Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

BUILT ENVIRONMENTAL FACTORS AFFECTING URBAN PROPERTY CRIMES IN SRI LANKA

Anuruddhika Buddhadasa[1], K.G.N.U. Ranaweera[2], Banuka De Silva[3]

buddhadasa@sjp.ac.lk[1], ranaweera@sjp.ac.lk[2], desilvakbn@kdu.ac.lk[3]

Department of Criminology and Criminal Justice, University of Sri Jayewardenepura[1,2]
Faculty of Criminal Justice, General Sir John Kotelawala Defence University[3]

Abstract

The subdiscipline of environmental criminology, or crime designated ecological perspective, has gained widespread acceptance in criminological academia. As a result, the immediate surroundings of an individual have been identified as a criminogenic factor. Criminology has traditionally focused on the characteristics of offenders and offenses, while somewhat disregarding the criminogenic spatial factors of crime. Prime intention of this criminological research study is to investigate the built factors that influence urban property crimes in Sri Lanka. Therefore, a purposive sample of 197 Property crime scenes including Burglary (63%), Theft (29%) and Robbery (8%) have been observed during a period of 15 months (2021-2022) within the Colombo Municipal Council area of Sri Lanka. Data were retrieved by using mix method approach of qualitative and quantitative methodology. The study has revealed significant associations between built factors and property crimes. Factors such as strong locks, security gates, security cameras, lighting conditions, visibility, and access points are identified as key determinants of property crime rates. The results suggest that improving lock security measures, installing security gates and cameras, enhancing lighting conditions, and increasing visibility can effectively reduce the incidence of property crimes. The findings contribute to the existing body of knowledge on crime prevention and urban planning, providing valuable insights for policymakers, urban planners, and law enforcement agencies. The study recommends the implementation of targeted interventions and strategies to mitigate property crimes and create safer urban environments in Sri Lanka. Further research is encouraged to explore additional factors and develop comprehensive frameworks for crime prevention in urban settings.

Keywords: Environmental Criminology, Urban property crimes, Criminogenic factors, Crime prevention in urban settings.

INTRODUCTION

Crime is a pervasive social phenomenon that has persisted throughout human history and continues to be a pressing issue in urban areas today (Bechdolt, 1975). It encompasses any act or omission resulting from human conduct that is considered harmful and punishable by the state. The safety and security of individuals and their property are crucial for the well-being and functioning of any society (Meron, 2011). However, urban areas often face challenges in maintaining safety due to the complex interplay of various factors. Criminology, as a multidisciplinary field, has examined different factors contributing to crime causation. Early research focused on biological, psychological, and social factors, while the 1970s witnessed a shift towards studying criminogenic factors from an ecological perspective (Brantingham & Brantingham, 1981). This shift has led to a transformative understanding of crime

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

prevention and control, particularly through the management of the environment.

The built envind ronment is one significant aspect to consider within the framework of environmental criminology. And it encompasses the physical structures, design, layout, and composition of urban areas. The neighborhood configurations and townships can be influenced the mobility of criminals and potential targets, thus creating opportunities for criminal activities. Urban areas have witnessed an increase in crime and violence, exacerbated by challenges in the development and management of these areas with the rapid growth and expansion of cities (Ghani, 2017). Urbanization, while economically beneficial, presents social challenges, including a rise in crime rates (Malik, 2016). The United Nations Human Settlement Programme recognizes crime as a significant issue faced by urban areas, often associated with factors such as poverty, unemployment, and high population concentrations (UN-Habitat, 2007). Additionally, the concept of new urbanism has been linked to an increase in crime rates in some urban areas (Jacobs, 1960). Many of these crimes are characterized as opportunistic and target property.

