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RETHINKING URBAN SAFETY THROUGH PERCEIVED SAFETY AND COMMUNITY ENGAGEMENT IN MALAYSIA'S SAFE CITY PROGRAMME

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Abstract

This study evaluates the effectiveness of Malaysia's Safe City Programme (SCP), with a focus on perceived safety (PS) and community engagement as critical dimensions of urban crime prevention. The primary aim was to assess the social impact of the Safe City Programme (SCP) through two objectives, which are to examine variations in perceived safety across demographic and housing typologies, as well as to evaluate the role of community engagement within the Crime Prevention Through Environmental Design (CPTED) framework. A cross-sectional survey of 10,076 urban residents from 14 Malaysian states was conducted to collect quantitative data. The results indicate that Safe City Programme (SCP) infrastructure-based strategies, such as improved lighting and surveillance, enhance perceptions of safety, particularly among men and residents of low-density, high-income housing. However, fear of crime remains prevalent, particularly among women and residents of lower-income neighbourhoods. Statistical analysis revealed significant differences in perceived safety (PS) across gender and housing type. Notably, community engagement emerged as the weakest-performing CPTED component, indicating limited public participation in the Safe City Programme (SCP) initiatives. These findings highlight the disparity between the Safe City Programme (SCP) top-down approach and CPTED's participatory ethos. The paper concludes by recommending a shift towards inclusive, context-sensitive strategies that integrate community voices to foster long-term, sustainable urban safety.

Keywords: Urban Safety, Safe City Programme, CPTED, Community Engagement, Perceived Safety

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INTRODUCTION

Urban safety is widely recognised as a fundamental pillar of liveable and sustainable cities. It extends beyond the prevention of physical crime, encompassing broader dimensions such as economic resilience, mental well-being, and social cohesion (Milliken, 2016). A secure urban environment promotes mobility, community participation, and investment confidence, all of which improve the overall quality of life for residents. In response to growing concerns over urban crime and public insecurity, the Malaysian government established the Safe City Programme (SCP) in 2004 under the Ministry of Housing and Local Government. The SCP was perceived as a comprehensive strategy that integrates environmental design with policing measures to reduce crime rates and enhance public confidence in urban areas. Recognising its strategic importance, the SCP was formally incorporated into the National Key Result Areas (NKRAs) in 2009, raising urban safety to the level of a national development priority.

Since its inception, SCP has been implemented across various municipalities through tangible interventions, including the installation of closed-circuit television (CCTV), street lighting enhancements, increased police visibility, and other physical security infrastructure. Despite these extensive applications, evidence suggests that fear of crime remains prevalent among urban residents. This discrepancy raises serious concerns about the programme's effectiveness, particularly in terms of addressing the subjective dimensions of safety that influence everyday urban experiences. While previous studies have primarily focused on the physical and operational aspects of SCP, there is still a significant gap in evaluating its social impact, specifically, notably how residents perceive safety in relation to their demographic background and living environments. Moreover, the extent to which community engagement has been integrated into SCP strategies, as promoted by the Crime Prevention through Environmental Design (CPTED) framework, remains underexplored.

Accordingly, this study addresses two main dimensions of urban safety within the context of the SCP. First, it seeks to examine how demographic characteristics particularly gender and housing typology influence urban residents perceived safety (PS). Second, it aims to evaluate the effectiveness of community engagement initiatives as an integral component of CPTED-based strategies under the SCP. By addressing these objectives, the study aims to provide a nuanced understanding of urban safety that integrates infrastructure-driven approaches with socially embedded strategies for crime prevention and community resilience.

LITERATURE REVIEW

Urban safety encompasses physical, social, and psychological dimensions that influence the liveability of cities (UN-Habitat, 2007; Cozens et al., 2005). Crime Prevention Through Environmental Design (CPTED) is the cornerstone for understanding the relationship between the built environment and human behaviour. Its five core principles, which are territoriality, surveillance, target hardening, maintenance, and community engagement, could emphasise proactive design strategies to deter crime and foster collective ownership (Cozens et al., 2005; Senna et al., 2025).

