

## **Toilet Paces, UNSDG, Swachh Bharath: Application of Principles of CPTED in Indian Toilet Spaces.**

**Ilayavel Shanmugam<sup>1\*</sup>, Madhava Soma Sundaram<sup>2</sup>**

<sup>1\*</sup>Reg No: 18214012041008, UGC-NET, Junior Research Fellow, Department of Criminology and Criminal Justice, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India.

Email: ilayavel.shanmugam@gmail.com

<sup>2</sup>Professor and Head, Department of Criminology and Criminal Justice, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India. E mail drmadhava@gmail.com

### **Short Bio**

**Ilayavel Shanmugam**, pursuing as a **Ph.D. Research Scholar (UGC-NET, JRF)** in the Department of Criminology and Criminal Justice, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India. Qualified and received the award of **Junior Research Fellowship (JRF)** in Criminology from University Grants Commission (*Ministry of Human Resource and Development*), New Delhi. His research deals with Criminal Justice Program and Policy analysis, also concerned with Crime Mapping and Crime Analysis. Earlier, as a Research Fellow I was effectively engaged in a Research Project, titled “**Victims of Terrorism, Internal Security and Victims of Crime**” funded by University Grants Commission – University with Potential for Excellence (UGC-UPE), New Delhi.

### **Abstract**

This is a premier research on why Swachh Bharath project is not successful towards free open defecation. This project is launched in 2014 with laudable objectives and vision to free India from open defecation. However, after 5 years of project initiation, evaluation reports suggest that nearly 40% open defecation exists in many areas. Many public toilets constructed were not in use or usable condition. Most importantly, the project enhanced criminal activities such as Vandalism, Eve Teasing, Drug Abuse, Prostitution, Sexual harassment And Aggravated assaults. This qualitative research by conducting focus group discussion suggests that the success of Swachh Bharath Mission depends on crime prevention. This current research is based on CPTED concept which rooted from Opportunity Theory of Crime and Routine Activity Theory. Time and need has arrived to evaluate the existing used and unused toilets based on Criminological perspective and Defensible Space. Open defecation free India and success of Swachh Bharath Mission depends on Hygiene, Sanitation and Crime Prevention which are three potential sides to Swachh Bharath Mission. Jai Hind.

**Keywords:** Swachh Bharath Mission (Urban), Anti-Toilet, Open Defecation, Crime, Crime Prevention, CPTED.

### **Introduction**

A developed nation needs an evolution in every aspect. It encompasses the enhancement of welfare of people which focuses on food, shelter, health, sanitation, and hygiene. Amongst, sanitation and hygiene plays a vital role. Swachh Bharat Mission was launched on October 2, 2014 by Prime Minister Shri. Narendra Modi, with one of the objectives as to construct sanitation facilities to households and transforming whole India free from open defecation free nation. This mission had a target completing the project before 150<sup>th</sup> birthday of Mahatma Gandhi by October 02, 2019. Many

independent records mentioned that execution of this laudable project towards achieving its goals and objectives were on record and also reported that elimination of open defecation is not achieved yet.

Despite the fact that toilets have been constructed, still people prefer to defecate openly. Most of the community toilet construction in the urban areas are not being used or converted as a shed for performing illegal activities such as Intoxicating with Drugs, Sexual activities and other Illegal activities. To add further, still many criminal activities persists where an article in the Hindu Business line (2019) stated that “Prime Minister had received Bill and Melinda Gates Foundation Award for his contribution to Rural Sanitation this year. At the time he received the award, two children were beaten to death for defecating openly in Madhya Pradesh”. There is absolutely no research done on this external impact of Swachh Bharat Mission on criminal behavior and crime. The connection between open defecation and crime could be connected to a Social Disorganization Theoretical framework. Social disorganization refers to the failure of social institutions or social organizations (e.g. schools, businesses, housing, real estate) in certain communities and/or neighborhood (Suresh & Vito, 2009). In those areas of concentrated poverty, and disorganization, the following two concerns, 1. Impact on individuals and their life opportunities and 2. Its impact on society and community (Cohen and Felson, 1979), show how crime levels are altered even by any Social Intervention or Policy. Neighborhood disorganization, opportunity to commit crime together creates a “**ghetto-culture**” promotes varieties of crime and restlessness in the area and spread to surrounding neighborhoods. The link between crime and social structure are connected strongly that even a praiseworthy policy and mission will not work if crime and criminal behavior is not controlled or disseminated.

