

An observational study of defensible space in the neighbourhood park

M A Marzukhi¹, M A Afiq¹, S Ahmad Zaki¹ and O H L Ling¹

¹Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Selangor Branch, Puncak Alam, Malaysia

*marlyana@salam.uitm.edu.my

Abstract. The planning of neighborhood park is important to provide space for interaction, leisure, and recreation among residents in any neighbourhood area. However, on an almost daily basis, newspapers report inappropriate incidents such as snatch theft, robbery and street attack that occurred in the neighborhood park. These cases reflect the significance of physical planning and design of neighborhood park that directly affect the safety and comfort of the users. Thus, this study attempts to engage with the defensible space concept in ensuring the security elements be applied in the planning of the recreational area. This study adopts a qualitative method form of research that is retrofitted to an observational study. The observational study is significant for revealing the condition of a neighbourhood park in the 'real-world,' in which direct observation is conducted on Taman Tasik Puchong Perdana. The observer focused on four elements or variables of defensible space concept including the provision of facilities in the neighborhood park, territoriality, surveillance, image and milieu. The findings revealed that the planning of Taman Tasik Puchong Perdana does not deliberate the defensible space elements, which may contribute to the crime activities in the park. In these circumstances, the planning of neighbourhood park needs to include proposals for the implementation of defensible space in response to the challenges underpinned by crime problems. Besides, the awareness among the residents needs to be emphasized with the support from local authorities and other organizations to manage and sustain the safety environment in the neighborhood park.

1. Introduction

Open space or recreational park is an important aspect in contributing to the ecological balance in the physical development of an area. People need a comfortable, safe and secure park for leisure and recreational activities that can promote a better quality of life. The existence of recreational park requires the integration of aspects such as appropriate location, safety, good facilities, and cleanliness, in accordance with local culture and the aspirations of the local population. In fact, the design of spaces and recreational areas that follow the principles, standard and guidelines is an important element to provide a sustainable recreational area that will directly affect the safety and comfort of the community [1]. However, almost daily in the news and media reports on crimes such as attacks on pedestrians, parking lots, and public transportation, street crime, violence against individuals, rapes, and thefts occurred in parks [2]. These problems lead to the question: Is the recreational park nowadays increasingly insecure due to this problems? This is because of current crime trends more concentrated in the recreation park especially in the neighbourhood area. Furthermore, robbery and



snatch thefts in the recreational area are at an alarming rate from time to time as a result of fewer safety features that caused discomfort among the residents to visit the neighborhood park.

2. Literature Review

According to Section 2 (1) of the Town and Country Planning Act 1976 (Act 172), open space is define as “any land whether enclosed or not which is laid out or reserved for laying out wholly or partly as a public garden, park, sports, and recreation ground, pleasure ground, walk or as a public place” [3]. The open space is an area that has components of public facilities such as surau, community centre, community hall, playground and other facilities [4]. Moreover, open space is important to provide green spaces and nature particularly in an urban environment settings which allows the public to access and carry out activity that aims for recreational activities. This includes either active or passive activities such as “walkways, sidewalks, and bicycle lanes - and the areas devoted to public parks, squares, green recreational areas, public playgrounds and open areas of public facilities” [5, 6]. According to *Manual Garis Panduan Dan Piawaian Perancangan Negeri Selangor* (2010), there are seven (7) hierarchies of open spaces in Selangor which includes play lot, playground, neighbourhood park, community park, town park, regional park and national park [7].

2.1 Neighborhood Park

Neighbourhood Park is one of the hierarchies of open space in the residential area. The provision of the park is important for recreational activities, sports and social interaction particularly for 3,000 local population in the vicinity [7]. The location of the open space area is within a radius of 1.5 kilometres from the residential units. The provision of the park is vital to create a sense of belonging and neighborliness among the residents which further can also create a safe environment within the neighborhood area [8]. The *Manual Garis Panduan dan Piawaian Perancangan Negeri Selangor* (2010) has set out certain criteria and requirements of neighborhood park as listed in Table 1 below.