Globally, the intersection of urbanisation, safety, and community participation has been discussed extensively by UN-Habitat (2007, 2019). These reports highlight that rapid urban growth often outpaces security infrastructure, making community engagement essential for maintaining urban resilience. Comparative research in Southeast Asia shows diverse Safe City initiatives, such as Singapore's community policing model, Indonesia's neighbourhood security schemes (*Sistem Keamanan Lingkungan* - Siskamling), and the urban surveillance networks of Thailand. All of these initiatives are emphasising public-government collaboration. Table 1 demonstrates several safe city initiatives. These cases highlight the need for participatory approaches in urban safety planning.

Table 1: Comparative Overview of Global and Regional Safe City Initiatives

Country/ Region	Initiative/ Programme Name	Key Features/ Focus Areas	Approach to Community Participation	Source(s)
Global (UN- Habitat)	<i>Safer Cities Programme</i>	Promotes integrated urban safety planning, focusing on gender, youth, and community resilience.	Advocates inclusive governance and citizen-led urban management.	UN-Habitat (2007, 2019)
Singapore	<i>Community Policing System (COPS)</i>	Integrates neighbourhood police centres with local residents to co-produce safety outcomes.	Strong emphasis on community-police partnership and participatory surveillance.	Ministry of Home Affairs Singapore (2017); UN-Habitat (2019)
Japan	<i>Kōban (Police Box) System</i>	Local police stations embedded in residential areas to maintain visibility and trust.	Continuous engagement between police officers and residents	Héra (2024); UN-Habitat (2019)

Country/ Region	Initiative/ Programme Name	Key Features/ Focus Areas	Approach to Community Participation	Source(s)
Indonesia	<i>Siskamling (Sistem Keamanan Lingkungan)</i>	Community-based night patrols promoting neighbourhood security and social cohesion.	through daily interactions. Residents collectively participate in routine patrols and crime reporting.	Intan Fitri (2016); Novekawati, et. al, (2023)
Thailand	<i>Smart Safety Zone Project</i>	Urban surveillance network integrating CCTV, data analytics, and community alerts.	Public– government collaboration through digital feedback channels and safety monitoring.	Royal Thai Police (2022); UNESCAP (2021)
Malaysia	<i>Safe City Programme (SCP)</i>	Combines CPTED- based environmental design, surveillance, and infrastructure improvement.	Moderate community participation; ongoing shift toward participatory CPTED and local engagement.	KPKT (2021); PLANMalay sia (2023); Lim (2020)

Source: Author (2025)

In addition to environmental approaches, the theoretical underpinnings of criminal behaviour offer further background for understanding urban safety interventions. One such approach is Rational Choice Theory. This theory, like CPTED, focuses on modifying the built environment to alter offender decision-making (Tabrizi & Madanipour, 2006; Anastasia & John, 2007). The decision to commit a crime is influenced by environmental factors. For instance, improved surveillance and territorial reinforcement might raise the perceived risk of detection, thereby deterring criminal acts. Similarly, effective target hardening can increase the effort required to commit a crime, reducing its appeal. By integrating Rational Choice Theory with CPTED (Figure 1), practitioners can gain a deeper understanding of the behavioural motivations behind crime and design urban spaces that not only reduce opportunity but also influence the offender's cost-benefit analysis.

