

## BUILDING THE SAFE CITY PLANNING CONCEPT : AN ANALYSIS OF PRECEDING STUDIES

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### Article history

Received

27 April 2015

Received in revised form

15 June 2015

Accepted

15 July 2015

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### Graphical abstract



### Abstract

The upsetting number of crime occurring in the cities evokes the fear of crime among the civilians. In order to provide a good quality of living environment, a safe city planning must be implemented. To achieve this, several safe city concepts are reviewed. This paper aim to study several safe city concepts done by other researchers. In order to search for the best safe city concepts, a qualitative method research which involves content analysis is the most suitable approach to be employed in this study. This research will develop a new safe city conceptual framework based on the synergy of the previous studies. It is noted that the main concept of safe city planning are the activities and proposition of land use planning, identification of hot spot crime areas, improvement of physical environment and public transport system and appropriate surveillance.

**Keywords:** Fear of crime, safe city, safe city planning, crime activities

### Abstrak

Bilangan statistik rekod jenayah yang merisaukan di bandar telah menyebabkan perasaan takut dan berhati-hati kepada jenayah terhadap orang awam. Perancangan Bandar Selamat perlulah direalisasikan untuk mendapatkan kualiti kehidupan yang aman. Kertas kajian ini bertujuan untuk mengkaji beberapa konsep-konsep bandar selamat yang telah dilakukan oleh penyelidik yang lain. Dengan tujuan untuk mencari konsep Perancangan Bandar Selamat yang terbaik, isi-isi konsep bandar selamat dianalisis. Kajian ini akan menghasilkan satu konsep baru yang merupakan hasil gabungan kajian-kajian yang lepas. Berdasarkan kajian, terlihat bahawa perancangan aktiviti yang sesuai dan penggunaan tanah, pengesanan kawasan-kawasan yg aktif dengan jenayah, pembaikan fizikal alam sekitar, pembaikan sistem pengangkutan awam dan sistem pengawasan yang sesuai boleh menjadi konsep utama untuk Perancangan Bandar Selamat.

**Kata kunci:** Ketakutan terhadap jenayah, bandar selamat, perancangan bandar yang selamat, aktiviti jenayah

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## 1.0 INTRODUCTION

Five goals had been formulated in order to achieve the vision of World Class City. Enhancing the living environment in Malaysia is among one of its goal. However, it is noted that the rate of crime in Malaysia particularly in the urban areas is increasing rapidly [1]. It is reported that there is a high increment on the

number of violent crime. The rise in the number of crime occurred in Malaysia has increased the fear of crime among the citizens.

Process of urbanization has somehow given a causal effect to the growth of crime rate [2]. People moving to the city area to seek for jobs and economic opportunities have led to the process of urbanization [2]. It can be seen that the process of

urbanization creates a modern living lifestyle and enhancing the quality of life. But does this evolution of lifestyle promote to the rise of crime activities?

Life opportunities in urban areas will increase the number of population in the cities. Due to the overcrowding in the cities, the rapid growth in the will create a problem and one of it is crime [2]. [2] & [3] also pointed that there is indeed a relationship between the processes of urbanization to the increment of crime rate.

It is important to highlight and further evaluate ways in mitigating crime to create a safer living environment. This is to reduce the fear of crime among the citizens that felt vulnerable and frightened to travel from one place to another as well as using public transportation. Our cities are not safe when the people are living in fear of crime even in their own houses. As [5] reported [6], 90% of the crimes in Malaysia occurred at housing area.

The Federal Department of Town and Country Planning had launched "Safe City Programme" in 2005. The objective is to create a city that is free from violence and crime. There are hierarchies of needs to achieve sustainable environment and one of it is safety which includes protection, security and law [7]. In the UK, the perception of people towards criteria of a "good place to live" is safety and free from crime [7].

The safety issues in cities are not only affecting the people psychologically, but also economically. It is reported that Australia spent a large amount of money annually in order to tackle the issue of property loss, fraud, emotional cost and others that are related to safety and crime [7]. A previous study also mention on how crimes create a financial impact not only in terms of its aftermath, but also in the necessary precautions that is required to be taken [8]. It is also apparent that the percentage of carbon footprint emitting from car vehicles, people visiting hospitals, repair of damage properties and more had increased [9].

The result from criminal activities has certainly developed safety issues that need to be addressed. A concept of safe city planning must be generated in order to solve this safety issues for a better living environment.

