

## Crime Prevention Through Environmental Design – A Case Study

Ar. Supriya Savant

Architecture, S. B. Patil college of Architecture and Design, Maharashtra, India

Corresponding author: Ar. Supriya Savant, [s.savant@sapatilarchitecture.com](mailto:s.savant@sapatilarchitecture.com)

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### ABSTRACT

Through the first, second and third generation of CPTED, which has evolved over the times, safety and security of people are the main aspects of consideration. Through literature study one can understand the significance of propositions of CPTED and how safety and security of citizens in neighborhoods, public spaces, can be achieved. CPTED is the system applied in designing erected spaces, but in doing so; the builders and promoters use areas, which leave neighboring areas place for crime.

This paper discusses, a case study of a gated society, and the relationship of CPTED in and around the society, which can lead to crime development. But through effective design, there can be reduction of crime and the quality of living can be bettered.

**Keywords:** CPTED, gated communities, quality of living, safety and security, crime.

## 1. INTRODUCTION

Safety has always been the important concern for people living in housing societies developed by builder and promoters. Many a times the planned new residential areas are being covered by CCTV, boundary wall, security guards, good lighting etc., for the safety of the residents, but in doing so, the nearby areas around the new housing society are left unattended, with construction materials occupying the street, the construction workers in the neighborhood, the construction waste occupying the street, poor lighting conditions on the main road, slums occupying the streets & local residents having poor economic background. [1].

Safety and security are been taken care inside the newly constructed housing or residential areas, but in constructing so, the surrounding areas are left unattended, which develop a place for crime.

## 2. LITERATURE REVIEW

### 2.1 What is crime?

Crime is fear that is created in the minds of people, due to lack of security and lack of lighting in areas which are ways of daily commute to residents of the neighborhood. Crime is breaking the laws of the society and harming people, in and around the neighborhood, which can deprive them of having a

good social life, which can in turn result in depression and harm the physical and mental wellbeing of the people. Crime can happen anywhere in the city. It can happen in the shopping mall, neighborhood, residential area, commercial complex, the streets, urban parks, railway stations just anywhere.

A city should be safe, livable, vibrant and healthy. Every woman and child should feel safe while walking on the street, at any time, during day / night. People are seen staring, catcalling, and passing inappropriate comments etc., such harassment does become a mental stress for most of the woman and result in the poor quality of life. [2].

### 2.2 Concept of a smart city-

A smart city is the one that uses strategies to reduce crime in urban areas thus smart cities help government authorities and residents, reduce crime and fear of crime creating a safe city to live in, enhancing a good quality of life. [3].

### 2.3 What is CPTED?

The collaboration for urban planners and security professionals are required, to derive concepts for making the city livable considering aspects of environmental psychology, behavioral science, and

criminology to create better living conditions for the people. This is termed as CPTED i.e., Crime Prevention through Environmental design. In CPTED, design strategies are used to fight crime in the design process so as to avoid, dark areas, use of fencing or gates, a clean neat view of the street with cameras, controlling the entry exit points, proper vigilance, where one can easily spot strangers, have good activity around the neighborhood etc. These strategies are the **first generation of CPTED**.

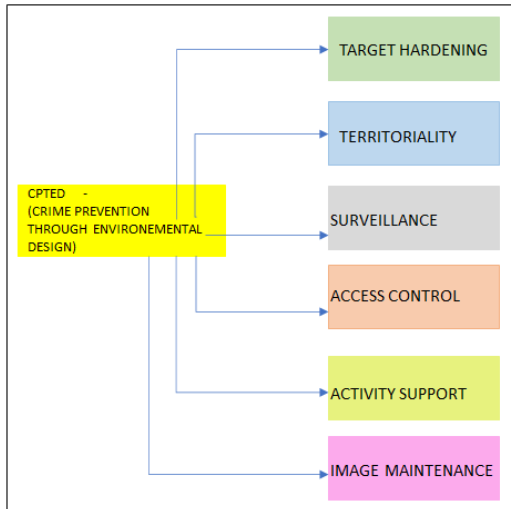


Fig 1 – the key concepts of CPTED – 1<sup>st</sup> generation

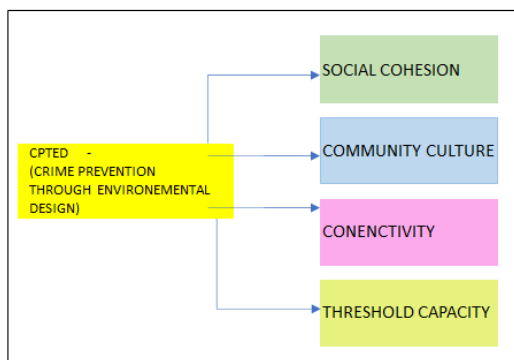


Fig 2 – the 2<sup>nd</sup> generation of CPTED

### 2<sup>nd</sup> generation of CPTED

Social Cohesion – social connectivity or relationship between residents to solve their problems. Programs like neighborhood watch to reduce theft, kidnapping can be introduced, so that quality of life can be improved.

Community culture –

Provision of cultural programs help people to connect with each other to create a sense of belongingness.