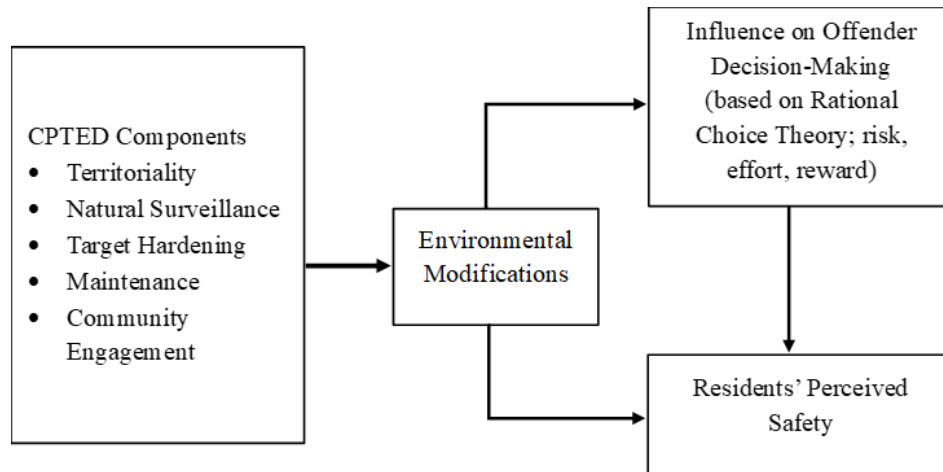


Figure 1: Conceptual Framework Integrating CPTED and Rational Choice Theory
 Source: Author (2025)

In Malaysia, studies by Lim (2020) and Eizamly & Anuar (2020) have documented SCP's policy and infrastructural dimensions. However, these works often overlook residents' lived experiences, perceived safety, and CPTED's community engagement component. More recent analyses, including the Malaysia Smart City Framework (KPKT, 2021) and PLANMalaysia's Safe City Action Plan (2023), underscore the government's commitment to embedding public participation in urban safety initiatives. Nonetheless, empirical evaluation of SCP's social outcomes remains scarce. This study addresses these gaps by combining large-scale perception data with CPTED-based analysis to provide regional insights into Malaysia's evolving urban safety paradigm.

RESEARCH METHODOLOGY

This study used a structured quantitative survey design targeting urban residents across Malaysia. The data collection involved 10,076 respondents sampled from 46 local authorities across 14 states of Malaysia. These states and local authorities were chosen based on their receipt of government allocations to implement the Safe City Programme (SCP). Respondents were selected using stratified random sampling to ensure representation across gender, age, housing types, and income levels. The stratified random sampling procedure was conducted by dividing the study population according to the 46 participating local authorities across the 14 Malaysian states. Each local authority represented a primary sampling stratum to ensure geographical representation of urban areas implementing the SCP. Within each stratum, proportional allocation was applied based on population size and urban residential density. Additional sub-stratification considered demographic characteristics such as gender, age group, housing typology, and household

income to ensure balanced representation of different social groups. This proportional weighting approach minimised sampling bias and improved the generalisability of the findings across SCP-implemented municipalities in Malaysia.

It is important to note that this study only includes areas and local authorities that received government funding under the SCP within the period 2017 to 2022. As such, urban areas or municipalities not supported by this initiative were excluded from the scope of this research. This ensures that the analysis reflects the direct influence of safe city strategies and implementations as intended by national urban safety policies.

The research instrument consisted of a structured questionnaire divided into three main sections: (1) demographic profile, (2) perceived safety (PS), and (3) CPTED components, which included community engagement. All items were measured using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The Perceived Safety (PS) construct consisted of nine items measuring respondents' perceptions of safety within residential environments, safety during daytime and nighttime activities, and feelings of vulnerability when alone at home or outdoors. Composite PS scores were calculated by summing responses across the nine items, resulting in a possible score range of 9 to 45, where higher scores indicate stronger perceptions of safety. Similarly, CPTED dimensions were measured using multiple-item constructs covering territoriality, surveillance, target hardening, maintenance, and community engagement. The use of composite scoring enabled a broader assessment of subjective safety experiences and environmental crime prevention perceptions.