## 2.0 CONCEPTS OF SAFE CITY PLANNING

In order to achieve a safer city planning, several aspects of safe city planning must be looked into. This paper focuses on three categories of situations that can influenced the safe city concepts which are: (1) the night time activities, (2) travelers & public transport users and (3) Community.

### 2.1 Night-time Activities

Night time life and activities in the cities can be the potential for crime, violence and anti-social behavior [10]. This studies by Robert critics the failure of planner

and developer to plan the use of land for night time activities that as is free from crime. He mentioned that it is the greediness of the planner and developer that contributes to the development of reckless growth in alcohol-related entertainment. It is the profit from the late night time entertainment that the developers are chasing for.

Night premises are defined as a concept of "clustering" where people meet each other, hang around, socializing, bumping into each other and eventually provokes aggression [10]. Drunk people from the night premises will ultimately walk on the quite streets, where there is a high potential of crime and violence activities such rape, thefts and a potential of homicide. Bromley & Nelson also support that there is a relationship between the consumption of alcohol and occurrence of crime in Britain [4].

It is agreed that night time activities can be beneficial to the economy, but it is highly suggested that the planner to look into activities that are non-alcohol related [5]. The night time economic is suggested to be centralized at the main street area of town [5]. However, it is noticed that the main street is rather dead due to high renting cost, living "deadening facades" such as showroom to occupy the main streets. This leaves nightclub to be active at the side street thus upsetting the residential area [5]. The main street area is recommended to be occupied with night time activities to make it livable at night to prevent the fear of walking at night [5].

There is a high risk of alcohol-related crime during midnight that comes from pubs and clubs [4]. This statement shows that to prevent criminal activities at night, not only pubs and clubs must be located at suitable spot, but the choice of night activities itself (eg; nightclub and pubs) are something that need to be consider.

Areas that is free from fear of crime can enhance night time activities thus increasing the economic value [6]. Alteration on the physical environment and night life activities can reduce the fear of crime [6]. It is revealed that the participants from a study conducted in Netherlands felt more secure at a place where there is door staff or body guard rather than having a surveillance of CCTV [6]. The participants are also influenced by the ethnicity of the door staff and they felt more vulnerable with Arabian or non-western door staff [6]. However, this finding is influenced by peoples' perceptions and stereotype towards other culture. The preference of the ethnicity of door staff or body guard can be vary for different countries. It is concluded that by having both CCTV and human surveillance, the feeling of fear of crime can be reduced during night time [6].

### 2.2 Travelling and Public Transportation

In order to achieve a safer city planning, we must look into all aspects of safety, and one of it is the action of crime towards travelers, different gender and ages and also public transport users. Walking down the streets and using public transportation can

certainly promotes the feeling of fear towards crime especially at prone areas. People always need to keep an eye on their surrounding due to high risk of thefts, pick pockets, kidnapping and etc.

There is an importance of providing walkable cities to children where they can reach their destinations safely [7]. It is essential to promote a friendly walking environment as it is a form of sustainability. Not only walking is good for human health, but high percentage of walking can reduce cost for transportation and construction of infrastructures. This can also help in reducing harmful gases which causes pollution.

In order to move towards sustainability, our cities should be design for every gender and group of people so they can benefit from it, and this includes children [7]. The friendly walking environment for the children must be safe from traffic and the risk of assault. A study suggests the potential safety and mobility benefits for the children by looking into the assistance of technology namely the Intelligent Transportation System (ITS) [7]. The ITS apply the concept of Environmental Adaptation where "ITS services can be directed toward the driver, to ensure appropriate driver behavior, the child pedestrian, and toward the infrastructure, to adapt it to the particular characteristics of each pedestrian" [7]. The ITS will functions as follow:

1. System that can warn drivers or pedestrian when there is a risk of collision
2. Systems that warn drivers about the presence of school children which are available on the market in the form of Variable Message Signs (VMS) or in-car systems.
3. Devices such as cameras and emergency-call push- buttons along streets, at public area to avoid fear.
4. GPS system to find lost children.
5. Video cameras that can trigger vehicle alarm when there is child detected on street.
6. Emitting devices carry by children with signals that can be detected to avoid accidents.

The systems suggested are undoubtedly can help in increasing the level of safety for the children wandering around the streets. However, it is a technology that needs to be further tested. The technology can trigger an alert when there is a danger and provide means of finding ways for lost children, but can it prevent criminal from committing the crime? It is also highly questionable on the comfort of the children to be carrying such device everywhere they go.