Awareness of crime prevention should be imparted via TV, Radio and other Social Media. Based on the murder and other criminal activities related to open defecating and construction of toilets. The current study is focused on understanding the attitude and opinion of local residents and leaders in North Chennai, in order to map the extent, types and problems related to criminal activities surrounding the existing and newly constructed toilets and why even after constructing toilets open defecation persists. The major goal of the research is to analyze why Swachh Bharat Mission is not effective and will the toilets built based on the “Defensive Space” coined by Newman under CPTED be successful? Policy makers of Swachh Bharat Mission underestimated the emergence of criminal activities which will hinder their process to free India from open defecation.

### Review of Literature

Swachh Bharat Mission is a very commendable and proud mission which was launched on October 2<sup>nd</sup>, 2014. After the celebration of Mahatma Gandhi’s 150<sup>th</sup> birth anniversary, the Country is “**not in real sense open defecation free**”. The intention of the mission is noble but the campaign and execution is poorly designed. Is this Campaign and Execution included all sections of the population especially in rural India? Is this Campaign and Execution done based on the environmental protection and if so, did the mission followed Crime Prevention Through Environmental Protection? Could these places be prone to Anti-Social Behavior and Crime? Multiple questions ponder when we read in the news such as murder and criminal activities related to open defecating.

Despite the fact that India is marching towards digitalization, basic amenity such as access to toilet is a challenge to many Indians especially to Rural Indians. Statistics indicate in Rural India around 52.1% and in urban 7.5% still defecate in the open, according to a survey covering Rajasthan, Bihar, Madhya Pradesh and Uttar Pradesh which released on January 4, 2019. Two-fifths of India's rural population falls into these states and reported a declining trend in open defecation rates, over 40 to 50% at the end of 2018, as per the government’s report on Swachh Status (RICE Report, 2019).

According to data from Chennai Corporation, there are about 517 toilets in Chennai and the reports suggest that the count is inadequate compared to the population in need of Sanitation. The information from RTI provides that there are about 714 public toilets which is in contrast with the count from field survey. National Statistics Report suggests one public toilet per 50 slum populations and one per 100 people for the transient population (Transparent Chennai’s Report, 2015). Though there are

few constructed toilets to cover slum and transient population, many of them remain unusable due to pathetic maintenance and condition. They lack proper amenities, example: broken doors, no or broken latches, no or poor lights, no water supply, poor or no ventilation, no provision of waste bins, etc. A survey by Dhagam Foundation in Chennai (2018) found that public toilets are under poor maintenance, and lack basic facilities. Existing usable toilets are inadequate to serve the population. The report further added that women especially lack access to public toilet.

Anecdotal reports suggest that, most of the public toilets in Chennai are found to be locked and/or abandoned. Most of the toilets are associated with encroachment; and problems related to stray feces spread all over, over with flown wastes from bowls. Corporation had constructed free toilets for Physically Challenged around the cities which still face similar problems stated above. These toilets are constructed under various public policy schemes which remain in unusable condition with lack of maintenance. The timings of the toilet are not defined and vary across area. Anecdotal information indicates that the City of Chennai Corporation is locks the facility and the usage is timed to prevent vandalism, encroachment, and crime. Women find it difficult to walk during the **wee hours** to defecate openly as the toilet is mostly kept locked.

Awareness on open defecation is the need of the hour as more people are practicing it even if they have access to or own a toilet. Many feels that defecating in open place rather than a toilet is comfortable as they are unaware of the problem of defecating openly. There are no studies or research done in India on this aspect especially how defecating promotes crime and environmental hazards. Opportunity is the root cause of Crime. CPTED is focusing on designing environment to prevent crime. While open defecating promotes crime and murder, construction and maintenance of usable toilets following CPTED concept will make Swachh Bharat Mission to achieve its goals and objectives by protecting India with Safety and Sanitation.