Data was collected between January and June 2023 using both online and field-distributed questionnaires. The ethical approval was acquired from Universiti Teknologi MARA, ensuring confidentiality and voluntary participation. Data reliability was validated using Cronbach's alpha, and it was greater than 0.80 across all constructs, indicating high internal consistency. Descriptive statistics summarised demographic and safety perceptions, while inferential analyses (independent t-tests and ANOVA) identified significant differences in perceived safety across demographic and housing groups. This methodological framework follows established social science research protocols (Creswell & Creswell, 2018; Hair et al., 2019).

ANALYSIS AND DISCUSSION

The demographic profile of the study's 10,076 respondents represents a diverse cross-section of Malaysian urban communities. Gender distribution was nearly equal, with 49.4% male and 50.6% female respondents, allowing for a gender-balanced analysis. Ethnically, the majority were Malay (73.9%), followed by Chinese (10.8%), Indian (6.3%), and others (9.0%), which closely matched the

national demographic composition. In terms of religious affiliation, the majority of participants identified as Muslim (78.4%), with smaller proportions of Christians (9.4%), Buddhists (6.0%), Hindus (5.8%), and others (0.3%). A significant proportion of respondents were between the ages of 20-29 (34.1%) and 30-39 (31.6%), indicating a young population with the ability to actively engage in community safety initiatives. About 20.7% were in their 40-49 age range, with smaller numbers in the 50-59 (9.9%) age range and 60 or older (3.7%).

Education levels were relatively high, with 69.4% of respondents holding university or college degrees, 28.4% having completed secondary education, and a small minority having only primary education (1.9%) or no formal schooling (0.3%). This suggests that the study participants are generally well-educated and likely to be aware of safety-related issues.

Table 2: Demography Results

NO.	VARIABLE	DEMOGRAPHY	FREQUENCY	PERCENTAGE (%)
1	Gender	Male	4976	49.4
		Female	5100	50.6
2	Race	Malay	7451	73.9
		Chinese	1091	10.8
		Indian	632	6.3
		Others	902	9.0
		Islam	7903	78.4
3	Religion	Christian	952	9.4
		Buddha	607	6.0
		Hindu	582	5.8
		Others	32	0.3
		20 - 29	3432	34.1
4	Age	30 - 39	3186	31.6
		40 - 49	2089	20.7
		50 - 59	994	9.9
		60-an and older	375	3.7
		University/College	6993	69.4
5	Education Level	Tertiary School	2857	28.4
		Secondary School	193	1.9
		Not Applicable	33	0.3
		Non-Government Sector	2811	27.9
6	Employment Sector	Government Sector	3284	32.6
		Business / Own Business	1569	15.6
		Retired	521	5.2
		Not working	1891	18.8
7	Household Income	Less than RM2000	2740	27.2
		RM2001 – RM4000	3177	31.5
		RM4001 – RM6000	2412	23.9
		RM6001 – RM8000	1076	10.7

NO.	VARIABLE	DEMOGRAPHY	FREQUENCY	PERCENTAGE (%)
8	Housing Types	RM9001 - RM 10,000	320	3.2
		More than RM10,000	351	3.5
		Bungalow	1664	16.5
		Semi Detached (Semi-D)	985	9.8
		Cluster House	285	2.8
		Terrace House	4963	49.3
		“Zero Lot Boundary”	99	1.0
		Town House	192	1.9
		Cluster Town House	20	0.2
		Flat/Apartment House	1493	14.8
		Condominium	309	3.1
		Others	65	0.6
TOTAL RESPONDENTS			10076	100

Source: Author (2024)

In terms of employment, 32.6% of respondents worked in the public sector, 27.9% in the private sector, and 15.6% were self-employed or entrepreneurs. Meanwhile, 18.8% were unemployed, and 5.2% were retirees. Household income varied significantly: 27.2% reported monthly incomes of less than RM2,000, 31.5% earned between RM2,001 and RM4,000, and 23.9% earned between RM4,001 and RM6,000. A smaller group earned between RM6,001 and RM8,000 (10.7%), while a total of 6.7% earned more than RM9,000. Terrace houses were the most popular type of residence, accounting for nearly half (49.3%) of the respondents. Other housing types were detached houses or bungalows (16.5%), semi-detached homes (9.8%), flats or apartments (14.8%), and condominiums (3.1%). The distribution of housing types also reflects income disparities, with higher-income respondents more likely to live in detached or semi-detached houses. Overall, this diverse demographic composition provides a comprehensive foundation for analysing perceptions of urban safety and the impact of the Safe City Programme across different segments of the population.