People living together in a society can bond together. Connectivity -

Between 2 neighborhoods connectivity can be achieved by organizing various programs

Threshold capacity – use of land for various purposes in the neighborhood. if left vacant can attract crime. [4]

### 3<sup>rd</sup> generation of CPTED

This focuses on creating green sustainable environment based on security and physical surrounding to ensure that urban space is safe, secure and friendly, to enhance the standards of living.

The 3<sup>rd</sup> generation directly focuses on the quality of life and thus address the six levels of Maslow's revised hierarchy on the needs of the people, as per the neighborhood hierarchy.

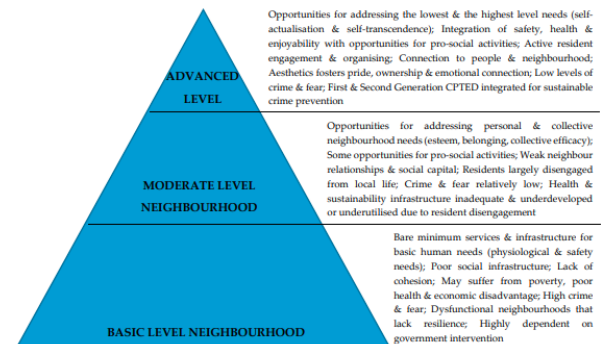


Fig 3 – 3<sup>rd</sup> generation of CPTED [5]

**Basic level neighborhoods** people don't want to interact, have a vibrant life, facades are blank with no activities, and are not interested in participation in activities. These may suffer from poverty and poor health. Crime can occur in these areas.

**Moderate level of neighborhood** – crime rate is low in these areas, but there is less sense of social belonging in the society. There is insufficient quality of health and infrastructure is not developed well.

**Advanced level** – people are connected in the society, have high enthusiasm in activities and are well integrated with social activities where safety and health are not affected.

In such neighborhoods, people voluntarily participate in keeping a watch on the strangers.

In gated communities, there is always a barrier of fencing or gates between social background of upper-

and lower-income groups of people. These can create an isolated area, vandalism, frustration, theft, etc. gates act as barriers, and separate visually the community. [6]

The use of CPTED crime prevention through environmental design is to incorporate the design strategies in the built environment which can reduce crime and fear of criminals.

### 3. METHDOLOGY

An observational method was used to gather the data for the study. Data collection in the form of visual surveys, questionnaire to the residents and interviews of the residents led to the observations.

#### 3.1 Case study -

The selected area for the study is in Pimpri Chinchwad. The selected residential community is a gated community, people residing are from various parts of India. The society consists of total 400 units.

A Photographic survey was done for the selected area and based on its observations were made where crime can occur and reason for the occurrence. The study was conducted on CPTED components of 1. Territoriality, 2. Surveillance, 3. Image Maintenance and 4. Target hardening

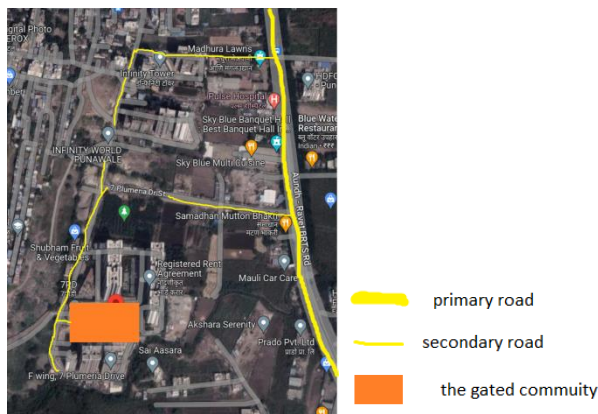


Fig 4 – the location

of the neighbourhood



Fig 5 – the site location and its surroundings

The location of 7 plumeria drive at Punawale, is a residential society having almost 400 units. The society is constructed in the developing area, but the surroundings are still grey.



Fig 6 – the society with high towers and gated community.

### 4. APPLICATIONS OF CPTED PRINCIPLES

1. Lighting – Natural Surveillance - Lighting conditions can be a major challenge for safety. The lighting conditions if are not good, creates a fear in the residents. The streets should be provided with sufficient lighting, so that people can be seen. Planning authorities should lighting at strategic locations which can reduce crime. By normal vision A face should be able to be identified aproximately 10 m by a person with a normal vison.



Fig 7 - Dark areas can be a reason for crime.



Fig 8 – Opposite areas are not developed, dark

2. Territorial reinforcement – by providing compound walls, the residential area is dictated as safe and secure inside the society, where a sense of territory demarcation is followed. It shows a boundary is created in planning for safety and security of the users.

Fig 9 – Wide roads with less lighting – a day photograph which shows the residential area defined with compound walls, with good security inside the residential area.