The global trend towards urbanization is expected to continue, with projections indicating that 68% of the world's population will reside in urban areas by 2050 (United Nations, 2018). This urban growth raises questions about the social impacts of urbanization and about the emergence of new fault lines of inequality, conflict, social harm, criminality, and transgression in urban life. Understanding the dynamics between crime, space, place, and the urban environment is essential for comprehending the complexities of urban crime and developing effective strategies to address it. Property crimes, which encompass the unlawful acquisition or destruction of an individual's possessions, represent a substantial classification of criminal activity. Several examples of criminal activities can be identified, such as theft, burglary, fraud, arson, and vandalism (Freeman, 1996; Conklin, 2004). According to Marshall (2020), property crimes frequently stem from the desire for economic advancement and can exhibit a wide spectrum of severity, encompassing minor instances of theft as well as more grave transgressions. High-volume crimes have a significant impact on individuals, businesses, and communities alike.

The issue of property crimes has garnered attention in numerous countries, including the United States. In response, concerted efforts have been made to address and mitigate these crimes, leading to a notable decrease in their occurrence since 1990 (Wright & Jacques, 2020). Similarly, within the context of Pakistan, there has been a notable escalation in property crimes spanning the period from 1975 to 2008. Specifically, dacoity and robbery have emerged as the predominant offences in this regard (Asian Economic and Social Society, 2020). The crime rates in Sri Lanka have exhibited a gradual increase, with a specific focus on property crimes, which encompasses locations that are frequently frequented by tourists (Overseas Security Advisory Council, 2019). It is imperative to comprehend the environmental factors that contribute to the incidence of property crime in urban areas to formulate efficacious strategies for crime prevention and control.

The primary objective of this research study is to examine the various built environmental factors that exert an influence on urban property crimes within the context of Sri Lanka. Insights into the dynamics of property crimes can be obtained through an examination of the impact of the urban environment. The examination of these factors will enhance the breadth of

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

knowledge regarding crime prevention and provide valuable insights for policymaking and implementation not only in Sri Lanka but also in other contexts.

LITERATURE REVIEW

Property crimes present a formidable challenge in urban areas, encompassing Sri Lanka, thereby bearing implications for public safety and societal welfare. Gaining an understanding of the built factors that influence property crime rates assumes paramount importance in formulating efficacious strategies for crime prevention and control. The purpose of this literature review is to delve into existing research concerning the association between built environmental factors and urban property crimes in Sri Lanka, while also drawing upon insights garnered from international investigations. By undertaking a comprehensive analysis of this corpus of knowledge, we can glean valuable insights into the intricacies of property crime and thereby inform evidence-based approaches to mitigate this issue.

THEORETICAL PERSPECTIVES

The influence of built factors on urban property crimes in Sri Lanka aligns with various criminological theoretical perspectives. These theoretical frameworks offer valuable insights into the relationship between built factors and property crimes, shedding light on the specific dynamics within an urban context.

One prominent theoretical perspective is Routine Activity Theory, originally proposed by Cohen and Felson (1979). According to Routine Activity Theory, the occurrence of crime is contingent upon the convergence of motivated offenders, suitable targets, and the absence of capable guardians (Hindelang et al., 1978). Within an urban setting, built factors, such as valuable targets and limited security measures, play a contributory role in the prevalence of property crimes.

Crime Opportunity Theory, initially proposed by Felson (1992), places substantial emphasis on the influence of available opportunities in shaping criminal behavior. This perspective underscores the importance of examining how built factors in Sri Lanka can either facilitate or deter property crimes (Gebauer et al., 2017; McLaughlin & Bowers, 2016).

Another significant theoretical framework, Broken Windows Theory, developed by Wilson and Kelling (1982), posits that visible signs of disorder, such as broken windows and graffiti, foster an environment conducive to crime. Addressing minor forms of disorder within the built environment holds considerable significance in preventing the proliferation of property crimes (Kelling & Coles, 1996).