A research by World Bank in India (2017) delivers that building toilets won't stop Indians from defecating in the open as long as their attitudes towards latrines do not change. According to the claim by government, it has constructed individual toilets for more than 88 percent of rural households in India. However, as per a governmental report the percentage of people who openly defecate in the four states (UP, Bihar, Rajasthan, and MP) is around 40 to 50 percent.

Open defecation leads to severe problems in terms of sanitation and proper waste management. According to the World Health Organization (WHO), India accounts for 59 percent of the 1.1 billion people in the world who practice open defecation by practice, culture or poverty, leading to some serious negative effects on both their own health and the environment. This practice might lead to several infections which includes water & vector borne diseases, pneumonia, tuberculosis, etc. It affects the environment by contamination and pollution through microbes. Comprising these, crime too plays an important role in threatening people from using the public toilet even for emergency. As a Criminology student I will add "**crime**" to the list of factors affecting environment.

Literature suggests that the poverty is one of the main reasons for the rural people to defecate openly because they have no financial means to build a toilet/latrine in their household. In the rural northern India, even those who have toilet/latrine still prefer to defecate openly due to their practice and culture. They are unaware of health and environmental aspects related to open defecation.

Chennai is the first city in India to have the highest number of self-cleaning public e-toilets totaling more than 180. These e-toilets are free to use and eco-friendly with provisions for waste treatment using anaerobic bio-degradation. There is even a Google app to locate these e toilets (Eram Scientific Solution, 2015). Steps should be taken to popularize after investing huge money on the construction of these toilets.

Superficial information provides that the public toilets are one among the most susceptible areas where exploitation and abuse of people especially on women and girls take place. Lack of guardian to maintain the premises lead to illegal activities such as sexual harassment, physical and verbal abuse, drug abuse, and related crimes. Women who attempt to defecate at night or early hours have the chance to be attacked by gangs and perpetrators. This correlates with the Routine Activity Theory where a potential (or) vulnerable target who lack guardian in a deserted environment is more exposed to criminal activities (Cohen and Felson, 1979). It is important to bring about an environment which

is safe and secured to promote the usage of toilets or e-toilets in order to prevent health and crime issues arising out of open defecation.

As stated earlier, the public toilets turn out to be “**no-go zone**” for public due to the improper maintenance, lack of proper lighting, equipment, water, etc. But, operates as an available space for substance and drug and alcohol abuse, rape, sexual harassment, and other related illegal criminal activities.

Differential Opportunity Theory by Richard Cloward and Lloyd Ohlin (1997) suggests breaching of dangerous spaces can be preventive by exploring the vulnerable zones and look out for possible measures through which we can seek to alter environments where the available space becomes less suitable to commit crime. Situational Crime Prevention Theory by Clarke (1997) suggests that the occurrence of crime can be prevented by altering the situations rather than changing the offender’s disposition. Thus, ways to reduce (or) prevent the chance of committing crime should be targeted in altering the space towards crime prevention, and safety along with health and sanitation.

The situation is even worse when the toilets are being vandalized and left unattended or not repaired. Chennai Corporation states that one of the main reasons for locking up is to prevent vandalize the public property. If there is any structural damage, it could be fixed occasionally by the contractors appointed by the Chennai Corporation. To prevent vandalism and crime, designing the toilet based on Newman’s “**Defensible Space**” which is based on CPTED concept is one of the preferable solutions. A public toilet built or remodeled under the natural surveillance with internal and external lighting would increase the usage. Constructing or altering the existing toilets with Anti-Vandal materials such as stainless-steel commode pans with no lids, concrete slabs instead of tiles, with locks, taps and fittings, to name a few, will prevent it from being vandalized. To keep the toilet and its environment clean, proper drainage and water supply is utmost necessary. Constructing and altering or the new and existing toilets based on CPTED concept is the only way to prevent abuse, crime, and open defecation by equally promoting health and hygiene. Since there are no research studies on this area, this qualitative research will be a premier one to explore the criminal issues related to the Swachh Bharath Mission concept and its execution. It will also provide answers on why Swachh Bharath Mission, though a laudable concept and a phenomenon not successful as expected. Altering the existing unused public toilets based on CPTED concept which is anchored on Routine Activity Theory is one among the solution towards Crime Prevention of most of Urban and rural India murder, rape, vandalism, physical and drug abuse.

