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# Principle factors which affect to the proper functioning of urban public gathering spaces with special reference to recreational parks in Colombo city

I.U.K. Gunawardhana, W.A.P.S Kumara, and H.D.S Asoka

Faculty of Built and Spatial Science, General Sir John Kotelawala Defence University,
Ratmalana, Sri Lanka
#gunawardhanaisuri@gmail.com,

Abstract: Rapid urbanization and change of lifestyles require more public open spaces in cities to fulfill different socio, economic and environmental needs of the city. The urban park is a breathing space in a highly dense urban fabric for the public to recreational activities as well as physical health activities. The successful functionality of recreational parks in urban context will be determined by citizens' acceptance. A Sociologist and urbanist, William H. Whyte is the mentor who did long time research on public gathering spaces. Based on the research, he identified a set of principal factors behind the successful functionality and social acceptance of public gathering spaces. This paper will be discussed the applicability of Whyte's Principles in Sri Lankan urban context. For this research, theoretical knowledge of urban public spaces, recreational parks, principle factors of Whyte's theory will be discussed through a comprehensive literature survey. Basically, the data collection was done by selfobservation, photography survey and a semi structured questionnaire. Semi structured questioner was helped to have more requests and ideas from the visitors. Finally, the data will be presented through photographs, graphs and charts to have better clarification about the collected data. In the conclusion, effect of Whyte's theory on the function of these parks and the things which have to be improved will be discussed.

**Keywords:** Urban public gathering spaces, Whyte's theory, Urban parks in Sri lanka

## Introduction

Urban public gathering spaces, especially recreational parks became more popular in Sri Lanka within last few years after long term civil war. Pedestrian pathways, markets, squares, parks had acted as public places in Sri Lanka. These places gave a considerable contribution to enhance the relationship of people and also between the natural environment and people("A Critical Look at Central Park's Design," 2012). These recreational parks had been designed with the consideration of human activities and their behaviour. As a result of rapid development of urban cities, human lifestyle became more stressed and complex. They didn't have much time to move with other people and engage with recreational activities except their daily routing. And also, urbanization had directly affected to the natural environment and it was regularly got replaced from high rises and huge buildings. Because of the induction of the population and deficiency of the lands, people had to live in very small plots within a limited space. Therefore, they didn't have enough space to spend their lives freely with nature. In present, people are looking for the places where they can spend their valuable time with their family and friends leisurely while they build up human interaction, feel the natural environment with improving their mental and physical satisfaction. Necessity of public gathering spaces with recreational activities emerged with this demand. The way of addressing to human



needs and spatial qualities should highly considerable in recreational parks.

Whilliam.H.Whyte did a research on urban public gathering places in New York city about why some urban public places successfully work and why others don't. In a city, there were faultless places where people can enjoy themselves. According to Whyte's findings, people were used to pass the time while sitting around fountains, ledges and along the streets as well as in mini parks and plazas. People were gathered around mini parks, public squares, plazas and streets. He had noticed, that these places got more crowded in special times in a day such as lunch hours, evenings or in weekends. And also, he had recognized some of these public places were totally empty. Throughout his research he had discussed about the principle factors which had caused to proper functioning of a public gathering place as well as the drawbacks which were caused to create a dead place. These places function because of the people. Therefore, the place should be comfortable and attractive for them. Whyte had identified sitting spaces, water, trees, sun, wind, food, streets (accessibility), desirable and triangulation as the affective principle factors for a better functioning of an urban public gathering space.

The problem that I'm going to address through this research is why some parks are functioning well when others are not. With the rapid development of Colombo city after civil war, lots of neglected lands were converted to public gathering places, especially for recreational parks. Most of them are functioning well and some of them are not. Though the amount of people that uses these parks

varies significantly, all these parks were designed with one main purpose in mind. But the problem is why some parks work successfully and others don't? What are the attributes that are affecting for the

functioning of these parks? Were they designed according to a principle or followed any proper method?

#### **Research Problem**

One of the best theories to study about urban public gathering space is Whyte's theory. The research question that we are going to address in this paper is whether the application of Whyte theory had led to the proper functioning of the recreational parks in Colombo city.