Social Disorganization Theory, as proposed by Shaw and McKay (1942), explores the impact of social and economic factors on crime rates. This theoretical perspective suggests that property crimes are influenced by factors such as high poverty levels, residential instability, and weak social networks. Analyzing the interplay between social factors and the built environment provides valuable insights into property crime patterns (Krivo & Peterson, 1996).

In summary, these theoretical perspectives shed light on the relationship between built factors and property crimes. Routine Activity Theory emphasizes the convergence of motivated offenders, suitable targets, and the absence of capable guardians. Crime Opportunity Theory highlights the significance of available opportunities, while Broken Windows Theory emphasizes the role of visible disorder. Finally, Social Disorganization Theory explores the impact of social and economic factors. By examining the interplay of these theories within the

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

specific context of Sri Lanka, a comprehensive understanding of property crime patterns can be achieved.

Strain Theory, introduced by Merton (1938), focuses on how stress and strain resulting from social and economic factors can lead individuals to engage in deviant behavior, including property crimes. Examining the built environment in relation to economic disadvantage and social inequality is crucial for understanding property crime rates (Agnew, 1992; Alexander & Nguyen, 1998).

Cultural Deviance Theory, as advocated by Chambliss (1971), highlights the role of an individual's cultural background and socialization in shaping property crimes. This perspective emphasizes how built factors may interact with cultural influences to shape property crime patterns in Sri Lanka.

Therefore, investigating the built factors influencing urban property crimes in Sri Lanka necessitates considering multiple theoretical perspectives. Routine Activity Theory, Crime Opportunity Theory, Broken Windows Theory, Social Disorganization Theory, Strain Theory, and Cultural Deviance Theory provide a comprehensive understanding of how the built environment, social factors, cultural influences, and opportunities contribute to property crimes. Applying these theories to the specific context of Sri Lanka enables policymakers and researchers to develop targeted strategies for preventing and addressing property crimes in urban areas.

Existing studies on built factors and urban property crimes

Existing studies on built factors and urban property crimes in Sri Lanka have examined the relationship between various environmental factors and the occurrence of property crimes. These studies have focused on both global and local empirical research.

Global empirical research studies have explored the impact of neighbourhood physical disorder, land use features, well-designed physical environments, street-level physical disorder, vacant properties, and green space on property crime rates. These studies have found significant associations between these built factors and property crime rates in different urban contexts.

Local empirical research studies in Sri Lanka have investigated the impact of urbanization, street lighting coverage, land use and land cover changes, public transportation, urban green spaces, urban planning, housing conditions, and crime hotspots on property crime rates. These studies have provided insights into the relationship between built factors and property crimes within the Sri Lankan context.

However, despite the existing research, there are still some gaps in the literature. The causal mechanisms underlying the relationship between environmental factors and property crimes, as well as the relative effects of various built factors on different types of property crimes, require further investigation. Additionally, the role of community engagement and other contextual factors in understanding the relationship between built factors and property crimes needs more exploration.

METHODOLOGY

To achieve the objective of investigating the built factors that influence urban property crimes in Sri Lanka., the following methodology was employed:

Study Area

The research was conducted in the Colombo Municipal Council area, which includes Colombo Central, North Colombo,

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

and South Colombo. This area was selected because it has reported the highest number of urban property crimes according to the Sri Lankan Police Reports (2015-2018). Additionally, the economic centres of Fort and Pettah are located within the territory of Colombo Municipal Council.

Sampling Technique

The purposive sampling method was used to obtain the required data for the study. Crime scene observations were conducted over a period of 15 months, from March 3, 2021, to June 31, 2022. The selected urban property crimes for the study were burglary, theft, and robbery. The sample size consisted of 124 cases of burglary, 57 cases of theft, and 16 cases of robbery, making a total of 197 cases. In addition to the crime scenes, the study also involved interviewing 24 police officers (Crime O.I.C.), 3 scene of crime officers (SOCO OIC), and 30 victims related to urban property crimes.

