



# Crime and Housing in Kuala Lumpur: Taman Melati terrace housing

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## Abstract

Recently, Malaysia has adopted the “Safe city program”, which is focused towards creating violence and crime free cities. To achieve this, it is important to address crimes and disorder in residential areas. So far studies identified that changes in built environment and modifications in space design can impact residents and offenders’ perceptions of criminality. Various CPTED measures are employed to create defensible space. This paper examines the effect of physical design on the occurrences of crime in Taman Melati residential area of Kuala Lumpur City and tests the effects of the built environment on the possibility of crime reduction through physical planning measures.

Keywords: Crimes; Terrace housing; Environmental design; Safe city; CPTED.

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## 1.0 Introduction

Malaysia has been experiencing accelerated urbanization since the last two decades. The current rate of urbanization in Malaysia is 63% (EPU, 2006, p. 361) and is projected to be 75% by the year 2020 (JPBD, 2006, p. 13). As usual, urbanization is often associated with increasing crimes in cities. Crime in housing areas has become a fact of life, with street crimes increasing; crimes against persons and properties generating considerable fear within the community, making safety an issue demanding critical attention at both local and national level. According to the statistics (CPPS, 2007), the crime index in Malaysia showed an increase of 13.4% and the crime rate has increased by 8.7% during 2006-07. About 90% crimes in Malaysia are property crimes whose occurrences are mainly in the housing areas (Sidhu, 2005, p. 9). Recently, Malaysia has launched the "Safe city program" with an objective to create a cities free from violence and crime. In order to achieve the global concern of creating sustainable communities and to assist the implementation of Malaysia's safe city programme which highlights the importance of quality of life improvements, it is important to address crime and disorder issues. So far, studies have identified that changes in the built environment and modifications of the space design can effectively affect both residents and offenders' perceptions of criminality. This study seeks to examine the crime level and safety perception and preparation of the residents in terrace houses in a residential area in Taman Melati of Kuala Lumpur City.

## 2.0 Literature Review

Crime has been defined in the Oxford English Dictionary (1989, p. 20) as '*an act punishable by law, as being forbidden by statute or injurious to the public welfare; an evil or injurious act; an offence, a sin, especially of a grave character*'.

Place-based crime prevention theories have been developed by three schools of thoughts (Colquhoun, 2004). Although these theories were weaved from different fabrics, they became woven together through time as they support mutual concepts. The three schools of thoughts are:

- a. Oscar Newman (defensible space) which includes that access to an area should be restricted to legal users.
- b. Jeffery's crime prevention through environmental design (CPTED) contains a mutual support to defensible space theory and takes it a step further by the manipulation of the physical environment to influence behavior to deter crime.
- c. Clarke's situational crime prevention takes both theories into consideration while including management and design interventions to reduce crime. The theory develops social and economical strategies to achieve a sustainable environment.

These theories have been developed separately from each other. The environmental criminology theory by Jeffery, resembles to a great extent CPTED and to a lesser extent the other two theories. It is also inspired by Lynch's (1964) urban design concepts, and zonal ecology theory.

At the empirical level, many studies have been conducted to examine the relationship between environmental design and crimes. Yancey (1983) studied the impact of architectural design on the behaviour of people living in Pruitt-Igoe, a housing scheme of eleven storey containing 2,762 apartments in St. Louis, where he found no elements of defensible space either in public or private areas. Hardy (1997) examined the effectiveness of CPTED principles in reducing crime in Las Vegas in two apartments – one where the alterations were made to its physical environment, and another one with no alterations to its environment, and found that alterations made to the physical environment had no impact on the reduction of crimes.

Robinson (1997) conducted a CPTED evaluation of York Campus in Canada to examine its safety in a belief that a campus is a 'microscop' of its surrounding environment. Despite the fact that CPTED features were not incorporated into the physical layout of the campus, she found that the campus is a relatively safe area compared to the surrounding neighbourhoods. Serpase (1998) carried out a research to examine the effectiveness of CPTED strategies as a tool in reducing crimes and the fear of crimes in two similar low-income housing apartment complexes – one with CEPTD elements and the other one without, in New Orleans, Louisiana, and found no decrease in the crime rates but an increase in crimes due to the decrease of police random patrol walks after the installation of the fencing.

Cozens, P. et al. (2001) believed that defensible space techniques are greatly unproven and showed that community safety could be achieved by good citizenship. Elbadawi (1991) studied the environmental and physical conditions that encourage criminal behaviour and the role of planning in creating homogeneous communities with good zoning, land uses and hierarchy of public/private places in three case studies located in different areas in Halifax, and concluded that it is rather difficult to generalize safety factors for different communities. CPTED features in each case had varying impacts on the neighbourhoods.