In this study, theoretical knowledge of urban public spaces, recreational parks, principle factors of Whyte's theory will be discussed through a comprehensive literature survey. This theoretical knowledge was assisted to conduct an analysis of collected data. Selected recreational parks around Colombo city were taken as case studies to collect data. When selecting parks, functioning of the park and basic arrangement is considered to do a successful and efficacious analysis. Basically, the data collection was done by selfobservation, photography survey and a semi structured questionnaire. Observation is based on the principle factors which had been identified from Whyte's theory. Before doing the observations, check list had to be prepared. Things need to be observed had to listed out carefully by considering the needed data. To present the observed data, photographs were taken. For take more data regarding selected factors, semi structured questionnaire was presented. From each park, 90 people were selected from different different age groups and gender. Questionnaire was done throughout the day during several time period to take an average data. By a semi structured questionnaire, with the response of the visitors more data were collected by adding more questions. And also, that was helped to have more requests and ideas from the visitors. Finally,



the data will be presented through photographs, graphs and charts to have a better clarification about collected data. Data of all three parks will be presented as a comparison. As the conclusion, effect of the Whyte's theory on the function of these parks and the things which have to be improved will be discussed.

Most of the researches has been done about the impact of the social, physical and mental factors of urban parks. Less number of researches has been done about the designing factors of a public gathering space. Whilliam.H Whyte has done A research about the principle factors which are affected to the well-functioning of an urban public gathering space. And We have studied about three well-functioning recreational parks in global context. These three parks also have been used the principles which have been identified by Whilliam Whyte.

#### **Discussion**

For case studies we have taken three well – functioning recreational parks around Colombo city. Diyatha Uyana, Viharamaha devi Park and Nawala Wetland park had selected among all the recreational parks around Colombo city considering about its function and context. Thus, these three parks comparably crowded than other recreational parks, conceptually the layout and the functions of the parks were different.

First, we observed the purpose of visit to these parks. According to the observations, purpose of the visiting had varied with the time of the day and age groups.

Above table mentioned that mostly people visited the park to relax, enjoy and entertainment. Secondly highest number of people came to buy food. In Diyatha Uyana park, less number of people visited to meet a person. Considerable percentage of people had visited for exercises.

Purpose of visit at Viharamahadevi park

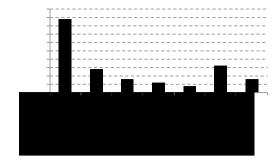


Figure 1: Survey results of main purpose to visit Diyatha Uyana

Purpose of visit at Viharamahadevi park

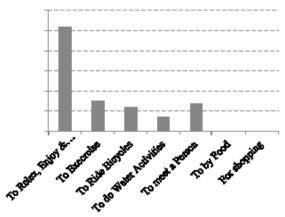


Figure 2: Survey results of main purpose to visit Nawala Wetland Park

As mentioned in above graph highest number of people visited for recreational activities as same as Diyatha Uyana. Minimum number of people came for do water activities. Though there is a food court in this park, anyone had not purposely came there for buy food. But as we observed lots of people had their meal in the park which had taken from outside.

Purpose of visiting to Nawala wetland park was varied within few purposes. As same as above mentioned parks, people came to this park also mainly for relaxing, enjoying and entertainment. Less number of people came to ride bicycles.



Purpose of visit at Nawala Wetland park

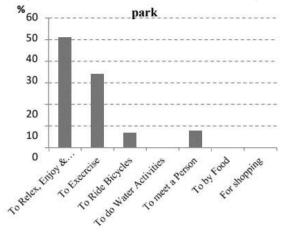


Figure 3: Survey results of main purpose to visit Viharamahadevi Park

According to the observations and data, people were gathered to these public open gathering spaces which had categorized as recreational parks for different purposes. category of the people had varied with the time and the age group. As the main purpose visiting, relaxing, enjoying entertaining marked as highest. Though it was the main purpose, they participate to other functions as well. Such as having food, boat rides, buying goods. All these functions were joined together in a park. As mentioned in Whyte's theory, people had gathered to public places basically for relaxation and recreational activities.

### A. Seating places

Seating arrangements had been designed according to the defined activities in Diyatha uyana. Soon after entering to the park, there is an aquarium designed with benches around it under a shading. While walking forward, food court had designed as a pitched roof building which exposed to the outside. Either sides of the food court had designed with benches and tables for dining under a shading of a tree canopy.

Food court was elevated few steps, and people used to sit on the ledge which had created from the food court boundary. Either sides of the walking path also designed with seating spaces as short benches. Benches had arranged throughout the bank of Diyawanna Oya. And also, people allowed to sit on the grassed land too. All those seating places were lit up during the night time for ensure the security.

