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## Research Article

# Drug-Free School Locality through Crime Prevention Strategies – The Case of Kerala

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In a quest to understand crime hotspots, particularly those entangled with drug use, this study shifts its focus towards the locations themselves rather than the criminals, as recent criminology research reveals that crime incidents tend to cluster together in certain areas. Notably, drug-related crimes fall into this pattern, necessitating a robust approach to address these issues effectively.

Kerala, witnessing a surge in drug-related instances involving youngsters near schools, becomes the canvas for this study. Seeking answers to the location of drug-related problems in Thiruvananthapuram's urban center, it delves into the environmental factors that amplify drug use.

Spatial aspects of school localities that trigger such activities come under scrutiny, employing theories, literature studies, and case analyses to forge strategies that can transform spaces and minimize contact between peddlers and children. The Central Government School, East Fort, Kerala, and its immediate 500m vicinity emerge as the focal area for in-depth analysis.

Spotlighting the transit area near the school as the epicenter of drug-related incidents, the study advocates security and surveillance enhancements in the region. Moreover, other contributing factors such as nearby beverage outlets, vacant spaces, unauthorized vendors, unmaintained dumping areas, and parking lots are identified as facilitators for illegal dealings. Proposed strategies encompass the installation of CCTV cameras, heightened police surveillance around the market area, pathway segregation, adequate transit shelters, and territorial boundaries to restrict unauthorized individuals.

Worth noting, the study relies on reported cases from the State Crime Record Bureau, Vazhuthacadu, thereby not accounting for unreported incidents. To strengthen future investigations, the incorporation of analytical tools becomes a paramount consideration. By weaving together these elements, this study endeavors to craft a unique perspective on crime hotspots and drug-related concerns within Kerala's dynamic urban landscape.

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## I. Drug and School Locality

### 1.1. Safe School

*Creating a secure atmosphere for children from their homes to their schools and back is what is*

*meant by "school safety." (NCPCR, 2020)*

*School safety involves the absence of violence, bullying, harassment, and the negative effects of substance use in schools and activities related to education. (Safer School, n.d.)*

Schools are crucial infrastructure tasked with producing tomorrow's citizens. Effective teaching and learning require a safe and secure atmosphere.

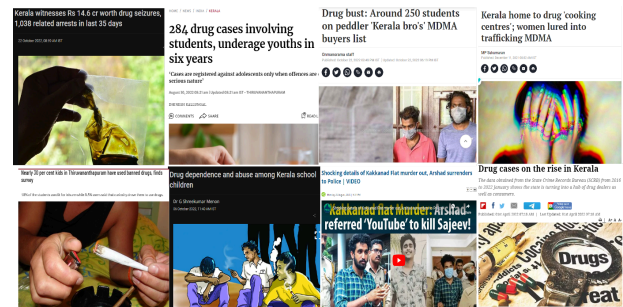
### 1.2. Relationship Between Drug Use and Crime

- Motivational Change
- Influx of Hormones
- Social Changes
- Removal of Consciousness
- Increased Risk
- An unstable household income.

### 1.3. Why School Surroundings

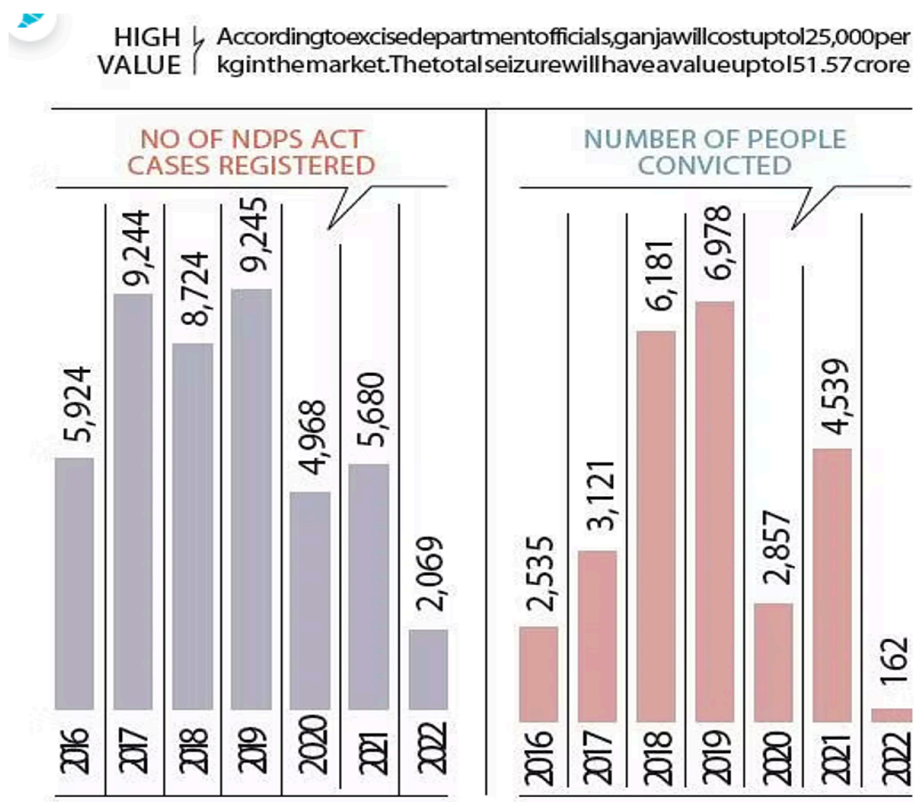
Teenagers are present in schools, and young adults and older children are more likely to commit offenses than people in other age groups. Criminals are drawn to these groups for both committing crimes and experiencing victimization within their age groups (Dale Willits, 2013).

