The Impact of Urban Design in minimizing Women's Fear of Crime

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Abstract

Crime is a condition that infringes on an individual's right to live in a tranquil and secure environment. Each year the rate of crime is increasing in tandem with technical advancement and urbanization. On the other hand, fear is characterized as anxiety or worries about being harmed or victimized. One crucial outcome of rising crime rates is a psychological phobia, which breeds fear of crime. In society, those who are already weak on the socio-economic and psychological fronts may lack the means to defend themselves from high-crime areas and will be plagued by their fear of crime. Areas like low-density public spaces, curving trails with poor lighting, urban forest with unclear vision lines, and destitute and abandoned structures with minimal human traffic are more prevalent in crime activities. Thefts, robbery, sexual assault, homicide, are among the more prevalent crimes in India, which has a wide spectrum of criminal categories. The majority of these incidents take place in metropolitan areas. This paper discusses how a conurbation design can help women to feel safe and comfortable using a space in the urban setting without the fear of victimization, thus reducing deleterious activities. Concepts of Situation Crime Prevention (SCP), Crime Prevention through Environmental Design (CPTED), can minimize the opportunities for crime and fear of crime. The methodology consists of a questionnaire to 320 women in urban, peri-urban settings who experience a fear of crime while using public spaces. The result of this paper indicates that a destitute urban setting instigates offenders to involve in malevolent activities, thus perniciously increasing the fear of crime. In contrary to this, Secured cities with cohesive communities, and mixed land use with bustling activities throughout the day can lessen the opportunities for crime and could create defensible spaces.

Theme: Urban Environment's role in Natural Monitoring

Keywords: Fear of Crime, Urban Crimes, Natural Surveillance, Urban Planning, Defensible Spaces.

1. Introduction

India has reported a total of **4,28,278** cases of **Crime Against Women** in 2021, showing an increase of **15.3%** over 2020 (3,71,503 cases) according to National Crime Records Bureau (NCRB) report 2021, this includes Indian Penal Code(IPC) crimes such as Assault on women, Kidnapping & Abduction, Rape, Theft and Robbery. In that **43,414** cases of **Crime Against Women** were registered in 2021, in 19 Metropolitan Cities, which shows an increase of **22.9%** over 2020 (NCRB, report 2021). As per United Nations Office on Drugs and Crime (UNODC), Crime prevention is defined as **"the strategies and measures that seek to reduce the risk of crimes occurring, and their potential harmful effects on individuals and society, including fear of crime, by intervening to influence their multiple causes."**

Numerous elements, such as socio-economic considerations, cultural backgrounds, environmental influences, poverty, etc., affect the offender's motivation to commit the crime. This paper asserts that one such aspect is the urban environment, where the majority of crimes occur, which can be planned for or changed to aid in crime prevention. Two main strategies for prevention of crimes in urban setting include Situational Crime Prevention (SCP) and Crime Prevention through Environmental Design (CPTED). The paper also seeks to identify the environments that make women feel more vulnerable to the crime and maximizes their dread of crime.

1.1 Crime Triangle

Any crime entails an offender, a victim, and an opportunity, which comprise the crime triangle (Fig.1.1.1). The criminal is perpetually motivated to carry out the planned crime against the desired victim in a setting where there is little danger of being discovered and no chance for the victim to attempt to flee. Preventive measures begin at the point where they can eliminate any one element of the crime triangle. This is made possible by boosting the likelihood of captures, lowering rewards, offering enough surveillance, and providing opportunities to escape for the victim.

Fig. 1.1.1. Crime Triangle

1.2. Situational Crime Prevention (SCP)

The strategy of SCP is that it addresses specific crimes by managing, designing and manipulating the environment in a manner that seeks to increase the risk to the offender, while reducing the offender's potential reward for committing the crime (Patel, 2013).