#### Diyatha Uyana

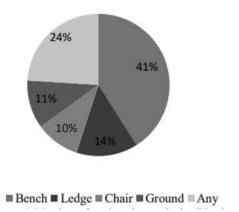


Figure 4: Mostly preferred seating method at Diyatha Uyana

This chart shows the preferability of seating method in Diyatha Uyana. most people had preferred to sit on benches. Secondly, 24% of people had no any special preference of the seating method. Minimum number of people had preferred to sit on chairs.

According to the observations in Viharamahadevi park, there were ample number of seating places designed throughout the park. Along the boundary of the park there were benches and ledges provided seating facilities for the pedestrians as well as for the visitors of the park. There were unevenly placed seating arrangements with a shelter as summer huts. And also, a small area of the park has been designed as a study area with benches and working tops. During day times number of people used to come this place for their studies as well as for have their lunch. As we observed most of the people preferred to sit under the trees or in the ground area.



## Viharamahadevi Park

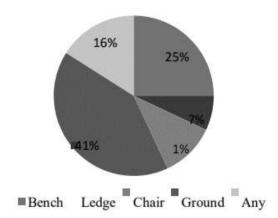


Figure 5: Mostly preferred seating method at Viharamahadevi Park

Above depicted shows the visitor's most preferable seating method in Viharamahedevi park. Most of the people had preferred to sit on the ground. Less number of people had preferred sit on the ledge. Secondly most preferred seating method was benches. In this park also 11% of people had asked for chairs.

Nawala Wetland park was designed with a continuous ledge going through the park. It was demarcated the path of the park from the beginning to the walking track. Either sides of the ledges were decorated with landscape. These ledges were used for seating under the shading of trees. By the side of the walking track also bordered by benches faced to the cannel. By designing seating spaces as continuous ledge, considerable amount of people can be sitting in a once. And also, there are some benches designed especially for physical training.

Above chart shows the seating methods which visitor's are mostly preferred in Nawala Wetland park. Highest number of people had preferred to sit on ledges. Secondly highest number of people had preferred to sit any where which available to sit. Less number of people had preferred to sit on the ground.

#### Nawala Wetland Park

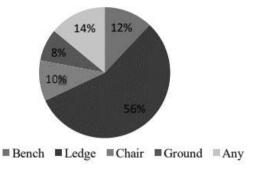


Figure 6: Most preferred seating method at Nawala Wetland Park

#### Availability of seating

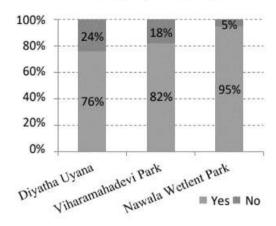


Figure 7: Survey results of availability seating in three main parks

Above graph shows the availability of seating in all three parks, whenever visitor's required. As shown, Nawala wetland park has the highest availability of seating. In every park, few number of people didn't get seating places everytime they visited. That because they didn't get a seat as they prefered. Such as for a couple, group of people. But, most of the people got a seat at any time they required.

According to the observations, all those three parks were consist of seating arrangement. Comparing with Diyatha uyana and Viharamadevi park, Nawala wetland park got more seatings available due to its design of ledges. at viharamahadev park, most of the people prefered to sit on the ground under the shading. People had faced more



difficulties without the handrest and the backrest of benches. At Diyatha Uyana, there were no any bench with a handrest and a backrest. Individual seating arrangement were used rarely in diyatha Uyana. Only Viharamadevi park got every type of seating arrangements. As example; benches, ledges and chairs. According to above data, considereble seating places had available in every park with various seating methods. As mentioned in Whyte's theory, availability of seating is a main factor for a better functioning of a park. All these three parks had consist with considerable seating capacity in different seating methods

#### B. Sun, wind and trees

In Diyatha Uyana, seating area of the food court which had faced to the car parks was showered with direct sun in the afternoon. Temperature of that side was comparingly higher than the other side which was faced to the aquarium under the shade of trees. Temperature and the comfortability were varied with the trees. Outdoor dining was laid under the shadings of trees. And also, food court was naturally ventilated by designed with low height walls by exposing to the outside tactically. That cause to merge the inside and outside atmosphere. Walking path directed under a canopy with the shading and cool breeze. During the afternoon people gathered around the shadings under the trees. With the sun set more people attracting to this place with their families and friends. Most of them prefer to sit around Diyawanna Oya, because they can feel the cold breeze in the evening.