Perception of Safety

The Perception of Safety construct was analysed to determine how safe respondents felt in their residential environments, particularly at different times of day and under various conditions. The results indicated that a significant majority of respondents reported feeling either “safe” or “very safe” at home or while walking in their neighbourhood during the day and night. For instance, 72.2% of respondents felt safe going out during the day, and 62.0% felt safe going out at night. This suggests that, overall, the Safe City Programme has been effective in fostering a sense of safety among community members.

Table 3: Respondents' Perception of Safety Level

NO.	PERCEPTION OF SAFETY (PS)	SCALE	FREQUENCY	PERCENTAGE (%)
1	Level of safety in a residential area	Very unsafe	119	1.2
		Unsafe	212	2.1
		Less safe	1327	13.2
		Safe	6681	66.3
		Very safe	1737	17.2
2	Level of safety while inside the house	Very unsafe	58	0.6
		Unsafe	159	1.6
		Less safe	1148	11.4
		Safe	7032	69.8
		Very safe	1679	16.7
3	Level of safety while outside from house	Very unsafe	52	0.5
		Unsafe	164	1.6
		Less safe	1153	11.4
		Safe	7276	72.2
		Very safe	1431	14.2
4	Frequency of going out for night-time activities within a week	Every day	1646	16.3
		Once or twice a week	3487	34.6
		3 to 4 times a week	2526	25.1
		5 to 6 times a week	1859	18.4
		Never go out during night-time	558	5.5
5	Level of safety when outside at night-time	Very unsafe	274	2.7
		Unsafe	448	4.4
		Less safe	2161	21.4
		Safe	6265	62.0
		Very safe	941	9.3
6	Level of safety when home alone at night-time	Very unsafe	201	2.0
		Unsafe	365	3.6
		Less safe	2314	23.0
		Safe	6397	63.5
		Very safe	799	7.9
7	Frequency of going out for day-time activities within a week	Every day	5037	50.0
		Once or twice a week	555	5.5
		3 to 4 times a week	1166	11.6

		5 to 6 times a week	3228	32
		Never go out during day-time	90	0.9
8	Level of safety when outside during the day-time	Very unsafe	29	0.3
		Unsafe	73	0.7
		Less safe	821	8.1
		Safe	7579	75.2
		Very safe	1574	15.6
9	Level of safety when home alone the day-time	Very unsafe	29	0.3
		Unsafe	182	1.8
		Less safe	900	8.9
		Safe	7383	73.3
		Very safe	1582	15.7

Majority of respondents were satisfied with their safety in residential areas. Approximately 83.5% of respondents reported feeling either “safe” (66.3%) or “very safe” (17.2%) in their neighbourhoods. Only a small proportion (3.3%) felt “unsafe” or “very unsafe.” This indicates a high level of confidence in local safety infrastructure and community vigilance. Respondents felt even more secure while they were inside their houses. A total of 86.5% reported feeling “safe” and “very safe” in their own residences. This reflects the success of home-level safety measures, as well as neighbourhood dynamics such as familiarity with neighbours and effective territorial reinforcement.