Clontz, K. (1995) examined the effectiveness of CPTED principles on the residential and commercial burglary crimes in the entire city of Tallahassee, the capital city of Florida. The findings of the study support some of the CPTED principles. The concept of mixed-land use advocated by Jacobs (1961) did not prove to be an effective tool in crime prevention; on the contrary, it was the cause of increased burglaries. Oscar Newman's idea about residential surveillance was not effective to reduce crimes in residential areas but not in commercial areas. Cozens, P. et al. (2002) examined the perception of crime, fear of crime and defensible space in two buildings with the same design but with different levels of maintenance, to test the impact of image on crime, fear of crime and defensible space, and found that detached-houses, semi-detached houses and terrace houses were safe places to live in and represented positive images of a defensible space. On the contrary, walk-up apartments represent a negative image of a defensible space and high-rise apartments were perceived as places with high crime rates and social disorder. The study supports Newman's theory of hierarchy of places regarding housing designs.

Baker (2005) examined the impact of urban form in the reduction of crime in Baltimore neighbourhood where she tested the integration of CPTED principles into the design process and found that the physical environment represents only one aspect of crime prevention and other social, economic and political issues should be addressed for an effective CPTED tool. Ewert (1999) studied night safety within a public area, the Pizza Corner in downtown Halifax to identify the social and physical issues affecting safety in the area. Two surveys were carried, one on the surrounding residents and the other one on the down town business operators to find how the people evaluate their level of safety in the down town. The findings showed that the Halifax down town is a relatively safe area and CPTED principles (territoriality), were supported. Hafazah and Siti (2010) report about the success of an active residents association that has led to enhance residents perception of safety and well-being, in PKNS flats of Taman Dato' Harun in Petaling Jaya, Malaysia.

It appears from the above review of empirical studies that the relationship between crime and CPTED elements or environmental design is not conclusive. There are controversies and these provide a ground for further studies which need to be pursued on a case-specific basis in developing countries, such as Malaysia.

### **3.0 Aim and Objectives**

The study aims to examine the impacts of the physical environment on crimes in residential areas, thus exploring the relationship between residential crimes and defensible space as indicated by the CPTED principles. The following objectives have been set for the study:

- a. to identify the types of crimes that occur in Taman Melati terrace housing area;
- b. to examine the safety level of the housing area based on their locations along the main road (AMR) and around the open space (AOS);
- c. to investigate the physical and environmental elements that lead to safer neighbourhoods; and
- d. to formulate planning policy recommendations based on the findings.

### **Research questions and hypothesis**

- a. What are the types of crimes or threats against which persons or properties need protection?
- b. Where are the crime offender's entrance areas in terrace housing (roofs, parking, back lanes or access to the rear of the dwelling and play areas)?
- c. What are the assets (persons, places and property) in each housing type that need protection?
- d. What are the assets exposed to the crimes (for example, if the back lanes represent an area of crime, can the offender enter these areas without control)?
- e. What are the security measures taken to mitigate these threats?

Based on the literature review the general hypothesis framed for the study is as follows:

*Terrace houses located around the open space (AOS) are more prone to crimes than those located along the main road (AMR) in the housing area.*

#### 4.0 Methodology

The study intends to cast light upon the problem of crime and disorder in residential areas which have become a fact of life with the increasing property and street crimes. CPTED describes ways to provide safety in housing areas through enhancing the visual link between the houses and the street (natural surveillance), having clear demarcating private and public spaces to reinforce a sense of property among the residents so they can take responsibility for the area assigned to them (territoriality), using signs or other design elements identifying the boundaries to restrict the movement of the offenders and facilitate their identification (access control), adjoining land uses that would activate the areas and increase its safety (image and milieu) and finally preserving and maintaining properties to give a sense of Omnipresence (maintenance). The employment of these principles would create houses which are defensible at least by virtue of their physical characteristics.

Thus, the purpose of the study is to examine the level of safety in the study housing area and identify the impact of the physical environment on crime in the area. The researcher had to identify first the factors related to safety in housing areas. This was done through the information gathered from secondary sources such as government reports, including an intensive literature review. Based on the literature review, the factors identified were grouped into six categories – location, social interaction, natural surveillance, omnipresence, security (target hardening) and maintenance. These categories are further analyzed in the questionnaire which formed the primary source of data. The information gathered during the field survey together with the secondary data was analyzed to evaluate the level of safety in the neighbourhood. The response variable – level of safety, has more than one cause as shown in Table 1.