## Methodology

Qualitative research is the best method of research to get access to hard to reach population and to collect sensitive data. This current qualitative research is conducted in North Chennai, Tamil Nadu, India. North Chennai geographically consists of 6 zones which include Thiruvottiyur, Manali, Madhavaram, Tondiarpet, Royapuram, and Thiru.Vi.Ka. Nagar covering a total of 142.07 sq km with a population of 16.5 lakhs (2001 census). There are totally 63 wards and the researcher following chosen purposive sampling selected randomly 53 toilets within North Chennai Zones. Qualitative focus group interviews were conducted. Focus group participation consists of two basic types 1. Natural group and 2. Artificial group. “An artificial group includes people selected according to some criteria and brought together for research purposes (Flick, 2009). Members of this artificial focus group are drawn from local residents. Focus group members included local representatives, leaders, working women, men, young male and female college students, representatives from feminist groups and general public. Each focus group consisting of 12 members from 6 zones (72 members) participated in the focus group qualitative discussion. All together the focus group discussion covered issues related to 53 public toilets out of 517 in total in Chennai. The researcher probed the members of focus group to share their thoughts and opinion on Swachh Bharath Mission, toilet constructed, and usage, increase in crime after their construction, major problems, their thoughts on solution, crime prevention and their thoughts about future use and abuse.

## Analysis and Findings

Current qualitative study on open defecation and the use of public toilets constructed under Swachh Bharath Mission, yielded many responses from the members of Focus Group Discussion. One local resident and a participant of the focus group discussion said **“The condition of public toilet is abysmal where the toilet accessories such as bucket, taps, seating, doors, light fittings, wash basin, mirror, pipelines, etc., are being vandalized by the local people or the ones who use it. Those stolen accessories are used in their own house or by the dwellers in platform. Irrespective of the gender specific toilets, the extent of vandalism such that no one can use these public toilets”**. No one manages or checks or even clean the toilets at least occasionally. Since all these toilets are located at a remote space, they lack visibility.

A woman as a focus group participant informed that **“often women are facing annoyance like Eve-teasing by men, by whistling or clapping to draw attention. The toilets are not open 24/7 and mostly are closed so there is no other way except openly defecate during wee hours. Although toilets are available, they are not useable and not maintained.** One of the members of the focus group discussion is a guard and a person who cleans these toilets and he expressed his view as **“The toilet premises would be strewn with discarded drugs, needles, condoms, etc. It will be awful and horrible task for us to clean up the pile of litters. As this prevails, it makes the people to hesitate on using the toilet. These illegal activities should be prevented by frequent patrolling which in turn enables the public to use it.”** Availability does not guarantee success. Success of the Swachh Bharath Mission depends on the reduction on open defecation and it depends on larger factors foreseeable and unforeseeable by the program.

Another member of the Focus Group Discussion who is currently a college student expressed his opinion that **“a significant and prominent area within the city limits has public toilets where surveillance cameras are installed. Public toilets in those areas have very fewer problems whereas the toilets constructed at the outskirts of city face innumerable problems and ultimately within the shorter period of its construction it remains unusable and locked. The technological growth, governmental support and maintenance is not evenly distributed resulting in the failure of the Swachh Bharath Mission”**. The program is not to be blamed but the execution failed. The program execution underestimated the spillover of **“Criminal Hangovers”** in those areas which could have been easily solved, if the program had looked out for the concept of **“CPTED”** while constructing or investing huge amount of governmental money which is **‘Taxed money’** on these toilets, which most of those recently constructed toilets remain dirty and locked now.

A member of the FGD, who is a counselor for that area, shared his thought as **“The public toilet has become a shelter for the miscreants as they use it for intoxicating with drugs and alcohol”**. It taunts the public to avoid, even on emergency circumstances.