In terms of behaviour, 34.6% of respondents reported they went out at night once or twice a week, while 43.5% said they went out more frequently (three or more times per week). This behavioural data supports the perception results: a large portion of the population not only feels safe but is also active in their neighbourhoods at night. Even though there is a lot of activity at night, some people are still worried about their safety. While 71.3% of respondents felt “safe” (62.0%) or “very safe” (9.3%) at night, about 28.5% expressed reduced confidence, with 2.7% feeling “very unsafe,” 4.4% “unsafe,” and 21.4% “less safe.” This indicates an opportunity for improvement, especially in lighting and patrol visibility.

In contrast, daylight behaviours reflected high levels of mobility and confidence. A full 50% of respondents left their homes every day, and another 32% did so 5–6 times per week. Less than 1% reported that they never left their home during the day. An overwhelming 90.8% of respondents felt “safe” (75.2%) or “very safe” (15.6%) when going out during daylight hours. Only 1% reported feeling “unsafe” or “very unsafe.” These findings indicate that daytime safety is strongly perceived, which confirms the Safe City Programme’s effectiveness in improving public space security. Lastly, 89% of respondents said they felt “safe” (73.3%) or “very safe” (15.7%) while they were by themselves at home during

the day. The minimal percentage reporting feelings of unsafety (2.1%) reflects confidence in both community safety and home-level security during off-peak crime hours.

All of these findings point to a community that generally feels safe in its daily environment. The highest levels of perceived safety were recorded at home and during the day, particularly reflecting the success of built environment factors and potentially the Safe City Programme's influence in strengthening community infrastructure. Although still positive, nighttime safety perceptions were more variable. From the perspective of Rational Choice Theory, these findings suggest that environmental safety measures influence offender decision-making by increasing the perceived risks associated with criminal behaviour. Improved street lighting, visible surveillance, and active neighbourhood presence may elevate the likelihood of detection, thereby reducing the attractiveness of criminal opportunities. This supports the CPTED proposition that environmental design can shape behavioural choices by altering the cost-benefit calculations of potential offenders. Areas with weaker visibility or reduced nighttime activity may conversely provide opportunities perceived as lower risk, contributing to residents' lower feelings of safety after dark. Suggesting that future Safe City Programme interventions might focus on improving evening community policing, lighting, and visibility. A key area of interest was the relationship between PS and demographic variables. Inferential analysis revealed statistically significant differences in perceived safety based on gender and type of housing.

Table 4: Mean Value for Perceived Safety Based on Gender

	Gender	N	Mean	Std. Deviation (SD)
PERCEPTION OF SAFETY (PS)	Male	4976	27.66	3.59
	Female	5100	27.23	3.43

Table 4 shows that men reported a higher composite Perceived Safety (PS) score ($M = 27.66$, $SD = 3.59$) than women ($M = 27.23$, $SD = 3.43$). The PS score represents the summed responses across nine perceived safety items measured on a five-point Likert scale, with higher scores indicating stronger perceptions of safety. The gender difference was statistically significant ($p < 0.001$), suggesting that women continue to experience higher levels of insecurity and vulnerability within urban environments. This finding is consistent with existing literature, which indicates that women often perceive greater exposure to crime risk due to social and environmental factors.

Table 5: Mean Value for Perceived Safety Based on Housing Types

Housing Types	N	Mean Value	Std. Deviation
Bungalow	1664	28.5132	3.84890
Semi Detached (Semi-D)	985	28.1401	3.56910
Cluster House	285	26.3684	3.76619
Terrace House	4963	27.2688	3.14270
“Zero Lot Boundary”	99	27.4949	3.62073
Town House	192	27.6354	2.85466
Flat/Apartment House	1493	26.4903	3.89327
Condominium	309	28.2330	3.46467
Others	65	25.6769	4.05859

Similarly, the type of housing had a considerable impact on perceived safety. Bungalows have the highest mean PS ($M = 28.51$), while those living in cluster houses and flats reported lower levels of perceived safety. This variation may be attributed to disparities in environmental control, private space, and security infrastructure, which are generally more prevalent in high-income, low-density housing. Wealthier individuals feel safer living in homes with greater security features (e.g., alarm systems, gated entry, surveillance cameras). These findings underline the importance of environmental and socioeconomic contexts in shaping individual experiences of safety. The Safe City Programme interventions may therefore need to be tailored according to neighbourhood typologies to maximize impact.