1.3. Three D concept

Every urban area or neighborhood requires a space assessment based on the three D's:**Designation, Definition,** and **Design**. The **Designation** aids in determining the original intent behind its creation as well as the actual use of the area, and it examines any conflicts between the two. **Design** aids in regulating and assessing human behavior in the physical environment that is designed. **Definition** helps in defining the area in terms of physical, cultural, social, and legal systems, as well as its relationship to intended human behavior. The implementation of the CPTED concepts into practice is assisted by the space assessment process.

1.4. CPTED

The CPTED concept contained suggestions for encouraging virtuous attitudes ("motive reinforcement") and suggestions for reducing the likelihood of physical crime occurring ("target hardening"). First Generation CPTED, divides into four principles: **Territoriality / Territorial control, Natural surveillance, Image and Milieu, Access control.**The extent to which the situation or the environment is difficult for the offender to involve in the act of crime is directly proportional to the reduction in the rate of crime. The psychological behavior of human is to commit uncommon activities in the places where there are no eyes to watch them. Thus creating a harder environment for the offender and also reducing the rewards for the crime can help in minimizing overall crime rate.

Territoriality – Physical design can contribute to a sense of control and proprietorship in users (Newman, 1972). It will be challenging for the perpetrator to commit any offense in a location that possesses ownership or that has a caretaker. Every community should have a clearly defined public space that is maintained by its inhabitants. This will create a safer environment and involve everyone volunteering to maintain and keep it safe.

Natural surveillance – As rightly quoted by Jane Jacobs "Eyes on the streets" (Jacobs, 1961) will be the ideal way of monitoring. Other than the residents, Hawkers and shopkeepers of the neighborhood can also act as the greatest observers of the unusual activities. This is feasible by providing proper vision lines from the houses without any obstruction by the property walls or landscaping, lighting at regular intervals can also help in reducing shadows and the blind spots.

Image and Milieu – The image ability of a location makes it challenging for the offender to engage in undesirable behavior. The Broken Window Theory (JQ Wilson, GL Kelling 1982), which asserts that anything that is not kept up with would make the offender believe that there is no one to watch over or take care of the area, validates this. This encourages him or her to indulge in the crime without hesitation.

Access control – Similar to territoriality, this aids in restricting the access of outsiders into the property. Entry restrictions can be achieved by providing road barricades, access control systems, screening with landscape, thus creating mini neighborhoods which has controlled and restricted usage.

Thus the 1st Generation CPTED describes more on strengthening the community and Residents acting as natural monitoring agents, whereas the 2nd Generation CPTED

concentrates on offender's perspective and decision making; which deals with crime displacement based on territorial, temporal, tactical, target, and functional aspects. The concepts in 2nd Generation comprises of **Social Cohesion, Community Culture, Connectivity and Threshold Capacity**. CPTED is also used as tool to manipulate human behavior in environmental psychology (Jorgensen et al., 2012). This approach will be helpful for the urban designers and planners to manage the settings of parks, streets, gathering spaces to minimize crime.

2. Literature Review

Various Research papers related to Fear of crime, Environments in which the crime happens, urban cues for crimes, crime in public transport, urban safety, SCP and CTPED in Indian context were the key aspects for selecting the literature study. Based on these 4 papers with related topic were taken into the study.