3. Access control - Mechanical Surveillance and control at entrance –

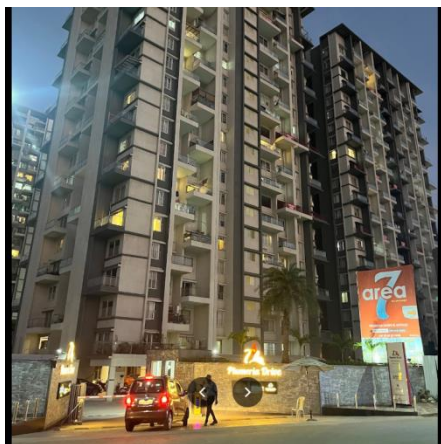


Fig 10- Control at the entrance by security guards & CCTV a night and day view at the society only



Fig 11- day view of provision of security

4. Image management - lack of proper maintenance and Vacant land and unused spaces there is loss of positive image in the surrounding.

5. Target hardening – provision of controlled environment with use of fences and security, and provision of fences can reduce crime.

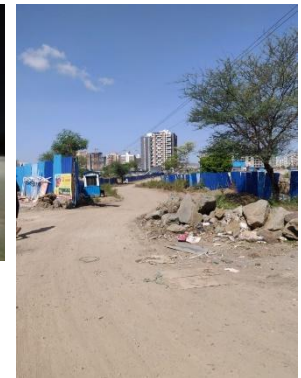


Fig 12 & 13 - Target hardening is seen only in the premises of the society, but the surrounding areas are not properly managed by the authorities with fencing and guards. These unattended spaces are areas where crime can occur.

6. Activity support – there is seen a lack of good signage's, and proper design of activities in the neighbourhood.

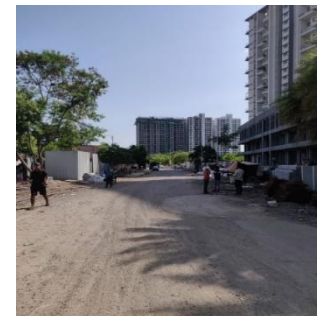


Fig 14 & Fig 15 – lack of signages – and no proper image maintenance- vacant and isolated areas

## 5. CONCLUSION - Planning requirement for a safer city

Proper design and effective use of built environment can reduce crime and fear of crime. Application of the principles of CPTED like natural surveillance, target hardening, natural access control and image maintenance and management at the early planning and design stage can reduce crime. Gated communities are safer for woman, but once they step outside of the gated community, problems of street harassment arise. [6]

Garbage left unattended on the street, sidewalks under construction, construction waste lying on the street, overgrown trees, rocks and boulders lying as dumping waste on street, lack of control on street, hiding places for strangers, wide vacant isolated streets, no proper signage's can lead to crime. These were the problems that are prevalent on many of the streets, and so the safety and security of woman is at stake. People living inside the gated communities find it safer to walk

inside, the society. Once they step outside, the problem of catcalling on the street begins. [1]

Fencing and securing the society creates problems as enclosures limit access and an economic background the high and low or rich and poor, a feeling of insecurity in the minds of people thus crime rates can be increased. [7]

Further research can analyze more crime rates around such gated communities at various locations so that planning principles for the future designing can be generated.

## 6. REFERENCES

- [1] "Condos are not safe, say residents," Hindustan Times, <https://www.hindustantimes.com/gurgaon/condos-are-not-safe-say-residents/story-Pb3I3rBKMgkEY609FKzkM.html> (accessed Jun. 18, 2023)
- [2] Over 80% Indian women have faced harassment on streets, how do we make public places safe? (2023) India Times. Available at: <https://www.indiatimes.com/news/india/how-do-we-make-streets-public-places-safe-for-women-599743.html> (Accessed: 18 June 2023).
- [3] S. P. Mohanty, U. Choppali and E. Koungianos, "Everything you wanted to know about smart cities: The Internet of things is the backbone," in IEEE Consumer Electronics Magazine, vol. 5, no. 3, pp. 60-70, July 2016, doi: 10.1109/MCE.2016.2556879.
- [4] P. Cozens, A Review and Current Status of Crime Prevention through Environmental Design (CPTED), [https://www.researchgate.net/publication/281604957\\_A\\_Review\\_and\\_Current\\_Status\\_of\\_Crime\\_Prevention\\_through\\_Environmental\\_Design\\_CPTED](https://www.researchgate.net/publication/281604957_A_Review_and_Current_Status_of_Crime_Prevention_through_Environmental_Design_CPTED) (accessed Jun. 19, 2023).
- [5] M. Mihinjac and G. Saville, "Third-Generation Crime Prevention Through Environmental Design (CPTED)," *Social Sciences*, vol. 8, no. 6, p. 182, Jun. 2019, doi: 10.3390/socsci8060182.
- [6] J. grant. "Types of gates." <https://journals.sagepub.com/doi/10.1068/b3165>. [https://www.researchgate.net/publication/23541464\\_Types\\_of\\_Gated\\_Communities](https://www.researchgate.net/publication/23541464_Types_of_Gated_Communities) (accessed Jun. 19, 2023).
- [7] R. Maconachie. "Do gated communities increase inequality? | World Economic Forum." FINANCIAL AND MONETARY SYSTEMS. Nov. 04, 2014. <https://www.weforum.org/agenda/2014/11/gated-communities-increase-inequality/> (accessed: Jun. 20, 2023).