A Social Activist who participated in the focus group discussion vented out her anger stating: **“The properties/accessories of the toilet are smashed and damaged by the users when they are in a group. Derogatory sentences, diagrams, words ‘graffiti’ are displayed on the inside and outside of the walls of the toilet displaying a “mob psychology”. Young adults in a group do it for fun and try to seek pleasure/satisfied through this.”** Another feminist FGD member expressed her opinion as **“Toilet is exploited for sexual purpose and activities such as oral sex by transgender population, gay, and sex workers for their profession especially when the toilet premises are closed or not in use.”**

The Focus Group Discussion brought out the members ideas, suggestions, anger, frustration and their story behind the open defecation, newly constructed toilets under Swachh Bharath Mission, how they became inoperative and Criminogenic as soon as they were constructed. The focus group discussion in sum, can be divided into **“Exterior”** and **“Interior”** factors which are discussed below.

1. **Exterior Factors:** Members of the focus group expressed the following **“Exterior Factors”** the reason for the non-usage failure of the project. One of the major factors discussed was **Potential Vandalism**. They opined a well maintained, guarded and routinely inspected public property is hard

to be vandalized. Toilet should be constructed in an open well-lit area and not in a cul-de-sac or remote area. It has to be designed in a way that individual can access for **'public help'** in case of emergency. The construction should be designed in such a way that public should be able to hear the scream of a victim in case of alleged criminal activities, preferably facing the street or footpath to promote natural surveillance. Focus group discussion also suggested that the area should be well lighted especially with a sensor and motion deduction lights, and surveillance cameras to identify trespassers.

The area should be properly fenced and should be visible to promote guardianship. Appropriate sign boards if the toilet is out of service or any information regarding maintenance should be posted. Contact information of fire, emergency, and help should be provided. FGD also concerned about roofs and recommended pitched roofing to deter climbing. Though the focus group members were not aware of the CPTED and Crime Prevention, substantively their suggestions were perfectly fitting Newman's concept of **'Defensible Space'**.

2. **Interior Factors:** Interior walls should be painted in such a way 'graffiti' is hard to draw. Interior should be so designed that no criminal activity should be possible to conduct inside the toilet. The focus group engaged in discussing the ways to avoid any opportunity to crime and possible violence inside the toilet and to maintain upmost hygiene so that the mission of Swachh Bharath project is useful towards a hygienic future India. Proper maintenance and safeguarding are vital for the success of people marching towards open defecation free India. Based on the Routine Activity Theory and CPTED principles, focus group discussion provided highlights of all potential exterior and interior designing aspects so that the Swachh Bharath Mission and the investments on the construction of public toilet will be successful towards building a safe and clean India.

### **Summary and Conclusion**

The advancement of public toilet system in India has its root from one of the oldest civilizations i.e. Indus Valley Civilization (Bronze Age) which shows that each house had their own toiletry arrangement with organized enclosed drains by bricks and slabs. Although it has been centuries together, the basic amenities are still a mirage for more than 60% of the Indians to have a toilet system based on the recent researches. In 2015, according to data from World Bank, 44% of Indians defecate in open. Open Defecation rate in India was higher compared to neighboring as well as poor countries such as Pakistan, Bangladesh and several Sub-Saharan nations.

### **Limitations of the study**

There is absolutely no prior study on this area of research. The current research mapped the present conditions and problems of the toilets constructed. Mapping the public opinion on various criminal activities and abuse of these toilet will provide a base line research area and to focus on crime prevention strategies. Since the topic and issue is a sensitive area to discuss and analyze, researcher adopted Qualitative Analysis using Focus Group Discussion. The current research is conducted only on Zones of North Chennai. Further investigation, research, and analysis is required to bring all the Criminological factors and Crime Prevention Through Environmental Design towards the success of Swachh Bharath Mission.

An evaluation analysis of the use and abuse of these toilets after 5 years of its operation is recommended so that factors involved in the abuse of toilets can be ironed by possible and potential crime prevention efforts. A pre-post evaluation is highly recommended, If CPTED is used as a crime prevention strategy for displacement and diffusion of crime surrounding public housing, business crimes, environmental crime, bus stations and other public utility services, why not the same concept be used for crimes generated because of public toilet?