2.1. Literature Review

Table 2.1. Comparative table for Literature Review

Topic	Methodology	Sample Size	Result
Revisiting fear and place: women's fear of attack and the built Environment. (Koskela & Pain, 2000) Hille Koskela , Rachel Pain.	Quantitative research	The questionnaire survey of 389 women was carried out in two cities of contrast environments.. In addition 45 in-depth interviews	In the end of the survey from two cities, Helsinki and Edinburgh; the results were quiet contrasting. However the need for developing countries to prioritize women's safety and design out fear in urban spaces will be the primary concern was the outcome.
Fear of Crime in Urban Settings: Influence of Environmental Features, Presence of People and Social Variables. (Ratnayake, 2013) Rangajeewa Ratnayake	Methodology involves the details of various theories and case examples justifying the theoretical statements.	---	This paper was concluded by comparing the fear of crime and the existing theories which describes the potential areas of crime. Additionally, it emphasizes the necessity of a comprehensive approach to urban design that integrates socio-economic culture and the Prospect Refuge Theory.
Situational Crime Prevention: A Study in Indian Context. (Patel, 2013) Dr. Nirpat Patel	Quantitative survey of different crimes in two Indian Cities namely Indore and Jabalpur were taken.		This paper concludes by emphasizing the need for widening the crime prevention approach, exploration of applicability of SCP in developing countries, adequate training for SCP oriented modules.
Geographies of Urban Crimes in India (Gupta, 2022) Bashabi Gupta	Various Indian Cities were chosen and from the National Crime Records Bureau the incidence of crime was considered.		An alarming trend is an upsurge in crime in all of India's cities, which makes it mandatory for intervention of preventative measures at multiple levels along with strict policing.
Present Research: **The Impact of Urban Design in minimizing Women's Fear of Crime. (2023)**	Quantitative survey in various cities of India	300 samples	Correlating the theoretical concepts with the facts numbers obtained from the quantitative survey, and providing urban design solutions for preventing crime.

3. Methodology

The understanding of an assortment of ideas and design approaches from CPTED and SCP served as the foundation for this paper's research methodology. Using a deductive research approach, the quantitative research method was deployed to evaluate all of the aforementioned concepts and design approaches. In order to gather information from a random sample size of 320 women from varied socio-economic backgrounds living in different cities across India, the survey was carried out using the positivist technique. Women were requested to answer questions about their perspectives concerning several public spaces they frequently encountered on a daily basis, which addressed a range of SCP and CPTED design factors, such as lighting, ownership, neighborhood ambiance and blind spots, landscaping, public transportation, and a couple of queries about a person's level of fear of crime and their perceptions of crime. For the survey, women from various employment statuses will be volunteering at different public spaces across India. Cities such as Mumbai, Bangalore, Chennai, Coimbatore, Kochi, Trichy, and Nagpur were prioritized. Surveys were intended to be conducted in public areas where women tend to congregate in greater numbers. The age range of the targeted respondent was planned to be in between 15 to 55 years. Each survey took place between 7 and 9 am and after 6 pm, with a planning period of roughly 10 minutes. The survey schedule for the nights was extended to capture the ambience of the public spaces at night, compare foot traffic, and comprehend the perspective of women using those locations.
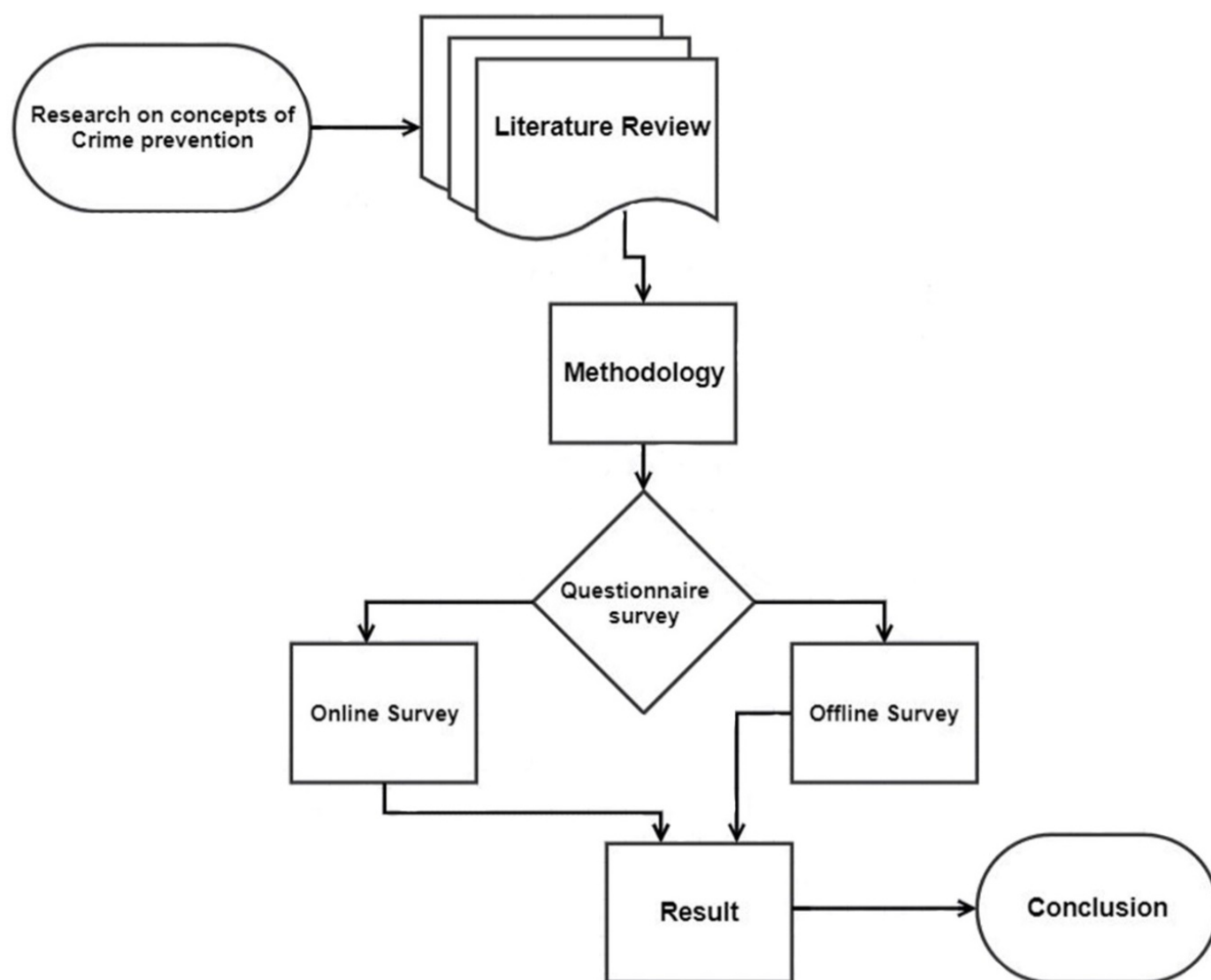
Fig.3.1. Methodology Flowchart