Table 1. Hierarchy and Function of the Neighborhood Park

Hierarchy	Area	Population Size	Distance	Facilities
Neighborhood Park	1.2 hec. (3.0 ac.)	Every 3,000 population; and Each increase 3,000 population requires 2 hec. (5 ac.)	In the radius of 1.5 km	Children's playground; Football field; Courts of badminton, tennis, takraw, etc; Jogging area; Parks and shelter; Place for rest; Public phones; Toilet; and Parking: <ul style="list-style-type: none"> 35 car parks for the first 2 hec. (5 ac.). Additional 1 car park / 1500mp (16,145.8 kps) remaining base area. Additional 30% motorcycle park. Additional bus parking according to the type of activity and site requirements.

Source: Manual Garis Panduan dan Piawaian Perancangan Negeri Selangor (2010)

Furthermore, the physical design of the neighborhood park is important to provide comfort and safety for the users to combat crime problems within the neighborhood area [1]. Therefore, the planning of neighborhood park which focuses on physical design for crime prevention is an important aspects, particularly through the concept of defensible space. At this point of reasoning, observation of this defensible space is critical to illuminate its application in practice that may affect society as a whole. In this sense, to better understand defensible space, this article turns to the next section.

2.2 Defensible Space

The concept of defensible space is introduced by Newman [9] to restructure and rearrange the physical layout in order to create social strength among the communities and to prevent crime in the residential area. Defensible space is defined as;

“....model for residential environments which inhabits crime by creating the physical expression of a social fabric which defends itself....an environment in which latent territoriality and sense of community in the inhabitants can be translated into responsibility for ensuring a safe, productive and well-maintained living space” [9].

Besides residential area, this study suggested to adapt the defensible space concept as one of the key features in planning of the open spaces and recreational areas. The suggestions includes the preparation of layout design through the arrangement of spaces in the neighborhood park. Further, defensible space entails an involvement and participation of residents or the communities in the area to reduce the crime activities and eliminate the presence of offenders. It is important to plan and develop a conducive open space and recreational area which further can create a sense of belonging among the community. Furthermore, a proper planning of open space will lead the local people to appreciate and value the area. This will also create a safe neighbourhood park that will give comfort and guarantees the safety of the users. In this sense, the planning of neighbourhood park is more liveable and can be managed by the residents within their locality [10, 11]. There are four elements that create the defensible space; territoriality, surveillance, image and milieu [9]. The territoriality is one of the defensible space elements that identify the boundaries of the area either it is private or public space. It is important to determine this space to create a sense of security in an area. Further, the surveillance elements are related to the supervision of the area as one of the ways to prevent crime to occur. Lastly, the image of the recreational area is vital to reflect a good image of the area which further will provide secured feelings to the community or the users of the recreational area. Therefore, the planning of neighborhood park should emphasize and implement these variables to create a park which is defensible by physical design to ensure the safety of the public. Therefore, the insight of the defensible space in relation to the research methodology selected is elaborated in the section that follows.

3. Research Methodology

This study used an observational study to investigate the ‘real-life’ condition of the neighborhood park. The researcher or an observer records the elements in a systematic manner by using rating scales in which the variables are identified from the literature. Through observation, the data collected is often more appropriate and reliable due to the direct observation either from a distance or near from the study area. The observation focuses on the physical elements such as the provision of facilities, safety elements and condition of environment that contribute to the movement of the offenders in the study area. The case study selected is Taman Tasik Puchong Perdana in the District of Petaling which is under the administration of Municipal Council of Subang Jaya. The study area is surrounded by mixed development of land uses such as residential, commercial and public facilities. The total size of the study area is 7.70 acres, in which 3.19 acres is covered with open space, whereas 4.51 acres is covered with lake area [12].