Data Sources, Data Collection Methods, and Data Analysing Methods

A mixed-method approach, combining quantitative and qualitative research methods, was employed to analyse the gathered data. The data sources included police records (CVR), crime scene-related photos, and interviews with respective police officials and victims of property crimes. Unstructured interviewing was used to gather information, and the data were analysed through thematic analysis, contextual information analysis, visual analysis, and content analysis, depending on the specific objectives of the research.

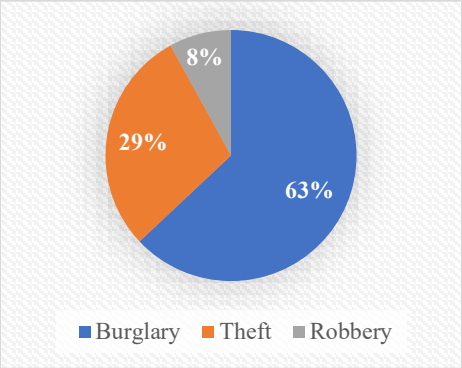
Specific objectives	***Data Source***	***Data collection method***	***Data analysing methods***
To analyse built environmental factors affecting criminal behaviour on property crime	*Crime scene related photos* *Police records (CVR)*	*Crime scene observation*	*Visual analysis* *Contextual information analysis*
	Respective police officials	*Unstructured interviewing*	*Narrative analysis*

Table 1. Data Sources, Data Collection Methods, and Data Analysing Methods

By employing this methodology, the research aims to gather comprehensive data on the built factors influencing urban property crimes in Sri Lanka. The combination of quantitative and qualitative approaches allows for a deeper understanding of the criminal behavior and its contextual factors. The findings from this study will contribute to the development of effective prevention and control strategies against urban property crimes.

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

RESULTS AND DISCUSSION



This section presents the findings of the study on the built factors affecting urban property crimes in Sri Lanka. The analysis of data collected through various research methods provides valuable insights into the relationship between built factors and the occurrence of property crimes. The following subsections present the key findings related to the types of crimes reported, their distribution across different areas, and the influence of built environment factors. The findings are discussed in the context of the research objectives to provide a comprehensive understanding of the impact of built factors on urban property crimes in Sri Lanka.

The **Table no. 2** and the **Figure no. 1** presents the reported crimes during the research time frame, specifically focusing on the types of crime, their frequency, and the corresponding percentages. The data collected from the field research conducted between 2021 and 2023 shows that burglary was the most frequently reported crime, accounting for 63% of the total reported crimes. Theft was the second most common crime, representing 29% of the reported cases. Robbery had the lowest frequency, comprising 8% of the reported crimes. In total, there were 197 reported crimes during the specified time frame. This data provides an overview of the distribution of different types of crimes in the research area.

	Type of the Crime	Frequency	Percentage
1.	**Burglary**	**124**	**63%**
2.	**Theft**	**57**	**29%**
3.	**Robbery**	**16**	**8%**
Total		**197**	**100%**

Table no. 2 Reported crimes during the time frame
Figure no. 2: Reported crimes during the time frame
(Source: Field Research, 2021-2023).

Burglary Related Built Environmental Factors

This section examines the built environmental factors related to burglary in the context of urban areas in Sri Lanka. The research aims to identify key factors that influence the incidence of burglary, such as doors with strong locks, security gates, security cameras, motion sensors, private security services, smart home security systems, access points, land use, lighting conditions, and visibility.

		Frequency	*Percent*
Valid	*Have*	*95*	*76.6*
	Do not have	*29*	*23.4*
	Total	*124*	*100.0*

Table 3. Doors with strong locks
(Source: Field Research, 2021-2023).

Based on **Table no. 3**, out of the 124 doors observed, 95 (76.6%) had strong locks, while 29 (23.4%) did not. It suggests that many property owners in the area are taking steps to secure their homes against burglars. However, the fact that some burglars were still able to break into properties with strong locks suggests that having a strong lock alone may not be sufficient to prevent burglary. Other factors, such as the skill level of the burglars and the overall level of crime in the neighborhood, may also play a role.