Viharamahadevi park is located in the area which known as the green patch of Cinnamon Garden. That because this park was filled with various type of huge trees and stands as a canopy. It provides a shade for whole park with cool breeze. This place can easily identify in this busy town because of its special feature of ample number of trees. Most of the people were attracted to this

place looking for shading with cool breeze in an urban area. People were looking for sitting places under a shading. Throughout the park which covered with the canopy provide comfortable seating with cool breeze. And also, it cut off the direct sun light coming in to the ground.

Similar to the Viharamahadevi park, Nawala wetland park also filled with large trees. Ledges for seating had designed under the shading of trees. And also, the walking track was shaded with a canopy. Some areas of the park had opened to the direct sun light while the rest of the area had functioned under the cool breeze with shading of canopy. From the cannel, cool breeze flows through the park. According to observations, most of the people had gathered around shadings. Most of the places under the shading were crowded. Open spaces converted comfortable places by making trees. Food courts and other spaces had ventilated by natural ventilation. As mentioned Whyte'stheory sun, 70% 60% 50% 40% 30% 20% 68% 88% 72% wind and trees are also a main factor for the better function of a park. As he discussed in his theory people gathered around shading areas in these parks. And most of the people perefered to sit under trees.

#### C. Water

As mentioned before Diyatha Uyana park had based on Diyawanna Oya. Therefore, most of the area had bounded with the water body. Boat rides are taken place to attract people to the park. And also, way to Diyatha Station gives a different experience for the visitors. Diyatha station had designed in the opposite river bank to the Diyath Uyana and the journey to the station was led by boats. As this was a marshy land, some parts of the park had converted to ponds with live features as flowers. Walking track ended with a small path which laid on the water body and covered with trees. Boundary of the Diyawanna oya had covered with a fence to



restrict the accessto the water. Also there is a water fountain in the center of Diyatha Uyana. It was designed with landscape elements to increase the attraction. At night this water fountain lit up with seiries of colours. This works as a land mark as well.

There is a chain of water fountains align with the Buddha statue and municipal council in Viharamahadevi park. This is used as a design feature as well as a land mark for the visitors to identify the place where they are. And also, there is another water body which has used for boat rides. Families, couples, young crowd and etc. can be seen enjoying this activity. Thus, there is a long bridge above the water body to cross the lake and to experience the view of the park. Small water fountains along the ledges can be seen in front of the Buddha statue. It demarcates the boundary of the statue. And also, this fountain creates an entrance with a welcome to the park.

Either the side of the Nawala wetland park, there is a cannel flow along the walking track. People do their physical training on the bank of the channel with the view and cool breeze. Seating places also have arranged along the cannel. There is a special boat which arranged for special events. people can use that for parties and event for have a different experience. And also, there is a water fountain inside the park. Walking path is laid around the fountain by demarcated from ledges while providing seating spaces faced to the fountain.

According to the above bar chart, majority had not satisfied with water activities. Highest number of people has not satisfied with water activities in Viharamahadevi park comparing with other two parks. Few people had satisfied with activities which are available in all three parks.



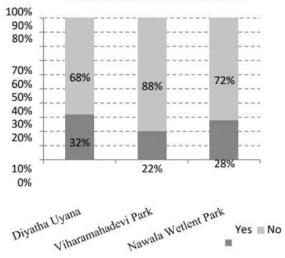


Figure 8: Results of the survey of the level of satisfaction among the people on Water activities in these parks

According to the observations and collected data, all three parks had a functioning water body. Swan boat rides are the available activity in these parks. At Nawala Wetland park there is no any recreational activity in water body than the boat which arranged for events. Every time even a one boat had a ride in Diyatha Uyana and Viharamahadevi park. But most of the people had not satisfied with the remaining activities. They had asked for more activities with different experiences. And also, people used to gather around water fountains. As mentioned in Whyte's theory, water bodies make an attraction for the visitors.

#### D. Food

During lunch hours and evening most people had attracted to Diyatha uyana to have their This park had located meal. neighbourhood of lots of administrative buildings. Therefore, during lunch hours Diyatha uyana food court was getting rushed and crowded. Outdoor dining tables were arranged either sides of the food court. There is no place for dine during rainy times. Some people deliberately visit the Diyatha uyana station to experience the outdoor dining. There are two other restaurants including Diyatha Station additionally to the main food



court. Variety of foods can be seen in the food court and the expenses are bearable. Restaurant located inside Diyatha Uyana was used by most of the people for special functions. Diyatha Station is also a different experience for visitors.