3.1 Observational Analysis

The observation was conducted on the 5th of May, 2017 during day and night, where an observer was focused on the physical elements in Taman Tasik Puchong Perdana. The observation focused on four variables of defensible space concept including the provision of facilities in the neighborhood park (refer Figure 1):

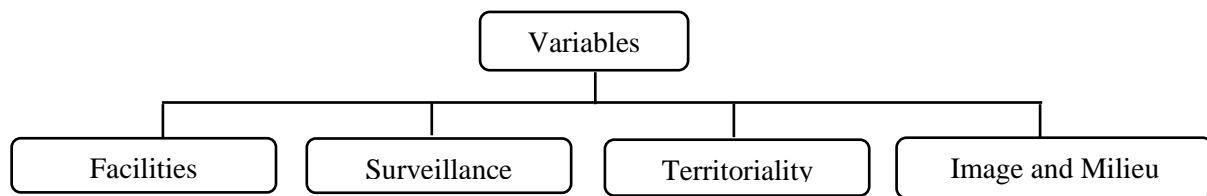


Figure 1. Variables for Observational Analysis

The observation was conducted systematically and recorded neatly to obtain correct results. The checklist was used as shown in **Table 2** below. Also, photographs were taken for each of the elements observed.

Table 2. Checklist of the Observational Analysis on the Defensible Space in Taman Tasik Puchong Perdana

Aspect	Elements	Condition
Facilities	Children's Playground	Good
	Jogging Track	Good
	Park and Shelter	Not Good
	Football Fields	Not Good
	Sports Courts	Not Good
	Toilet	Not Good
Surveillance	Parking	Not Good
	Lighting	Not Good
	CCTV	Not Good
Territoriality	Fence / Landscape / Bollard	Good
	Lake	Not Good
Image and Milieu	Landscape	Not Good
	Cleanliness	Good

4. Discussion and Findings

The findings focused on the provisions of facilities in the neighborhood park and four variables of the defensible space; territoriality, surveillance, image and milieu. Accordingly, the results show that the implementation of defensible space elements were not applied in Taman Tasik Puchong Perdana.

i. Facilities

The first variable observed is the condition and provision of facilities in the neighborhood park. From the observation, the provision of facilities still did not fulfill the characteristics and requirements for the planning of neighborhood park as shown in Table 1. This is due to the lack of provision of facilities such as football field, badminton court, takraw court and futsal court in the study area.



Figure 2. Condition of

Children's Playground

ii. Territoriality

The observation analysis shows that the environmental aspect of the study area is not safe for the public to engage in the recreational activities. This is because the area did not have strong element of territoriality to aid the local community to defend their neighborhood park against crime. In fact, the area is exposed to crime activities particularly snatch theft due to no physical barriers provided between the recreational area and non-recreational area. Thus, it creates a weak territoriality of Taman Tasik Puchong Perdana. Physical barrier can be designed and provide in the form of landscaping or fencing which can control the entrance and exit of the area.



Figure 3. No Barrier around the Study Area

iii. Surveillance

Surveillance, which is divided into formal and informal categories is an important variable of defensible space to prevent crime. The analysis found that there are lack of informal surveillance such as community programs and awareness among the local residents which further led to the lack of public participation and social interaction in the park. The community programs and activities are important to attract public to join and participate in the activities conducted in the neighborhood park, thus, become one of the surveillance agents. Moreover, the analysis also shows the lack of formal surveillance such as lighting, CCTV, organized security patrol, and guard post provided in the Taman Tasik Puchong Perdana. Lighting is one of the crime deterrents which can act as natural surveillance for the community around the study area. However, the analysis found that the lighting condition in the area were poorly maintained and not well-functioned. Thus, it makes the study area obscured and at risk to offenders. Also, there is no regular patrol by the security patrol or neighborhood watch which further contribute to the crime activities in the study area.

iv. Image and Milieu

Image plays an important part in ensuring the neighborhood park have a good appearance and not vulnerable to the crime activities. Nonetheless, the finding shows that Taman Tasik Puchong Perdana is exposed to the offenders due to the lack of safety elements which can prevent from crime activities. For instance, the form of landscapes within the area are not well-maintained. In fact, many trees are blocking the views that can also become the hidden place for the offenders. Furthermore, there are no provision of proper landscapes within the study area that can be used as barriers to prevent the offenders to enter and exit the neighborhood park.