4. Results and Discussions

Five female surveyors, including a college student, a working woman, and a homemaker, were selected to assist with an offline survey. They performed the survey in a variety of urban points of interest, which comprises a community garden, a mall atrium, a Food Street, vegetable markets, bus stands, transit stops, secondary roads, recreational areas near lakes, and the vicinity outside a college campus. Each survey was lasted for about 20 minutes, and it was conducted during 7 to 9.30 am in the morning and after 6 pm in the evening in selected cities like Coimbatore, Bangalore, Mysore and Trichy. A concurrent online survey was conducted using Google Forms. The quantitative information from both surveys was examined, and a correlation between the theory and the sample survey's results was found. In addition to the questionnaire survey, an observation survey was conducted to track women's comfort level in using public places at night and their level of dread of doing so. In this survey, women were asked about their experiences using the surrounding region at night. The quantitative survey was responded by 243 women, of which 208 were through an online survey and 35 were through an offline survey. The questionnaire had 24 questions regarding the most used public space, ambience of their neighborhood, fear of crime in public spaces, types of crime which provokes fear, their previous experience of crime etc (sample of the questionnaire has been attached). The predominant response was from 20 to 40 years age range, which comprises of college students, self-employed or working women. Over **72% of women** in the survey have experienced the crime in their life, and over **64.8% of women** have fear of crime while using public spaces alone. A question about the different sorts of crime that make women fearful was asked in the survey. Most people were afraid of crimes including sexual assault (49.5%), as well as chain snatching. (Fig.4.1).