Table 1: Independent variables examined against housing safety level

Variables	Measurement
1. Housing location	1. Houses along the main road. 2. Houses around an open space.
2. Social interaction	1. Neighbourhood watch group. 2. Knowing the neighbours. 3. Visiting the neighbours.

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3. Natural Surveillance	1. Front entrance vision. 2. Rear entrance vision 3. Lighting.
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4. Omnipresence	1. Picking mail. 2. Curtain opening & closing. 3. Cutting grass.
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5. Security	1. Doors and window locked. 2. Lock changes. 3. Burglar alarms.
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6. Maintenance	1. Neighbourhood cared for. 2. Litter around. 3. Vandalism.
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Source: Newman (1972),

A triangulation approach was adopted in which information was obtained by using both quantitative and qualitative methods. The quantitative method involved the use of questionnaires and personal observation. A questionnaire consisting of five sections – security check list, residents’ interview, demographic information, perception of safety, was administered to randomly-selected 200 terrace units which were stratified based on their locations along the main road and around the open space. The qualitative approach involved constructing interviews with some residents and the neighbourhood officials to obtain a diverse viewpoint so as to cast light upon the problem and to identify some of the issues that were aroused during the survey. Two types of scales – Likert and Thurston were used to measure the qualitative variables.

#### 4.1 The study area

The study area, Taman Melati, is located in the Setapak area of Kuala Lumpur. It is situated 15 KM away from the CBD of Kuala Lumpur and is in close vicinity of Gombak district of Selangor state. The state has a record of being a high crime state (17%) in Malaysia. Taman Melati is indirectly affected by the spillover effect of high crime rate in the adjacent areas. In Taman Melati, the problem of crimes started in the mid 80’s with the establishment of the Malaysia Institute of Art (MIA) and the Tengku Abdul Rahman College which has increased the need for housing in the area and the crime in the area was related to the poor design of the buildings and the environment. Several housing developments with no consideration of the living conditions of the users were developed. Taman Melati is now booming with a considerable number of housing developments resulting in an increase

in the population density and social problems. It is believed that more development in the area will lead to further increase in the crime rate.

## **5.0 Results And Discussions**

### **5.1 Socio-economic and demographic characteristics of residents**

The residents' demographic and socio-economic attributes of the sample residents surveyed show some noticeable characteristics such as the dominance of male head of households in both housing areas (AMR and AOS) followed by a significant percentage of unmarried respondents; dominance of (60%+) of middle-aged residents; Malays constitute the majority of residents followed by the Chinese and the Indians. The mean family size is 3 with a majority of families in both areas having 1-3 male and female members. The mean monthly family income is around RM4000 in both areas, followed by automobile ownership which exceeds 2.0 per family. The length of residency of the families in both areas is slightly more than 10 years, whereas the mean monthly rent of the AOS area is higher (RM1185) than the prevailing rent in the AMR area (RM950).

### **5.2 Respondents' safety perception**

The study used four approaches to measure the level of safety in the two housing areas. The first is the respondents' perception of the neighbourhood safety, the second is the number of break-ins in both housing locations, the third is the types of crimes experienced in the neighbourhood, the fourth is the target hardening features used by the respondents to deter crime (Table 2). According to the literature review, areas along the main roads are not safe because of its increased permeability (Paul and Patricia Brantingham, 1981). Our result shows that AMR terrace units were safer than AOS terrace units, because the mean for the former (3.45) is higher than the latter (2.99). An independent sample t-test result ( $t = 2.9$ ;  $p < .05$ ) shows that the mean level of safety perception of the two groups has come from different populations.

The second measure of the level of safety is the break-ins within both housing locations. The results showed that the AOS housing experienced double break-ins than the AMR housing. The third measure is the type of crimes experienced within both housing locations. The findings showed that although street snatches were the major crimes experienced by all residents, the percentage of AMR residents who became victims of it was higher than those of AOS residents. Actually, AOS residents experienced a higher rate of vehicle theft and vandalism than AMR residents.

The fourth measure is the residents' target hardening CPTED measures that can be used as proxies to gauge the fear of potential crimes in the housing area. Both AMR and AOS residents have adopted several target hardening features as potential crime prevention measures. Most of the residents within both housing locations used window bars

and very few used burglar alarms. This might be the reason why most of the break-ins were through the front door.