Fear of Crime (FOC)

Fear of crime was examined through three dimensions: physical deterioration, social disorder, and indirect victimization. Across all 13 items used to assess FOC, a substantial proportion of respondents expressed worry or anxiety. The most common triggers included seeing vandalism, walking near overgrown vegetation or abandoned housing, and hearing stories of crime from the media or acquaintances. Gender differences were once again prominent. Women had considerably higher fear of crime ($M = 53.92$, $SD = 6.40$) than men ($M = 51.90$, $SD = 7.27$), which was both statistically and practically significant ($p < 0.001$). This is consistent with other studies (e.g., Callanan & Teasdale, 2009; Gilchrist et al., 1998), which explain women's increased anxiety as a result of their perceived vulnerability and socially constructed gender roles regarding personal safety.

Interestingly, residents of bungalows reported a stronger sense of safety and a greater fear of crime ($M = 55.67$) than those in other housing types, including condominiums ($M = 48.58$). This contradiction can be explained by the concept of asset-based anxiety: higher-income individuals with more goods may feel more vulnerable to targeted theft or burglary. Moreover, their homes are often more isolated, increasing the perception of exposure to criminal activity.

The fact that some residents simultaneously feel "safe" yet remain "fearful" highlights the complex psychological nature of urban security. It underscores the necessity of Safe City Programme interventions that address both objective safety (e.g., crime rates, infrastructure) and subjective perceptions (e.g., fear, vulnerability).

Table 6: Mean Value for Fear of Crime (FOC) Based on Housing Types

Housing Types	N	Mean Value	Std. Deviation
Bungalow	1664	55.6689	7.53826
Semi Detached (Semi-D)	985	54.4721	6.54980
Cluster House	285	51.3930	5.96763
Terrace House	4963	52.6278	6.47772
"Zero Lot Boundary"	99	51.8586	6.75823
Town House	192	53.5521	5.63064
Cluster Town House	20	50.5000	6.24500
Flat/Apartment House	1493	51.0261	6.68789
Condominium	309	48.5825	7.30130
Others	65	53.4308	9.02076

Effectiveness of CPTED Strategies

The Safe City Programme adopts the CPTED (Crime Prevention Through Environmental Design) framework, which consists of five core principles: territoriality, natural surveillance, target hardening, maintenance, and community engagement. The study examined how successfully these principles were perceived and practiced within residential areas.

Table 7: Comparison of CPTED Elements in Residential Areas

No.	CPTED Elements in Residential Areas	Score	Mean Value	Std. Deviation	Rank
1	Territoriality	358310	35.56	4.826	1
2	Maintenance	327389	32.49	4.240	2
3	Surveillance (Natural Surveillance)	314172	31.18	4.614	3
4	Target Hardening	279936	27.78	7.189	4
5	Community Management	152633	15.15	3.289	5

The territoriality recorded the highest composite CPTED score (M = 35.56), followed by maintenance (M = 32.49) and natural surveillance (M = 31.18), suggesting that residents were more actively engaged in environmental ownership and upkeep practices than in collective community management initiatives. These behaviours align with territorial reinforcement strategies that discourage criminal activity by signalling active occupancy and informal control.

This finding also reinforces the assumptions of Rational Choice Theory, which posits that offenders make calculated decisions based on perceived risks and rewards. Strong territoriality cues such as maintained front yards, resident monitoring, and visible occupancy increase the perceived effort and likelihood of apprehension for offenders. Consequently, criminal behaviour becomes less attractive because the environmental conditions reduce opportunities for anonymous or low-risk offending. The integration of CPTED principles with Rational Choice Theory therefore provides a stronger behavioural explanation for how environmental design contributes to crime deterrence within residential communities.