Q. Spaces where you feel safe.

Most of the respondents chose pleasant and well maintained spaces as their first priority, followed by busy streets, CCTV monitored and well illuminated spaces (Fig: 4.2)
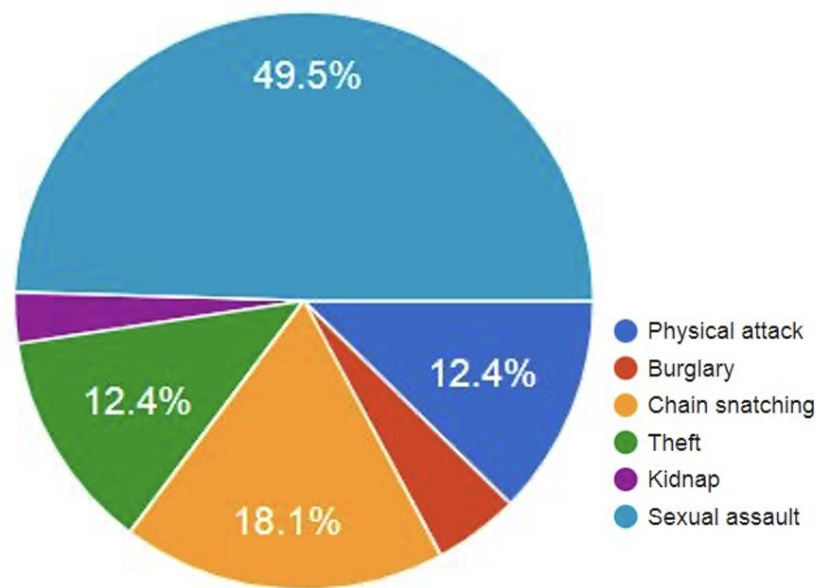
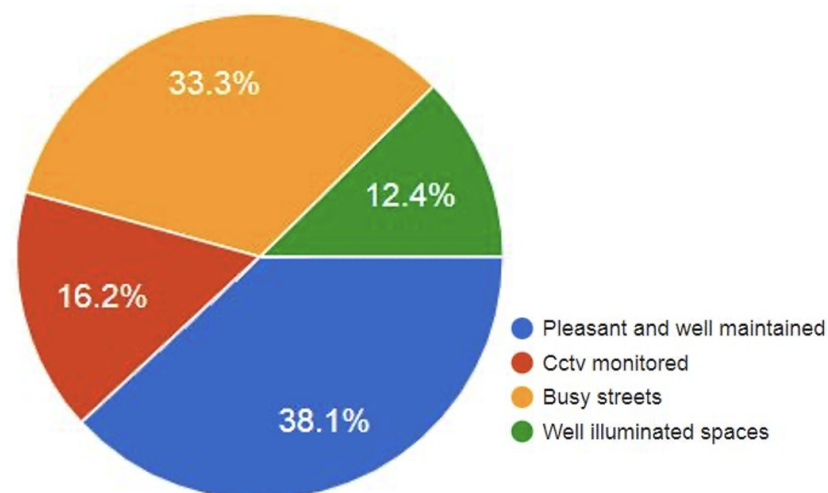**Fig.4.1.** Types of crime included

Fig.4.2. Safe spaces as per respondents

In the survey, women were asked to rate (out of 5) on how safe they feel in the public space at different period of a day. (Table: 4.2)

Table : 4.2 Public spaces during different period of a day.

	Unsafe	Fairly Safe	Moderately safe	Safe	Safest
1. How safe you feel in a public space during day?	0%	1.9%	22.9%	**44.8%** (108 responses)	30.5%
2. How safe you feel in a public space during night which is crowded?	1%	17.1%	**40%** (97 responses)	28.6%	13.3%
3. How safe you feel in a public space during night which is lonely?	**41.9%** (102 responses)	25.7%	19%	8.6%	4.8%
4. How safe you feel to use a public transport during night?	19%	22.9%	**25.7%** (62 responses)	23.8%	8.6%

Q. Ambience and Blind spots in your neighborhood.

Women addressed that the ambience of most of their neighborhoods (Table: 4.3) were with low lighting, narrow streets, empty grounds and building, unmaintained urban landscapes.