### **5.3 Analysis of factors influencing the safety level within both housing locations:**

In analyzing the six factors that exerted influence on the safety level in the terrace housing area, the following findings deserve careful considerations:

- a. The location of the housing in the area had an influence on the level of safety. However, the location of the terrace units (at street junctions, end of terrace and mid of terrace) within both housing areas did not show any relation with the level of safety.
- b. Social interactions among the residents living along the main road are better than those residing around the open space. A strong social interaction is one of the reasons why AMR residents felt safer than their counterpart AOS residents.
- c. Natural surveillance situation indicated that AMR residents had enough lighting and good front vision than the AOS residents. As a result, the level of safety is better within AMR than AOS housing.
- d. Omnipresence is a measure to make the offender believe that the residence is occupied. The finding did not show any difference between the two housing locations in their level of Omnipresence.
- e. Regarding the security measures undertaken by the residents, it was found that the AMR residents had employed better target hardening devices than AOS residents.
- f. Maintenance and management measures adopted by the AMR residents have proved to be better compared to AOS residents.

### **5.4 Other findings**

Based on the literature review, it was apparent that terrace housing planned around an open space would be more vulnerable to crime. However, further analysis indicated the following:

- a. The crime risk was higher in houses around the open space than the houses located along the main road. This finding contradicts Brantingham's (1981) study which found that accessibility is associated with higher crime rate.
- b. The location of terrace houses (at street junctions, end of terrace and middle of terrace) did not have any effect on the crime rate. This finding does not support Brantingham (1981) and Leam (1998) findings that middle blocks and middle of terrace are safer than end of blocks or terrace.
- c. Social interactions make people feel safe and hence, proved to have an effect on crime risk. This supports Oscar Newman's (1972) sense of community.
- d. Natural Surveillance proved to have a relation with the level of safety. This supports Newman's Defensible Space theory (1972).

- e. Omnipresence had no impact on crime reduction, thus, no support for Alzelinka (2001) findings and CEN (2002) study on abandoned and neglected properties which can be linked to crime problems.
- f. Security measures did not show a relation with the level of safety – this does not support Clarke's (1983) target hardening studies.
- g. Maintenance and management of the neighbourhood had an impact in reducing the crime occurrences. This supports Clarke and Mayhew's (1980) study on environmental management.
- h. Houses with good appearance are more vulnerable to crime, because offenders think that the benefit is worth the risk. This finding does not support the 'Broken Windows Theory' (Wilson and Kelling, 1982) that poor housing maintenance represents an opportunity to potential offenders.
- i. Offenders' break-ins were mainly through the front doors. This does not support Alice Coleman's (1985) study that identified back lanes as giving access to potential offenders.

In a nutshell, the results showed that no serious crime problems exist in the area. A majority of the break-ins are petty crimes (shoes stealing and drainage covers stealing). However, interviews with the residents revealed that there was an increase in fear of crime due to the increase of street snatching. The residents' fear of crime was higher than the actual number of crime incidents that took place. Since the main crime is street snatching, the area has to consider Clarke's (1997) sixteen opportunities reducing techniques, in particular 6 (formal surveillance), 10 (identifying property) and 12 (denying benefits).

## 6. 0 Conclusion

The crime situation in the Taman Melati housing area is fairly good for living as it appears from residents' safety perception. However, it is also evident that a significant percentage (27%) of AOS residents feel unsafe to live in compared to 10% of the main road residents who opined that the area is unsafe to live in. It also emerges from the residents' survey and opinion is that the house is safe but the neighbourhood is not safe because slightly more than two-thirds of the residents have become victims of street snatching. Therefore, it is necessary that crime prevention measures should be focused towards creating a safe neighbourhood so that the houses become safe as well. In this regard, the following recommendations appear important:

- a. Natural surveillance should be encouraged without infringing residents' privacy.
- b. Some modifications to houses' entrance should be made to reduce chance of easy entrance.
- c. Gates and fences should be higher while allowing natural surveillance onto and from street.

- d. Planting should not grow to obscure view or provide hiding place for criminals.
- e. Provide full illumination to pedestrian walkways.
- f. Provide continuous footpaths and cycle routes in road reserves.
- g. Traffic calming measures may improve safety situation.
- h. Awareness programmes for residents and formation of active resident associations.

The other option the community can adopt is creating a gated and guarded community, the experience of which is mixed when the measure is applied to terrace housing, because it has both financial and legal implications. In fine, the community should adopt more situational crime prevention measures in order to build their safety-net environment.

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