Maintenance practices were also robust. Most respondents regularly repaired damaged windows and doors, ensured outdoor lighting was functional, and maintained their gardens. These actions contribute to a well-kept environment, which, according to CPTED principles, deters crime by projecting order and reducing opportunities for misconduct.

Natural surveillance was another key element. Residents expressed awareness of unfamiliar individuals in their area and were likely to monitor street activity. However, some limitations were noted, especially in multi-level dwellings where visual surveillance is less effective. In such cases, infrastructural enhancements such as strategic lighting, open fencing, and window placements could improve visibility and deter criminal behaviour.

The lowest-scoring component was community engagement and awareness, indicating a gap in collaborative crime prevention efforts. This point to an opportunity for the Safe City Programme to strengthen community-based initiatives, such as neighbourhood watch programs, community policing forums, and awareness campaigns that foster collective responsibility.

This finding demonstrates the Safe City Programme's general effectiveness, with high resident satisfaction regarding safety, especially in higher-income and well-maintained housing environments. Demographic factors and housing typologies significantly influence safety perception and fear of crime. Implementing CPTED principles, such as clear territorial boundaries and proper maintenance, proves vital in fostering safer urban communities.

CONCLUSION

This study demonstrates the general effectiveness of the Safe City Programme in enhancing urban safety, as reflected in the high levels of resident satisfaction and positive perceptions of safety across various residential environments. Notably, individuals living in higher-income neighbourhoods and well-maintained housing areas reported greater feelings of safety, underscoring the role of socioeconomic status and environmental quality in shaping security experiences. These findings align with broader urban safety literature, which suggests that

investment in infrastructure and residential upkeep contributes directly to perceived and actual crime reduction. The data also reveal that demographic factors such as gender, age, and household income as well as housing typologies like bungalows, flats, condominiums, and others, have a significant influence on both perception of safety and fear of crime. For instance, while women expressed a higher fear of crime, residents of detached houses, despite feeling safer overall, exhibited elevated concern due to greater asset exposure. These nuanced patterns suggest that safety is not a uniform experience but rather contextual and shaped by personal circumstances and living environments.

Crucially, the study highlights the value of incorporating Crime Prevention Through Environmental Design (CPTED) principles into residential planning. Territoriality, natural surveillance, and routine maintenance were all substantially linked to higher levels of safety perceptions. High scores in territoriality reflect a sense of ownership and stewardship among residents, which deters criminal activity by creating environments that are clearly defended and monitored. Likewise, regular maintenance of public and private spaces projects order and discourages vandalism and neglect, which are commonly associated with criminal behaviour. However, the lower ratings for community engagement and collective management indicate a need for further development. While physical and infrastructural interventions are essential, fostering social cohesion and resident participation in safety initiatives such as neighbourhood watch groups or community patrols could enhance the Safe City Programme's impact. Such efforts would empower residents not only as observers but as active stakeholders in the collaborator of safety.

The findings further validate the integration of Rational Choice Theory within the SCP and CPTED framework. Environmental interventions such as surveillance, territorial reinforcement, and maintenance not only improve residents' perceptions of safety but also influence offender behaviour by increasing perceived risks and reducing criminal opportunities. This demonstrates that urban safety strategies are most effective when physical design interventions are understood not merely as infrastructural improvements, but as mechanisms capable of shaping behavioural decision-making within urban environments.

In conclusion, the Safe City Programme has made significant progress in addressing urban safety concerns in Malaysia, particularly through environmental and structural strategies. Moving forward, a holistic approach that integrates physical design, social participation, and targeted policy interventions will be essential for building resilient and secure communities. Urban authorities may improve the Safe City Programme's long-term viability and sustainability by customising safety strategies to population demands and housing situations, as well as strengthening the social fabric through community-driven initiatives.

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