to the "Diyatha uyana" urban park. According to survey data as presented in sample frequency of the first visit is 64 and visited before frequency is 86 out of 150 participants. That value display percentage of first visit is 42.7% and percentage of visited before is 57.3%. there is majority in visited before respondents.

According to the analysis relationship with age and non-natural sounds at Diyatha uyana urban park, out of the 26.0% are 18-24 age group respondents, 0.7% are strongly disagree, 2.7% are disagree, 3.3% are neutral, 14.7% are agree and 4.7% are strongly agree with overall non-natural sounds. Out of 26.0% of total 25-34 respondents, 3.3% are strongly disagree, 5.3% are disagree, 7.3% are neutral, 6.0% are agree and 4.0% are strongly agree with overall non-natural sounds. out of the 17.3% are 35-44 age group respondents, 0.0% are strongly disagree, 1.3% are disagree, 8.7% are neutral, 2.7% are agree and 4.7% are strongly agree with overall non-natural sounds. Out of 15.3% of total 45-54 respondents, 0.0% are strongly disagree, 2.0% are disagree, 7.3% are neutral, 4.7% are agree, 1.3% are strongly agree with overall non-natural sounds. Out of 9.3% of total 55-64 respondents, 2.0% are strongly disagree, 0.7% disagree, 4.0% are neutral, 0.0% are agree and 2.7% are strongly agree with overall non-natural sounds. out of the 6.0% are more than 65 age group respondents, 0.0% are strongly disagree, 3.3% are disagree, 1.3% are neutral, 0.0% are agree and 1.3% are strongly agree with overall non-natural sounds.

3.1 Testing of hypothesis

The hypothesis formulated for this study is tested in a systematic way in order arrives at a conclusion about the variables being researched under this study. Accordingly, there were hypothesis which were formulated based on the research model are tested under the non-natural sounds and visitors' nature appreciation needs in "Diyatha uyana" urban park. There has a relationship between non-natural sounds and visitors' nature appreciation needs. The researcher used chi-square test for testing the hypothesis.

H1-There is a relationship between human sounds and visitors' nature appreciation needs.

The degrees of freedom are 16 and related value stands is 34.129 and Asymp Sig at .005 and further the Chi-Square Table depicts data as when the degree of freedom is 16, the value exceeds 34.2672. Hence null hypothesis isn't accepted and there is a significant relationship between human sounds and visitors' nature appreciation needs. According to Gamma value .301. It means this value is between 0.30-0.99 and there is a strong relationship is between human sounds and visitors' nature appreciation needs.

H2-There is a relationship between machine sounds and visitors' nature appreciation needs.

The degrees of freedom is 16 and related value stands is 34.524 and Asymp Sig at .005 and further the Chi-Square Table depicts data as when the degree of freedom is 16, the value exceeds 34.2672. Hence null hypothesis isn't accepted and there is a significant relationship between machine sounds and visitors' nature appreciation needs. According Gamma value .352. It means this value is between 0.30-0.99 and there is a strong relationship is between machine sounds and visitors' nature appreciation needs

H3-There is a relationship between instrumental sounds and visitors' nature appreciation needs.

The degrees of freedom is 16 and related value stands is 47.265 and Asymp Sig at .000 and further the Chi-Square Table depicts data as when the degree of freedom is 16, the value exceeds 39.2524. Hence null hypothesis isn't accepted and there is a significant relationship between instrumental sounds and visitors' nature appreciation needs. Gamma value (-.035). It means this value is between (-.01) -(-.09) and there is a weak relationship is between instrumental sounds and visitors' nature appreciation needs.

Finally, Main Hypothesis in this research there is a relationship between non-natural sounds and visitors' nature appreciation needs. When the degrees of freedom are 16 and related value stands is 56.392 and Asymp Sig at .000 and further the Chi-Square Table depicts data as when the degree of freedom is 17, the value exceeds 39.2524. Hence null hypothesis isn't accepted and there is a significant relationship between non-natural sounds and visitors' nature appreciation needs. According to Gamma value .338. It means this value is between 0.30-0.99 and there is a strong relationship is between non-natural sounds and visitors' nature appreciation needs.