Another study addresses the perception of women traveler travelling in the city of Kuala Lumpur [8]. In the finding, it was reported that the respondents felt safe travelling in Kuala Lumpur during the day time but not during the night time. They felt vulnerable to the potential of theft assault, rape and pick pockets. Their perception of safety is highly based on the road

traffic [8]. There is a difference between the level of safety for women and men as women often face greater obstacle and draw more attentions. Based on the finding, the respondents highlighted that they felt more secure at areas with CCTV. However, it can be argued that CCTV can only help in detecting or capturing criminal during the aftermath and not preventing them from doing their job.

Another different study looked into the women's travelling safety issue particularly for public transport users [9]. The research revealed that travelling time, travelling distance and age does trigger the safety issues for the women. Instead of focusing on factors of incidents that makes the women traveler feel unsafe, this study concentrates on the effect of poor public transportation service that leads to safety issues. It is strictly recommended for investment on safety policy guide and public transport service. The service for public transportation must be looked into to ensure that the public transport arrived on time with no delay and no technical issues that can prolong travelling time. It is also suggested to provide an essential travelling needs for elderly women for a safe and comfortable journey [9].

The unsafe feeling among travelers is also emphasized by a study that focuses on the physical aspect of railway station that can prevent or reduce the fear of crime to the public [10]. The participants from the study mentioned that a highly visible railway station layout design can them a more secure feeling. The idea of visibility is to provide public with exposure to their surroundings with no obstacles that prevent them from knowing what is happening behind it. Beside visibility, better lighting, CCTV and clean railway station are influenced in providing a safer environment to the public [10].

### 2.3 Safety and Community

A system, called as 'U-Crime Prevention System (UCPS)' is studied to analyze crime and used for prevention strategies by using the function of Internet App [11]. Police have their own limitation and UCPS can ease the work by giving crime information and user participation [11]. This study by Moon, Hea and Lee intends to create a system for crime prevention by analyzing hot spot crime areas and case systems that contribute to the causes of crimes.

Land use, building usage, urban infrastructure and location of CCTV is analyzed and it is revealed that the position of CCTV are not located at hot spot crime areas [11]. In order to offer a safer environment, the suitable location of CCTV installation must be well analyzed. It is suggested that by improving the urban physical environment, a safer city can be achieved [11].

Pain and Townshed investigate the perception of safety among different group of people in New Castle, England. Based on their interview, most of the people in the city centre are afraid of theft, assault and child abuse while the elderly and mothers are more concern on pick pockets and snatching issues

[12]. They highlighted Oc and Tisdell planning strategies that are divided into four categories; fortress approach (controlling access), panoptic approach (surveillance), regulatory approach (active management of public space) and animated approach (increase human presence). Oc and Tisdell prefer the latter two approaches as it will create a livable environment thus preventing the feeling of fear of crime [12]. While the first two resulting in more privatized of space that can provokes fear [12].

It is found that the public feels safer when the city is active and crowded by people[12]. CCTV can be seen as surveillance to address people concern on safety, but it does not prevent crime from happening [12]. Same goes to street lighting, the public are concern about the lighting of the city, as darker place create more potential of crime but it does not prevent the fear of crime [12]. It is highlighted that authorities play an important role in implementing law and policies, but less effort was taken to understand the users perception towards their safety in city centres [12].

In order to provide a safer community environment, Crime Prevention Through Environmental Design (CPTED) has developed three CPTED concepts as follow [13]:

1. TERRITORIOL ENFORCEMENT: symbolic barriers (signage, suble road texture), real barriers (fence or design that differentiat spaces), access control (Promoting opportunities of surveillance by using physical attributes).
2. NATURAL SURVEILLANCE : Visibility; opportunity for residents to observe streets
3. NATURAL ACCESS CONTORL: Organised accessed control (security person) and mechanical access control (eg; key locks).

### 3.0 METHODOLOGY

This study analyses the concepts of safe city planning. By conducting a qualitative research method of content analysis, a new conceptual framework for a safe city planning is proposed by combining several concepts together. Based on Table 1, the concepts is divided into 3 categories; night time activities, traveler & public transport users and community.