According to the observations, places were marked by food vendor in Viharamahadevi park. Niche market was already taken place around the park. People were used to have their meal on benches, arranged benches with tables or on the ground. And also, there is a cafeteria in the park with a dining place. People who came from long distances to visit Colombo are gathered to this park to have their meals. But the people who are in Colombo are very less visit to this park purposely for have their meal. That is because these is no any proper food corner in this park with varieties. Ice cream carts can be seen taken place here.

There is no any food corner or a niche market can be seen in Nawala wetland park. In the morning there is only one stall of "kola kanda" supplier in front of the park.

Except Nawala wetland park, other two parks had a food corner. From those two parks, food corner and the restaurant at diyatha uyana functioning well due to its varieties of food and availability. At viharamahadevi park, food vendors got a prominent place. Some people visited to diyatha uyana purposely for had their meal. And majority of the people who come for any other reason also try to have a refreshment if there is available. Therefore, availability of food is main factor which affected to the function of the park. As mentioned in Whyte's theory, if food is available in a place people had used to gather in those places. A community of people created around food stalls.

#### E. Streets

Diyath Uyana park was directly opened visually to the main road without any fence

or a barrier. This matter to enhance the visual connection with space and to enhance the attraction. But there is only one main entrance and most of the area had bounded with Diyawanna Oya. One side of the park which had opened to the main road was barriered with a slop and a small channel. A part of the park which faced to the main road was barriered with a short fence to restrict entering people from there. That because of the security purposes while maintain the transparency. Divatha Uyana is located faced to a main road. Therefore, people can easily get close to the park. And also, layout of the park helps to lead the visitors without any guide or help. Streets inside the park were connected each other. Either sides of the walking track were defined with huge trees and some parts were defined from the Diyawanna oya and seating arrangements. People can easily identify their location of inside the park because of the interconnection of the streets. Walking track of Diyatha Uyana is consist of 3D paintings. People can enjoy themselves and have a different experience by taking photographs while walking. Paved path had designed for walking and bicycle track had located in the middle of walking tracks.

Viharamahadevi park had renovated by removing the fence by making more accesses to the park. That had created a link between the park and all the main streets around the park. People can easily access to the park from any side. Boundary of the park was defined with trees, bushes and benches. Here also transparency of the park was high. people move in to the park without any doubt while having a basic idea of the character of this park. Paved and carpet pathways connected and behave as guiders in the park. Either sides of the pathways also defined from trees and bushes. Jogging track and bicycle track are laid on the periphery of the park. around the park, street had busy with food vendors.



Two sides of Nawala wetland park was opened to the main streets. Rest of the area was bounded with a cannel. This park is located away from a main town. Park was defined from the street by paving and landscapes. As this was not spread through a wide area people won't face any difficulties to find the directions. People allow to entered to the park from any place which opened to the street. The boundary was defined with some flower pots to demarcate the boundary while maintaining the transparency, after entered to the parking area, the way directed in to the park by three main entrances. All those three pathways connected to the walking track. Therefore, people can easily find the way.

According to the observations, all three parks had designed perfectly to keep the visual connection with roads. Every park had used natural elements such as trees, bushes, water fountains to define the paths. Transparency of the park, motivate people to visit. All three parks have similar qualities in boundary defining, landscaping, designing connections of pathways inside the park. According to Whyte's theory streets had being designed really well and this has a significant impact on the proper functioning of the three parks that I had considered in this study.

#### F. Undesirables

Everywhere in Diyatha Uyana, they have placed security people for maintain the well behaviour. They have to be checked all the vehicles from the main entrance. Around the parking area, aquarium, shops and food court there were people from the forces and ecurity. Therefore, undesirables were not allowed coming in to the park. People can have food only around the food corner and they don't allow to take food inside to the park. Because of this high security, people can't use anything like liquor or drugs inside the park. There were very few dark spaces under the security and most of the spaces are

well functioned. But in the night time stalls are empty. Those places are available for desirables. Benches in this park are too short for sleep. Therefore, they don't prefer to sleep on benches in this park. And also, there were CCTV cameras placed everywhere in the park for better security.

Viharamahadevi park was secured by military people. There are checkpoints around the park. All the maintainers also were done by them. Therefore, undesirables can't get in to the park and make any disturbance for the visitors. But after around 6 in the evening, those kinds of people started to move in to the park. This was happened because most of the area of park getting darker and emptier in the evening.