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## Important Terms in this Research Paper

Terms	Definition
<b>Anti-Social Behavior</b>	An act in a manner that has "caused or was likely to cause harassment, alarm or distress to one or more persons not of the same household" as the perpetrator. It covers a wide range of unacceptable activity that causes harm to an individual, to their community or to their environment. It also includes concern for public safety or fear of crime, public disorder or public nuisance.
<b>Community Toilets</b>	The building is a shared facility for a group of residents or an entire settlement. Community toilet blocks are used predominantly in areas where people belongs to low-income and/or informal settlements/slums. Also where there is space and/or land are constraints in providing a household toilet. These are for a more or less fixed user group i.e. meant for a particular set of residents/people
<b>CPTED</b>	Crime Prevention Through Environmental Design (CPTED) is defined as a integrative approach for reducing crime through environmental design and the management and use of the built environments
<b>Crime</b>	Committing an act intentionally which is usually deemed socially harmful or dangerous and specifically defined as prohibited and punishable under criminal law.
<b>Criminogenic Public Toilets</b>	An environment that is likely to cause, tend to produce or produce crime or criminalistic factors Toilets built for the general public or floating population in places such as train stations, markets, tourist places, near office complexes or other public areas where there are substantial amount of people passing by.
<b>Qualitative research</b>	Research that includes data which are non-quantifiable. It is carried out through open ended and conversational communication
<b>Swachh Bharat Mission (Urban)</b>	Government of India launched this mission 2 October 2014 with vision of ensuring hygiene, waste management and sanitation across the nation. Key objectives are to eliminate open defecation, create awareness about sanitation and public health, to promote behavioral change regarding healthy sanitation practices.
<b>Vandalism</b>	An act that involves purposeful destruction or damage to public or private property.
<b>Wee hours</b>	It includes the hours that are very late in the night or very early in the morning.

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**Appendix 1.**

**Few Photographs of public toilets in North Zone, Chennai, Tamil Nadu, India**

**Figure 1: Deteriorated Toilet Entrance**



**Figure 2: Toilet Cubicles without proper light fitting**



**Figure 3: Vandalized Toilet Equipment and Debris**



**Figure 4: Cubicles without Doors and Stained Floor**



**Appendix 2. Swachh Bharat and Anti-Toilets - Discussion Guide**

**Objectives**

- To identify the forms of criminal behavior occurs in and around public toilet.
- To examine the exploitation and abuse of people who use the toilet especially women and girls.
- To study the set-up of accessible toilets pertaining to sustainable development.
- To analyze the awareness on open-defecation.
- To suggest construction of public toilet under Swachh Bharat based on CPTED principles.

**Zone wise discussion details**

Chennai North Zones	Date	Session	Time	Members participated
Manali	10-Aug-19	Morning	10.00 A.M to 12.00 P.M	6 members per session  (A total of 72 members)
		Evening	4.00 to 6.00 P.M	
Madhavaram	11-Aug-19	Morning	9.00 to 11.00 A.M	
		Evening	4.00 to 6.00 P.M	
Thiruvottiyur	24-Aug-19	Morning	11.00 A.M to 1.00 P.M	
		Evening	5.00 to 7.00 P.M	
Tondiarpet	25-Aug-19	Morning	10.00 A.M to 12.00 P.M	
		Evening	6.00 to 8.00 P.M	
Royapuram	31-Aug-19	Morning	9.30 to 11.00 A.M	
		Evening	4.45 to 6.30 P.M	
Thiru Vi Ka Nagar	1-Sep-19	Morning	9.00 to 11.30 A.M	
		Evening	5.30 to 8.00 P.M	

### **Questions for Discussion**

- 1) State the causes for open defecation?
- 2) Reasons for not using the public toilet
- 3) Does the toilet infrastructure fulfill all your need?
- 4) Is the public toilet well-maintained?
- 5) Are you subjected/ exposed to any sort of crime?
- 6) Is there any vulnerability with respect to gender?
- 7) Does the location pose as a safe public place?
- 8) Does the location of public toilet possess natural surveillance?
- 9) Suggest few measures to improve surveillance
- 10) Does the building design facilitate easy and efficient approach to carry out maintenance?
- 11) Accessibility of public to toilet facility
- 12) Causes for the decline in the usage of toilet by general public
- 13) Possible reasons for the reduction in the number of toilet facilities around the area