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

		Frequency	Percent
Valid	Have	29	23.4
	Do not have	95	76.6
	Total	124	100.0

Table 4. Security gates (Source: Field Research, 2021-2023).

Based on **Table no. 4**, out of the 124 burglaries analyzed, only 29 properties had security gates while 95 did not have security gates. This means that 76.6% of the properties did not have security gates, while only 23.4% of the properties had security gates. The presence or absence of security gates can be considered a built environmental factor that may affect the incidence of burglaries in the city. The data shows that there is a higher likelihood of burglary in properties that do not have security gates. This finding may suggest that having security gates can be an effective way to deter burglars from attempting to break into a property.

		Frequency	Percent
Valid	Have	53	42.7
	Do not have	71	57.3
	Total	124	100.0

Table 5. Security cameras
(Source: Field Research, 2021-2023).

The analysis of **Table no. 5** reveals that most of the burglaries in Colombo city (57.3%) occurred in properties without security cameras, indicating a vulnerability among numerous properties lacking surveillance equipment. Conversely, 42.7% of the burglaries had security cameras installed, reflecting a positive trend of property owners recognizing the importance of CCTV technology for enhancing security. However, the presence of CCTV alone does not guarantee burglary prevention or perpetrator identification, as burglars often remove or steal the DVR box to avoid detection. Thus, it is crucial to implement additional security measures such as physical barriers, alarm systems, or security guards alongside CCTV to effectively deter property crimes. Property owners must also ensure the security of their CCTV systems and regularly review and update their security measures to maintain a robust infrastructure. These insights inform the understanding of security cameras' impact on property crime rates and can guide policymakers in developing comprehensive strategies for crime prevention and public safety in urban areas like Colombo city.

		Frequency	Percent
Valid	Have	4	3.2
	Do not have	120	96.8
	Total	124	100.0

Table 6. Motion sensors
(Source: Field Research, 2021-2023).

Based on the data provided in **Table no. 6**, out of the 124 burglary cases considered, only 4 cases (3.2%) had motion sensors, while the remaining 120 cases (96.8%) did not have motion sensors. This information can be used to infer that the presence of motion sensors in properties might not be a significant deterrent to burglars in Colombo city, as only a small percentage of the burglary cases had such sensors. However, it is important to note that the sample size of cases with motion sensors is very small, which could limit the validity of this inference.

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

		Frequency	Percent
Valid	Yes	12	9.7
	No	112	90.3
	Total	124	100.0

Table 7. Get the service from private security services.
(Source: Field Research, 2021-2023).

The findings derived from the analysis of **Table no. 7** shed light on the significance of private security services in relation to burglary incidents within Colombo city. The data reveals that a mere 9.7% of the 124 examined burglary cases involved the engagement of private security personnel, while the remaining 90.3% occurred in properties lacking such services. These results clearly indicate that a majority of burglary incidents transpire in properties without private security, suggesting a potential correlation between the absence of private security and the occurrence of burglaries. Private security services can act as a substantial deterrent to potential burglars due to their physical presence and surveillance capabilities. The knowledge of active monitoring and patrolling by trained security personnel can dissuade criminals from targeting such properties, creating an environment less conducive to burglary and other property crimes. These findings highlight the importance of incorporating private security measures into comprehensive crime prevention strategies in urban areas like Colombo city, given the prominence of properties without private security services as primary targets of burglaries.

		Frequency	Percent
Valid	no	124	100.0

Table 8. Use smart home security systems.
(Source: Field Research, 2021-2023).