### 1.4. Need for the Study



**Figure 1. Cases of drug issues in recent years**

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**Figure 2.** Cases of NDPS Act cases from 2016 to January 2022. Source: Drug cases on the rise in Kerala, Indian Express, 2022.

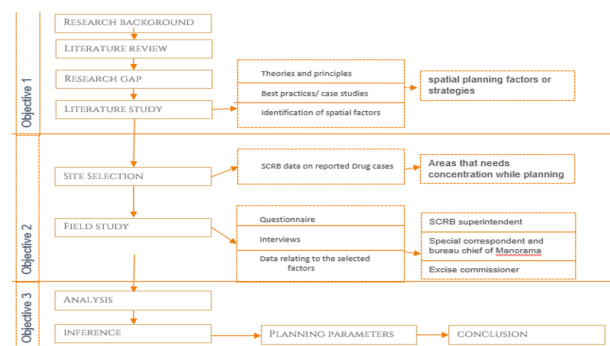
### 1.5 Aim

To identify spatial planning parameters/indicators for a drug-free school locality

### 1.6. Objectives

- To identify theories and principles related to drug-related crime.
- To identify and map concerned localities.
- To explore factors that enhance a drug-free school locality.

## 1.7. Methodology



**Figure 3.** Methodology of the study

## 1.8. Scope

- Predict future hotspots where crime can occur.
- Reduce crime through spatial planning around schools.

- Help in getting an idea of crime scenarios and, in turn, help in taking initiatives and raising awareness among citizens about crime-prone areas.

### *1.9. Limitations*

- This study is limited to the urban context of Kerala.
- Only reported cases are considered.

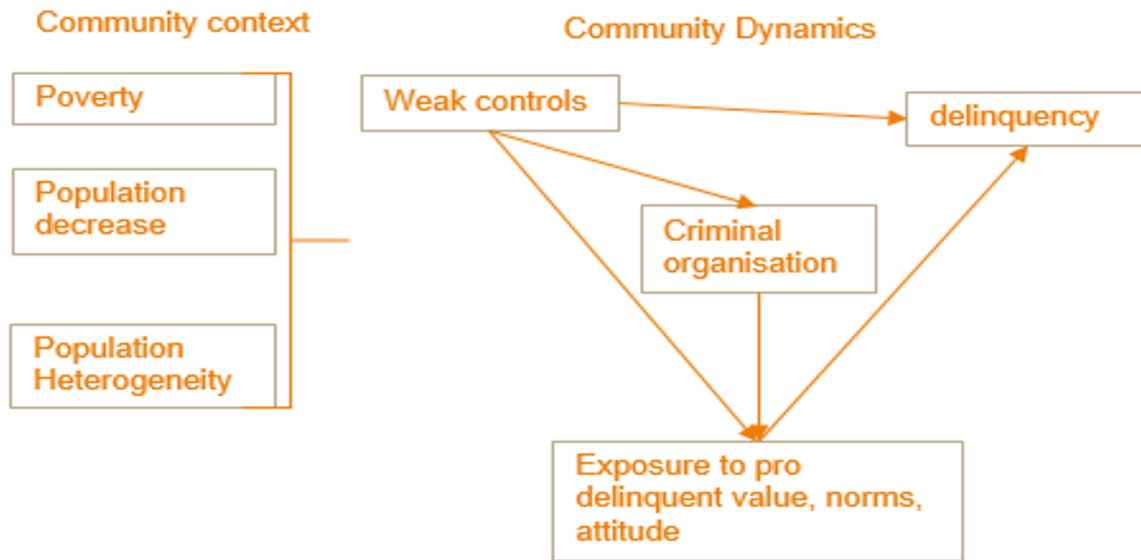
## **II. Theories**

### *1.10. Social Disorganization Theory*

This theory was quoted by McKay in 1942. The hypothesis of social disorganization is frequently used to investigate various connections between geography, concentrated deprivation, and criminal behavior (Muggah, 2016).