As a result of constant use of such spaces, respondents have took few precautionary measures on their behalf to avoid the uncommon circumstances; this includes the use of tracking system, avoiding visits to lonely places, avoiding night travels, visiting public spaces in groups, awareness about the emergency helplines (Fig.4.3).
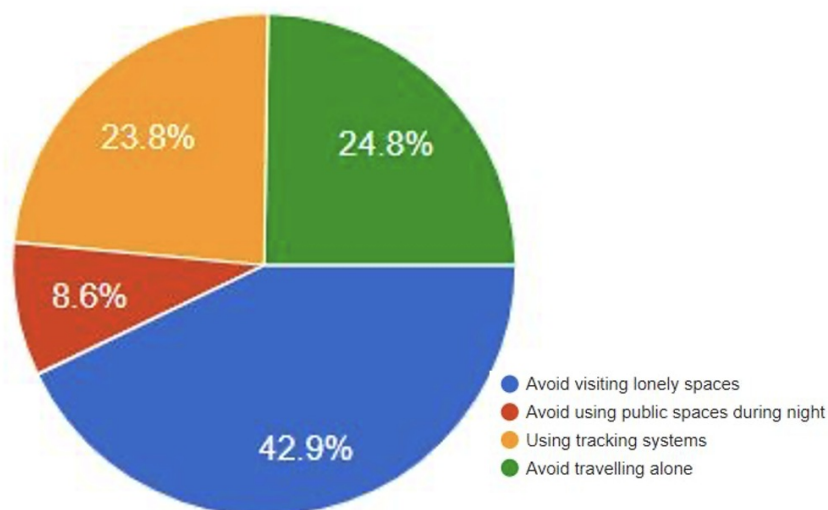

Fig.4.3. Precautionary Measures

	Bright/Well Lit & busy with human activities	Moderately Bright/Lit & less human activities	Dark & lonely
Ambience of your neighborhood during day time	53.3%	41%	5.7%
Ambience of your neighborhood during night time	17.1%	55.2%	27.6%

Table 4.3. Ambience of their Neighborhood

In addition to the questions, few women openly expressed their grievances on how difficult it is to use public spaces alone. Some of their perspectives **Cities are created with a commercial concern and not the liability or the aspects of safety** – Ravina Nafde (Self-Employed)

Society should be more trustable and reliable in case of any emergency. People should be more aware and educated about safety measures and emergency contacts Daarini (College Student)

Travelling in a public transport is unsafe for women I believe, so I have never travelled alone in a bus – Simrat (Full time worker)

5. Conclusion

Every member of society deserves a public space where they can be around without worry, reluctance, or fear. Unfortunately, a majority of women experiences disparity and finds it challenging to even travel alone without fear. For an act to occur, it requires an offender who can accomplish his/her thoughts in an appropriate environment over an innocent victim and earn the rewards and motivation to carry the same in other place on another person. This has to be minimized at the policy and planning level by the implementation of preventive measures and creating high-risk scenarios for anomalous behavior.