Figure 4. Landscape in the study Area

The children's playground is also located out of sight and do not have barrier around it which can lead to the crime activities such as kidnapping. Moreover, the image of this neighborhood park do not have sense of welcoming that can attract the public to engage with the recreation activities. Milieu is also one of the defensible space variables that is related to the design and placement of buildings surrounding the study area which can create an area prone to crime. Moreover, part of the neighborhood park is visible from the main road and can be accessed directly without proper barricade, which is at Jalan Persimpangan Puchong Perdana. Thus, this shows that the element of milieu is not fully applied in this neighborhood park.

5. Conclusions and Recommendations

The findings indicate that the crimes activities that occurred in the Taman Tasik Puchong Perdana are due to the lack of implementation of defensible space in the neighborhood park. In this sense, the factors of lighting, safety features, surveillance and maintenance often contributes to the crime in the study area. Therefore, to prevent the problems and issues that led to the crime in the neighborhood park, the planning of recreational area should be well-planned with the implementation of defensible space concept as an approach to deterring the crimes activities. Security control in open spaces and recreational areas must be one of the key initiatives in the form of social interaction of a community environment that is safe, and harmonious. Also, the facilities should be provided in all aspects so that the study area will become a recreational area that is fully equipped, comfortable and secure for visitors.

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References

- [1] Ibrahim W 1991 *Perancangan Bandar: Aspek Fizikal dan Kawalan Pembangunan*. Kuala Lumpur. Dewan Bahasa Dan Pustaka, Kuala Lumpur.
- [2] Lee Lam Thye, Deputy Chairman of the Malaysian Crime Prevention Foundation (MCPF) 2014 *World Town Planning Day Public Lecture and Exhibition*. Kuala Lumpur.
- [3] Town and Country Planning Act 1976 2009 Laws of Malaysia. Kuala Lumpur: Percetakan Nasional Malaysia Berhad.
- [4] Francis M 2003 *Urban Open Space*. Island Press, London.
- [5] Thompson 2008 Design Principle –Parks and Open Space. *Healthy Spaces & Places*. Assessed on June 2016, www.healthyplaces.org.au
- [6] United Nations Human Settlements Programme 2015 Adequate Open Public Space in Cities. *UNHabitat for a better future*. Assessed on May 2016, www.unhabitat.org
- [7] Jabatan Perancangan Bandar dan Desa Semenanjung Malaysia 2010 *Garis Panduan dan Piawaian Perancangan Negeri Selangor*. Kuala Lumpur: Jabatan Perancang Bandar dan Desa Semenanjung Malaysia.

- [8] Chow KY 2014 Taman Macallum, Taman Kejiranan Usaha MPPP. *Buletin Mutiara*, 16th January 2014.
- [9] Oscar N 1996 *Creating Defensible Space*. U.S. Department of Housing and Urban Development Office of Policy Development and Research – Institute For Community Design Analysis.
- [10] Mohit MA and Hannan MHE 2012 *Social and Behavioral Sciences. A Study of Crime Potentials in Taman Melati Terrace Housing in Kuala Lumpur: Issues and Challenges* **42** 271
- [11] Mair JS and Mair M 2003 *Health.Violence Prevention and Control through Environmental Modifications* **24** 209
- [12] Rancangan Tempatan Majlis Perbandaran Subang Jaya (Pengubahan 1) 2020. Majlis Perbandaran Subang Jaya, Selangor.