Typical characteristics of a disorganized community include making it a business-friendly area for drug dealing with:





**Fig: formation of delinquency**

**Figure 4.** Social Disorganization Theory Source: Social Disorganized Theory (Porter, 2015)

- High unemployment rate.
- Low education level.
- High minority population (Chen, 2020).

### 1.11. Concept of SCP

Situational Crime Prevention (SCP) is a method of preventing crimes by managing, arranging, and otherwise influencing the environment to make it more

challenging for offenders and less likely for them to be rewarded for committing the crime (Patel, 2013).

Significance of SCP:

1. Lessens the likelihood that offenders will commit crimes.
2. Modifies criminals' perceptions of whether they can get away with a specific crime.
3. Makes it seem more difficult, risky, and unsatisfying to commit crimes (Patel, 2013).

1. Environmental Criminology	2. Rational Choice	3. Routine Activity
<ul style="list-style-type: none"> <li>• Crime happens when four things come together: a law, an offender, a victim or target, and a place.</li> </ul>	<ul style="list-style-type: none"> <li>• criminals think about their decisions before they commit crime.</li> </ul>	<p>in order for a crime to happen there must be three things</p> <ul style="list-style-type: none"> <li>• offender</li> <li>• a suitable target,</li> <li>• no one watching this target.</li> </ul>

Figure 5. Main theories under SCP.

### 1.12. Place Management Theory



Figure 6. Crime triangle.

The crime triangle has been improvised by certain handlers to reduce crime. We have, for offenders, a handler to handle them; for a target, a guardian to protect them; and lastly, for the place, we have the manager or place manager who is responsible for handling the crime at that place (Eck, 2014).

The place management hypothesis, a subset of routine activity theory, explains why there is little or no crime in most areas but a lot of it in a small number of places. The method by which managers do their four main duties provides the explanation:

1. Organization of physical space
2. Regulation of conduct
3. Control of access
4. Acquisition of resources (Eck, 2014).

Place management affects more than just high-crime areas. Crime hot spots can be created in a region when crime hot spots are connected. A neighborhood's crime rate may increase due to the concentration of high-crime areas (Eck, 2014).

This theory was explained by Eck in his study, where he plotted the different facilities and the crime related to these areas or facilities, forming a J-curve indicating certain areas have more crime than others, mainly due to the management of the place. In other words, "a small minority of facilities contribute the majority of offenses at all risky facilities," which is also termed as the "iron law of troublesome space" (Eck, 2014).

Wilcox and Eck (2011)

### 1.13. Crime Pattern Theory

Quoted by Paul and Patricia Brantingham in 1980, also known as the Theory of Geometry of Crime, in which the nodes are areas such as home/work space/entertainment zone, and the connections between nodes are pathways. Together, they form an Activity space, i.e., nodes + connected pathways. These areas are visited by the target/offender, and there will be certain areas in between the nodes that are suitable for a crime from the offender's point of view. This area fitting the crime template gives the opportunity for the offender to commit a crime. The entire circle is well known to the offender as they usually travel through these areas. The more the number of targets cross the path that intersects with the area fitting the crime template, the more opportunities for crime.

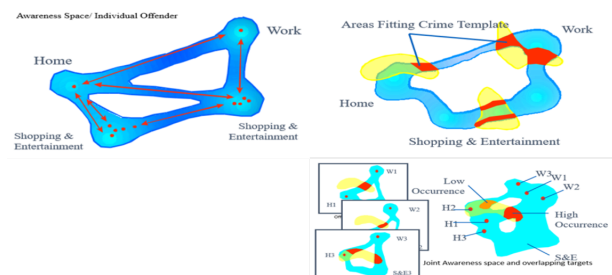


Figure 7. Representation of the awareness theory with the following elements: (a) individual offender, (b) area fitting crime, and (c) three offenders and their awareness space

#### 1.14. CPTED - Crime Prevention Through Environmental Design

A purposeful design of buildings, landscaping, access routes, and other exterior/interior security measures are all part of this crime prevention approach, which aims to lessen and/or completely eradicate crime and disorder (Council, 2003).