4. Findings

The finding of the research is mainly identified all non-natural sounds (Human sounds, Machine sounds and Instrumental sounds) have a strong relationship with visitors' nature appreciation needs in Diyatha uyana urban park. There is a strong relationship between human sounds and visitors' nature appreciation needs in an urban park. It is a strong relationship between machine sounds and visitors' nature appreciation needs. But the weak positive relationship between instrumental sounds and visitors' nature appreciation needs According to demographic factors most of the participants were male in Diyatha park. In this survey data show a higher score explained among 18-24 and 25-34 age groups participations. According to demographic factors most frequency of the participants was visited before in urban park. Demographic factors most of the participants visited Diyatha uyana an urban park for an afternoon. In this survey data shows a higher score explained among 3-4 hour participations were staying in Diyatha uyana urban park. Both female and male visitors have a neutral perception of non-natural sounds.

5. Conclusion

The urban park is the one of top outdoor recreation areas in the world. Baththaramulla "Diyatha uyana" urban park one of famous urban park in the Colombo district. This study reviews based on the park. The findings reveal how to influence

of non-natural sounds for visitors' nature appreciation needs in this park. According to this study, null hypothesis rejected and research found there is a strong positive relationship between independent variable and dependent variable. As far the relationship between independent variable and nature appreciation needs are concerned, it has been provided by this empirical study that there is clearly a strong positive relationship. In the other words, there are positive effects to visitors' nature appreciation needs from non-natural sounds of "Diyatha uyana" urban park. Also, researcher found there is a relationship between gender, age and non-natural sounds. In order to make this sure, the researcher statistically tested how visitors' nature appreciation needs is associated with the independent variable. All statistical tests which were scientifically undertaken clearly proved that there is a positive relationship between each independent variable and dependent variable. All of these chi square tests are significant. However, overall statistical tested prove there is a strong positive relationship between non-natural sounds and visitor's nature appreciation needs.

6. Recommendations

Based on the finding of the researcher would recommend the followings to the defense and Urban development authority. The authority of defense and the urban development ministry should more attention to the visitors' nature appreciation needs in an urban park. The project developers should emphasize to create an environment as naturally with more natural sounds. The authority should more concern to control non-natural sounds and develop natural sounds in Diyatha uyana urban park. The authority should more attention about human sounds and they should control the annoying human sounds in an urban park. The authority should more attention about machine sounds and they should control the annoying machine sounds in an urban park. The authority should more attention about instrumental sounds and they should control the annoying instrumental sounds in an urban park.

References

- [1] Boxall, P., & Adamowicz, W. (2002, August 6). Understanding. Retrieved from www.bing.com: <http://www.bing.com>
- [2] Schafer, R. (1994). *Soundscape. Our sonic environment and the tuning of the world.* Vermont, USA: Destiny books. (Original work published, 1977).
- [3] A John. (1986). Recreation trends and implications for government, *Work Leisure and Technology*, pp. 167-83
- [4] Clark, R. a. (1979). Determining the acceptability of recreational impacts: An application of the Outdoor Recreation Opportunity Spectrum. In *Proceedings of the Recreational Impacts on Wildlands Conference*, 32-42, Seattle, WA, Oct. 27-29, 1978.
- [5] Gramann, J. (1999). The effect of mechanical noise and natural sound on visitor experiences in units of the National Park system. *Social Science Research Review* 1(1). National Parks Service. Washington, DC, USA. 15 p.
- [6] Grau, K. (2005). Acceptability of social conditions in Zion National Park: incorporating auditory elements into a visual crowding research method. . Unpublished MSc thesis, University of Montana, MT, USA. 120 p.

- [7] John, A. (1986). Recreation trends and implications for government. In R. Castle, D. Lewis & J. Mangan (eds) Work, Leisure and Technology. Melbourne, Longman Cheshire, 167-83 (p. 167).

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