The data presented in **Table no. 8** indicates a notable absence of smart home security system usage among property owners in Colombo city. This observation can be attributed to various factors, including cost considerations, limited awareness or education regarding the advantages of smart home security systems, and a perception among property owners that alternative security measures are sufficient. Notably, the lack of variation in the data precludes an in-depth analysis of the impact of smart home security systems on preventing burglaries in Colombo city. Nevertheless, this finding serves as a starting point for future research endeavors aimed at investigating the reasons behind the limited adoption of smart home security systems and exploring strategies to increase their usage, thereby contributing to the reduction of burglary rates in the city.

		Frequency	Percent
Valid	Unlocked doors	16	12.9
	Unlocked windows	17	13.7
	Vulnerable entry points	10	8.1
	fragile doors	9	7.3
	Fragile windows	8	6.5
	By breaking the lock	64	51.6
	Total	124	100.0

Table 9. Access points
(Source: Field Research, 2021-2023).

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

The data presented in **Table no. 9** provides a comprehensive overview of the access points utilized during burglaries in Colombo city, highlighting the frequency and percentage of incidents associated with each access point. The findings reveal that breaking the lock was the most reported access point, accounting for 51.6% of incidents. Unlocked windows and doors were also frequently exploited, comprising 13.7% and 12.9% of incidents, respectively. Additionally, vulnerable entry points, fragile doors, and fragile windows were identified as access points, with frequencies ranging from 6.5% to 8.1%. These results suggest that improving lock security measures, such as upgrading locks or ensuring their proper installation and maintenance, can effectively reduce the occurrence of burglaries. Furthermore, identifying and fortifying vulnerable entry points, including enhancing the security of doors and windows or installing additional security features, such as security bars or grilles, can contribute to the prevention of burglaries.

		Frequency	*Percent*
Valid	*Residential*	*55*	*44.4*
	Commercial	*46*	*37.1*
	Industrial	*10*	*8.1*
	Institutional	*13*	*10.5*
	Total	*124*	*100.0*

Table 10. Land use
(Source: Field Research, 2021-2023).

The analysis of the data in **Table no. 10** reveals that residential areas accounted for most burglary cases (44.4%), followed by commercial areas (37.1%). A smaller proportion of cases occurred in industrial (8.1%) and institutional areas (10.5%). These findings suggest that residential and commercial areas in Colombo city are more vulnerable to burglaries. The higher incidence of burglaries in residential areas can be attributed to factors such as the ease of access to homes and the perceived lower risk of detection compared to commercial areas. The presence of valuable items and cash in commercial areas may contribute to the higher incidence of burglaries in those locations. The lower incidence of burglaries in industrial and institutional areas may be due to the presence of security measures and restricted access.

		Frequency	*Percent*
Valid	*There was the exterior lighting*	*6*	*4.8*
	There was interior lighting	*24*	*19.4*
	There was not any lighting	*94*	*75.8*
	Total	*124*	*100.0*

Table 11. Lighting conditions
(Source: Field Research, 2021-2023).

Based on the data presented in **Table no. 11**, a significant majority of burglary cases (75.8%) occurred in locations where lighting was absent, while only a small percentage of cases took place in areas with exterior lighting (4.8%) or interior lighting (19.4%). These findings underscore the crucial role of lighting conditions in shaping the occurrence of burglaries within Colombo city. The absence of lighting in burglary-prone areas may have facilitated perpetrators in executing their crimes undetected, while the presence of lighting could have served as a deterrent or aided in the identification of potential burglars. The data emphasizes the significance of implementing adequate lighting measures to prevent burglaries in urban settings. This may entail the installation of streetlights, motion sensor lights, and the enhancement of visibility

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

through the use of exterior and interior lighting for properties. Furthermore, individuals and businesses should ensure that their premises are properly illuminated to mitigate the risk of burglaries.

		Frequency	*Percent*
Valid	*Have natural visibility*	*26*	*21.0*
	Have artificial visibility	*28*	*22.6*
	No visibility	*70*	*56.5*
	Total	*124*	*100.0*

Table 12. Visibility
(Source: Field Research, 2021-2023).