**Table 1** Content analysis of safe city concept

Categories	Safe City Concept	Analysis
Night Time Activity	<ul style="list-style-type: none"> <li>• Development of land use that is non-alcohol related activity</li> <li>• Planning the economic activity at city center. (performance, shopping and etc)</li> <li>• Human surveillance &amp; CCTV</li> </ul>	<ul style="list-style-type: none"> <li>• Planning for land use activity can reduce safety issues in the city.</li> <li>• Aid of surveillance requires both human and CCTV to reduce the fear and potential of crime</li> </ul>
Travelers and public transport users	<ul style="list-style-type: none"> <li>• Technology that can support walkable environment in preventing accidents and detecting criminals</li> <li>• Improvement of public transport system</li> <li>• Surveillance of CCTV</li> <li>• Highly visibility of space, better lighting and clean environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Further study on the application of advanced technology needs to be done</li> <li>• Public transport system certainly needs to be investigate to ensure safety</li> <li>• CCTV can only help to identify or capture criminal, but not necessarily preventing crime.</li> <li>• This environmental factor can reduce potential and fear of crime</li> </ul>
Community	<ul style="list-style-type: none"> <li>• Identification of hot spot crime areas and suitable location of CCTV</li> <li>• Improvement of physical environment</li> <li>• Oc &amp; Tisdell Planning strategies and CPTED concepts (see 2.3)</li> </ul>	<ul style="list-style-type: none"> <li>• More attention of surveillance at hot spot areas</li> <li>• This environmental factor can reduce potential and fear of crime</li> <li>• Involves physical and environmental factor as well as public participation.</li> </ul>

### 4.0 RESULTS AND DISCUSSION

The result from the analysis of content from Table 1 will be discussed in this section. At the end of this section, a new concept will be recommended to create a synergy Safe City Planning concept.

#### 4.1 Night-time Activity

It is highly noted that the issues for night-time safety is related to alcohol. It is important to plan a suitable night- time activity that will not trigger criminal behavior. Besides focusing on alcohol-related activities, we also need to look into the possibility of activities and environmental factor that can trigger criminal actions.



## 4.2 Travelers and Public Transport Users

The application of technology is a great deal this days. Technology helps human with their daily activities, giving fast information and helps with human limitations. However, the application of technology suggested that can enhance a safe walking environment needs to be further investigate. This technology includes the attachment of device to our children, or can also use by adults. But are we ready to take it to the next level? Do we feel comfortable carrying a device with us everywhere we go? It also requires discipline to carry such device around. A further study on perception of people towards the application of this device needs to be done.

Apart from technology, traditional approach such as revising the environmental and physical factor certainly can improve the safety level. It is agreed that high visibility, influence of lighting and clean space can provide more secure environment to people. Policies and system for public transportation need to be revised or improved in order to avoid criminal activities and providing comfort in travelling.

## 4.3 Community

In order to prevent our community from suffering safety issues, authorities and planners must convinced them that they are living in a safe environment. Hot spot crime areas need to be identified and it can be done with advanced system tool such as GIS. More attention needs to be given at hot spot areas by providing necessary surveillance. The planning strategies and CPTED concept can be applied by looking into the physical and environmental factors.

Each categories of safe city planning recognized CCTV as being one of the important elements in ensuring public safety. With the utilization of CCTV, it can assist to provide the sense of security among users which might eliminates the fear of crime. Though the usage of CCTV is effective in reducing crime rate, the function of CCTV by itself does not stop crime. It is highly suggested to aid both human surveillance and CCTV for a better human protection.

## 4.4 Recommendation for Concept of Safe City Planning

Based on the three categories studied, the synergy from all concepts can create a new concept of Safe City Planning. Therefore, the recommendations of the safe city concept are as follow:

1. Planning suitable activities for development of land use.
2. Identification of hot spot crime areas.
3. Improvement of physical and environmental factors (visibility, street lighting, division and demarcation of space, signage, clean environment and etc )

4. Revision on public transport system.
5. CCTV with aid of human surveillance.

## 5.0 CONCLUSION

The increasing number of crime rate in cities has certainly evokes the fear of crime. It is important to enhance our living environment by providing a safe city for all. By looking into several concepts of safe city planning, it can be concluded that activities and development proposed in the cities at the early stage of planning plays an important role in shaping the livability and security of the city. By identifying existing hot spot crime area, several improvement can be made such as increasing the visibility, improving the quality of street light, keeping the environment clean and installation of CCTV with aid of human surveillance. It is also important to look into the public transportation system to ensure traveler's safety and eliminates the fear of crime.

This study is limited to the physical factors to prevent crime that can create a safer living environment. However, the main reason for people to commit crime is from their inner self. It might due to cost of living, problematic families, peer pressure and so many more. A stronger safe city planning concept can be achieved when the physical factors is combined with the spiritual and psychological behavioral study.

## Acknowledgement

The authors would like to express deepest appreciation for those from the University Putra Malaysia and Faculty of Design and Architecture as the funding bodies of this research, under Geran Putra, Inisiatif Putra Berkumpulan.

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