Location and the layout of the Nawala Wetland park suppressive undesirables getting in to the park. There are few security people as well. There is no any place in this park which distrust for the visitor. Each and every corner functioning well. Therefore, winos don't get any chance to get in to the park during day time. During the night time also this park functioning well. But, to this park also undesirables come in midnight because the park getting empty and there are spaces to sleep.

Diyatha uyana and Viharamahadevi park has a good security comparing with Nawala Wetland park. Due to the dead of functions at Viharamahadevi park, desirables get chance to entering to the park in the night. And also, design of the benches creates a comfortable place for them. As a solution for that, at Diyatha uyana all the benches were designed as short benches. But the stalls are available for them during night time. Nawala Wetland park also provide places for desirables. That because of the benches and ledges which make a comfortable place for sleep. After midnight this park also getting empty. When considering to the Whyte's theory most of the recreational parks have a room improvement in managing the undesirables.



# G. Triangulation

Triangulation is one of the main principle factors which affect to the gathering of people. There are lots of recreational activities in Diyatha Uyana. Fish therapy stall, mobile film stall, street 3D paintings and children's park cause to aggrandize the attractive of the park. These activities cause to create connections between people. These places were crowded in evening and during the weekends. Some people visit this place purposely to take

3D photos. And also, the business area had given a major support for triangulation. There is no any sculpture can be seen in this park. But people used to gather around the water fountain which had designed at the centre of the park.

Viharamahadevi park was famous from long time for recreational activities. Various events like food festivals, carnivals, outdoor musical shows make this place more attractive. Viharamahadevi park act as a main gathering point. There is an outdoor open-air theatre for events. Usually once a week there are various events happening in open air theatre. During seasons there are number of events taken place Viharamahadevi park. Such as Vesak lantern exhibitions, Christmas carols, "bakthi Geetha" events. One side of the park which faced to the Green path was filled with paintings. And also, there is children's park which was functioning well during evening and weekends. Next to the children's park, considerable area allocated for business activities. They have designed huts with benches and a work top. And also, horse rides and outdoor gym was supported to keep the attraction of the park while making a gathering point as well as enhancing the social interaction. Monuments and statues have been given an identity for the park while it works as a landmark for the visitors. And also, people had used to gather around those statues.

Nawala Wetland park is less in triangulation. There is a children park for small children. There is lack of activities happening there. people just gathered only for physical activities, family gatherings and specially for events happening in the boat.

Diyatha uyana and Viharamahadevi park has a high density of triangulation than Nawala Wetland park. Those two parks were designed basically for recreational purpose. People do enjoy the events and functions happening. Some people purposely come for participate to those events. As mentioned in Whyte's theory, these parks had used different activities, events and functions to maintain the triangulation. Nawala wetland park should improve capitalising on this principle factor of triangulation.

#### **Conclusion**

By considering the comprehensive analysis done on the data gathered through a self-observation questionnaire, and photography survey was used to derive the conclusion in this study. The conclusion of this study is that application of principle factors in Whyte's theory had led to a significant impact for the proper functioning of the recreational parks in Colombo city. When considering the three recreational parks that I had chosen for this study Viharamahadevi park, Diyatha uyana and Nawala wetland park, the principle factors of Whyte's theory had complied and applied to varying levels. But as a whole the proper application of the principle factors such as sitting places, water bodies, streets, food and triangulation had led to the proper functioning of the recreational parks.

For further works I would like to extend this study and do more comprehensive analysis on how the principle factors of Whyte's theory would affect to the social behaviour of people who visit to these recreational parks. Apart from that some parks have a lack of



application of certain principle factors and those factors are as follows.

During my study I have observed that some of the qualities has to be improved in these three parks. In Viharamahadevi park there should be a proper food court for the visitors. And more water activities have to be added to make people more engaged. There should be more lighting in Viharamahadevi park to illuminate the dark places and streets.

In Diyatha uyana there is some room for improvement in relate to seating. It would be better if there are more seats with backrest and hands rests. There should be better access to the water body. Around the food court it would be better to have more lightning. And also, in a situation of raining there is no proper shelter for the visitors to be. In Nawala wetland park there should be more activities to make people more engaged in activities to improve the triangulation. There should be more access to water bodies.

And there is a more room for improvement in the security side. There is no proper place for the people to eat in Nawala wetland park. Therefore, it would be better to have a food court.

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