Based on the data presented in **Table no. 12**, it becomes evident that a significant proportion (56.5%) of the burglary cases examined occurred in locations characterized by limited visibility. In contrast, artificial visibility and natural visibility accounted for 22.6% and 21.0% of the cases, respectively. These findings underscore the influential role of visibility in the incidence of burglaries within Colombo city. It is plausible that burglars tend to target places where they can carry out their activities discreetly, evading detection by both surveillance systems and passersby. Conversely, the presence of natural visibility, such as open areas or unobstructed views, as well as artificial visibility through means like street lighting and security cameras, may act as deterrents or aid in the identification of perpetrators. Consequently, the data emphasizes the significance of augmenting visibility as a preventive measure against burglaries in urban areas. This could entail actions such as trimming vegetation to eliminate hiding spots, installing adequate street lighting and surveillance cameras, and fostering natural surveillance through community-based initiatives like neighborhood watch programs. Moreover, individuals and businesses should prioritize ensuring that their properties maintain sufficient visibility to mitigate the risk of burglaries.

Theft Related Built Environmental Factors.

This section delves into theft-related built environmental factors in Colombo, Sri Lanka, utilizing data from Tables 13 to 17. These tables offer valuable insights into the types of theft observed, the influence of lighting conditions and visibility on theft incidents, the presence of security cameras, and the diverse access points employed by thieves. The findings underscore the significance of comprehending these factors in the development of effective strategies aimed at preventing theft and improving urban security within the context of Colombo. By understanding the dynamics at play, policymakers and urban planners can devise targeted interventions to mitigate theft and create safer urban environments.

		Frequency	*Percent*
Valid	*Residential theft*	*8*	*14.0*
	industrial theft	*15*	*26.3*
	Auto theft	*34*	*59.6*
	Total	*57*	*100.0*

Table 13. Types of the theft
(Source: Field Research, 2021-2023).

Table no. 13 presents a comprehensive overview of the prevalence rates of various theft categories within the Colombo region. The data analysis indicates that auto theft emerged as the predominant category of theft, constituting 59.6% of the total reported incidents. Industrial theft was observed to be the second most prevalent form of theft, comprising 26.3% of all reported theft incidents. In contrast, residential theft

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

constituted 14% of the total theft cases. It is imperative to acknowledge that residential theft is the illicit appropriation of property or possessions from individuals' residences. In contrast, industrial theft transpires within commercial or industrial environments, such as factories or warehouses. Auto theft, also known as motor vehicle theft, pertains to the unlawful act of stealing motorised vehicles, which includes a wide range of vehicles such as cars, vans, and motorcycles.

		Frequency	*Percent*
Valid	*There was the exterior lighting*	*13*	*22.8*
	There was interior lighting	*6*	*10.5*
	The absence of any form of illumination or lighting	*38*	*66.7*
	Total	*57*	*100.0*

Table 14. Lighting conditions
(Source: Field Research, 2021-2023).

The analysis of theft incidents in Colombo city, as indicated in **Table no. 14**, demonstrates the impact of lighting conditions on criminal activities. Based on the available data, it can be observed that a significant proportion of the documented theft occurrences, specifically 66.7% out of the total 57 cases, transpired in circumstances where no source of illumination or lighting was present. The aforementioned statement highlights the importance of darkness in relation to its role as a contributing element to instances of theft in Colombo. Moreover, the data presented in the table indicates that a mere 22.8% of the incidents transpired under external lighting, whereas the remaining 10.5% occurred in the presence of internal lighting. The statistical data presented indicates that the existing levels of illumination in outdoor and indoor settings may lack adequacy in deterring criminal activities and minimising the likelihood of theft. Based on the findings, it can be deduced that insufficient illumination is a noteworthy environmental element contributing to instances of urban property crimes in Colombo. Hence, the potential efficacy of improving the lighting infrastructure across the urban landscape in mitigating theft and bolstering the overall safety and security of the populace becomes apparent.