The main five types of factors under the theory include:

- The design and arrangement of objects and people to enable observations and increase visibility is known as natural surveillance (NS).
- Access Management (AM) is the practice of orienting and guiding people and vehicles along acceptable channels and limiting unauthorized access through the use of actual or perceived obstacles and other characteristics.

- Territoriality (T) is the use of physical characteristics to define a region and to convey a sense of pride and ownership.
- Physical Maintenance (PM) is the care of a structure or area, including replacement, repair, and general upkeep., and general upkeep.
- The goal of order maintenance (OM) is to identify small incorrect behaviors and take action to stop them (Council, 2003).

1. *CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN FOR A SCHOOL* Effective planning and management of the physical environment at and around the school site have the ability to lessen real and perceived crime problems. The term "crime prevention through environmental design" refers to this kind of manipulation (CPTED) (Group, 2014).

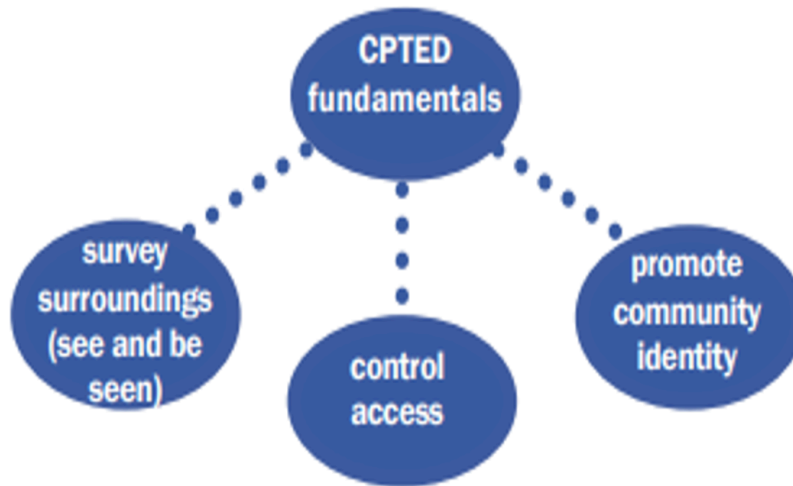


Figure 8. 3 main principles around schools

### III. Site Study

#### 1.15. Methodology on site selection

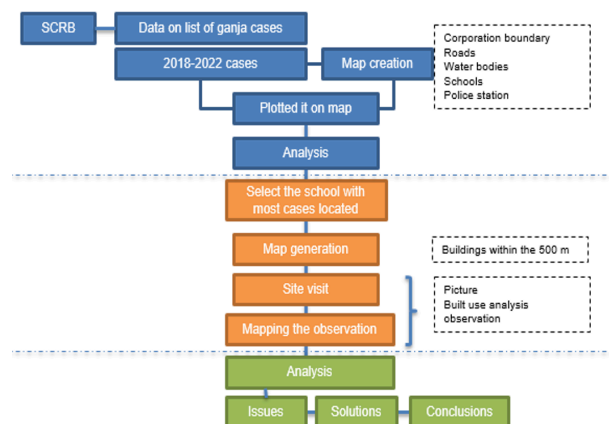


Figure 9. Methodology on site selection

#### 1.16. Site Selection

The site selected is the Trivandrum corporation boundary since it's the urban area of our state and comes in the fifth most position of most cases found in the state of Kerala. The area is selected because of its importance being the capital city with its character of urban quality.

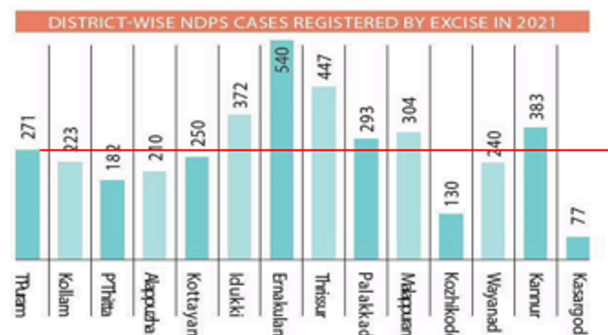
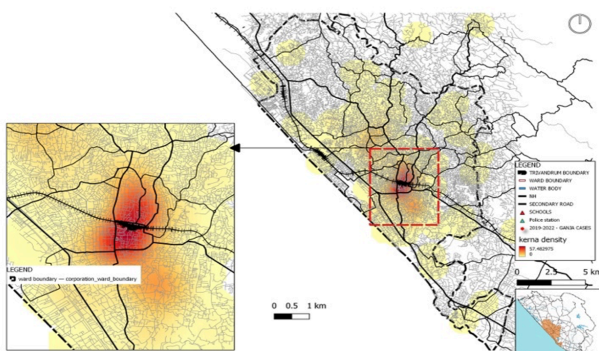


Figure 10. The NDPS cases mentioned by the excise department in the newspaper. Source: Ernakulam records Kerala's highest drug cases, Indian Express, 2021.