It is clear that the Broken Window Theory and the quantitative survey's results have a correlation in the area of safe spaces that needs upkeep. Women prioritize cleanliness, comfort, and livability over other factors when choosing a place of visit. Busy streets also help in keen monitoring which makes women to use those streets without hesitation or dread of victimization. Preventive measures of CPTED gets implemented at the neighborhood level which further gets translated by connecting different neighborhoods or communities to minimize the rate of crime in their immediate surroundings.
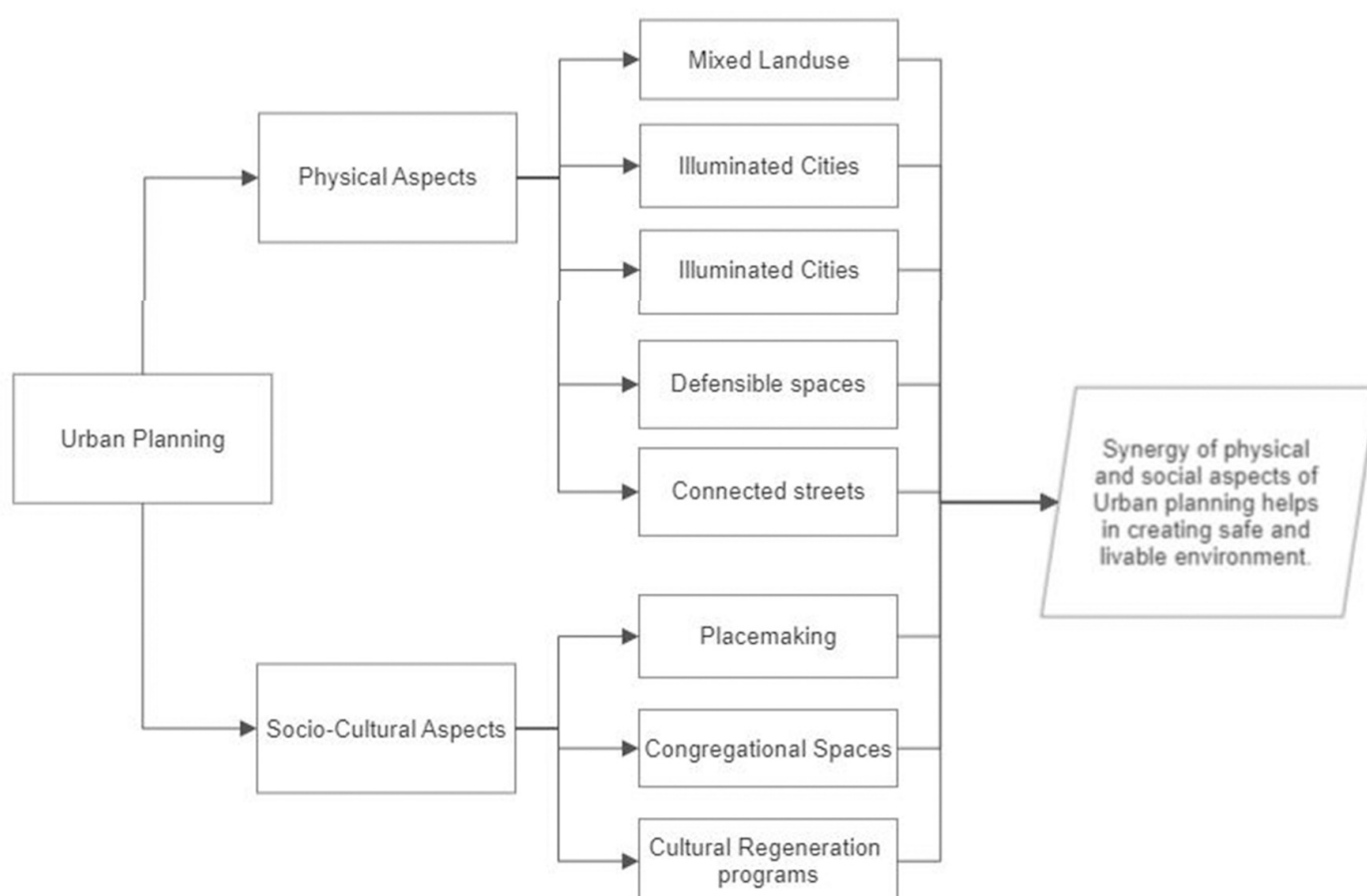

Fig.5.1. Urban planning aspects for safer cities

Only women between the ages of 20 – 40 years responded to the survey. In the survey, the response from women who were still in a nutshell and were reluctant to visit public settings due to their preconceptions was a limitation. The crimes committed in urban areas, such as sexual assaults, molestations, physical assaults, chain snatching, theft, and kidnapping, constituted within the scope of the study. In offline surveys, the sample size dropped due to a lack of time. In the Online survey women from Coimbatore, Bangalore, Chennai, Mysore, Trichy, Kochin, Palakkad, Sharjha, Lucknow, Mumbai, Nagpur and Hosur were the respondents. As a result, the survey was conducted primarily in the southern region of India, which was another significant research restriction.

Sample of Questionnaire

https://docs.google.com/forms/d/1PjQWAA87cpfKlm2b2phyCouTHVmtbJOBRpvloDzpt1k/edit

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