**Figure 11.** SCR data on the map generated from 2018-22



**Figure 12.** Kernel Density Map of the crimes

The concentration of the cases is in the innermost city center, the East Fort area, and hence the school that is selected for the site is the Central School Trivandrum, and a buffer of 500m is studied in detail. Site study is conducted and found that the school is surrounded by the North Bus Stand in front and Chala Market on its east side, and within the buffer of 500m, there exists Chenkal

Choola slum area and a railway station. There are also the presence of many crooked ways and a lack of segregation of pedestrian and vehicular access, and many isolated spaces are also present, which can lead to such issues. Overlapping the cases, it was found that such areas lack surveillance and the lack of activities in certain areas is one of the main causes of such activities.



**Figure 13.** Entire school buffer of 500m with built-use map and the images

It is also found that dilapidated structures and waste dumping zones with no proper surveillance and the presence of socially backward classes and their presence are also one of the main causes. The dilapidated structure of the crowded bus stand also provides a suitable area for supply, and the only high school present in the area is the Central School, making it a crime attractor focusing on the students. The following factors are ranked upon observation and the crowdedness of the site.

Factors	Based on importance
Vehicular access elements	
Pedestrian access elements	
Intersections	
Public transport	
Highways	
Lighting	
Schools	
BPL family	
Unemployment	
Violent crime	
Garbage dumping area	
Parking areas	
Stores selling lottery tickets	
Retaining wall	
Signage	
Public parks	
Warehouse	
Bars	
Movie theater	
Convenience stores	
Vacant land	
Maintenance	
Apartment buildings	
Trees and shrubbery	
Restaurant	
Offices	
Shopping malls	
Banks,	
Pedestrian and bicycle access	
Topography	
Fencing	
Musical theater	

Table 2. Ranking the issues based on observation and the context of the site



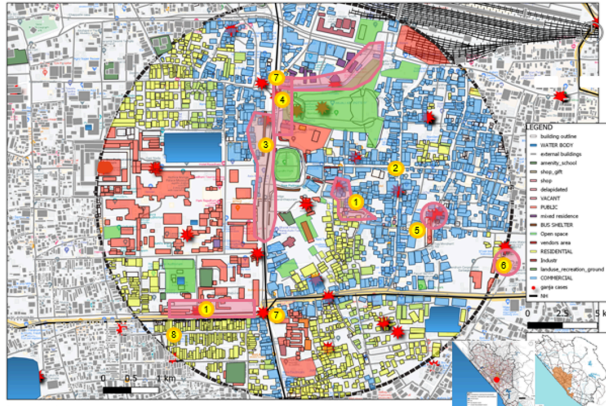











Figure 14. The solutions of the site

1		Surveillance could be brought through installing of cctv else activity inducing elements can be brought
2		Vehicular access can be permitted at the main roads and the inner roads be pedestrianized
3		Implement ore surveillance and proper infrastructure and maintain ace of the bus shelter
4		The vendors can be displaced to reduce crowding, and permit the authorised registered vendors
5		The inner market area and the road can be maintained well and removal of trampoline sheets to provide lighting
6		The dumping site require more surveillance and the areas lies further away require better maintenance
7		Police surveillance in the abandoned building and the commercial shops at the intersection should be implemented
8		Provide one entry and exit so that the access of people can be controlled in the residential units
9		Install speed bump at the ends of the entrance and exit

The study focuses on the area where there are possibilities in which illicit drug dealing could happen near the school locality, to come up with possible parameters that will indicate the presence of possible drug dealing.

Drugs possibly become a main factor for the reason for the increase in many other crimes.

Main parameters include access control, surveillance, and management.

There are many shady areas related to the issue, and they can be resolved by incorporating more of the above-mentioned aspects.

From the parameters, it's found that the main importance is to be given to **the roads and network**.

The transit areas are the ones that bring more opportunity.

Overall, the main tool for avoiding such an environment is the maintenance of existing structures.

Certain areas can control vehicular access.

The shady areas can have more surveillance by incorporating more activity-driven built use or CCTV cameras.

There is a need for reclaiming the area, such as parks and recreational areas, in order to reduce crime in such areas.

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