		Frequency	*Percent*
Valid	*There was natural visibility*	*13*	*22.8*
	There was artificial visibility	*16*	*28.1*
	There was not any visibility	*28*	*49.1*
	Total	*57*	*100.0*

Table 15. Visibility
(Source: Field Research, 2021-2023).

The analysis of the data presented in **Table no. 15** indicates that visibility exerts a noteworthy influence on urban property crimes in Colombo, Sri Lanka. Out of the total sample size of 57 participants who were surveyed, a significant proportion of 49.1% indicated that they experienced a lack of visibility at the crime location. This finding suggests that crimes tend to transpire in areas characterised by restricted visibility, enabling perpetrators to carry out their activities without detection. In contrast, a notable proportion of participants (28.1%) indicated the existence of artificial visibility,

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

encompassing streetlights or other sources of illumination. This finding implies that the presence of artificial lighting could potentially serve as a deterrent against criminal activities. Remarkably, a mere 22.8% of the participants indicated the presence of natural visibility, emanating from adjacent buildings or structures. This finding implies that the influence of natural visibility on crime prevention may not be as substantial when juxtaposed with the effects of artificial lighting. The findings presented collectively emphasise the potential effectiveness of improving visibility through the implementation of lighting installations or other related measures as a strategy to mitigate urban property crimes in the city of Colombo.

		Frequency	*Percent*
Valid	*Have*	*20*	*35.1*
	Do not have	*37*	*64.9*
	Total	*57*	*100.0*

Table 16. Security Cameras
(Source: Field Research, 2021-2023).

The presented **Table no. 16** provides information on the frequency and percentage of security cameras (CCTV) present or absent at the crime scenes of theft incidents. Among the total of 57 incidents analyzed, a mere 20 crime scenes (35.1%) were equipped with security cameras, while the remaining 37 (64.9%) lacked any installed security cameras. This data indicates that the majority of theft incidents occurred at locations without surveillance systems. The presence of CCTV cameras can serve as a potential deterrent for would-be thieves and contribute to the identification and prosecution of perpetrators in the event of theft incidents. Consequently, it may be prudent for authorities to consider the installation of security cameras at these locations to prevent future thefts.

		Frequency	*Percent*
Valid	*Unlock doors*	*7*	*12.3*
	Unlock windows	*11*	*19.3*
	Keys left in the vehicle	*7*	*12.3*
	Keyless entry hacking	*8*	*14.0*
	Hotwiring	*24*	*42.1*
	Total	*57*	*100.0*

Table 17: Access points
(Source: Field Research, 2021-2023).

The presented **Table no. 17** offers valuable insights into the diverse access points employed by criminals to illicitly enter crime scenes, with a specific focus on incidents of vehicle theft. Among the 57 incidents that were documented, the data reveals that hotwiring is the predominant method utilised by thieves, accounting for 42.1% of the total number of incidents. The act of hotwiring a vehicle entail circumventing the conventional ignition system by establishing connections between designated wires to initiate the starter, ignition, and fuel systems. This unauthorised procedure allows an individual, typically a thief, to successfully initiate the engine and operate the vehicle without the possession of a key or proper authorization. The employment of this illicit method is commonly observed among individuals involved in the act of car theft, as it serves to speed up unlawfully acquiring a vehicle. The access point that ranked second in terms of frequency was the unlocking of windows, which accounted for 19.3% of reported

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

incidents. This observation highlights the notable occurrence of vehicle thefts resulting from the owners' failure to secure their windows, thus facilitating convenient entry for perpetrators.

The analysis reveals that a significant proportion of incidents, specifically 14.0%, can be attributed to the act of keyless entry hacking. This finding underscores the capacity of certain individuals with criminal intent to capitalise on the weaknesses inherent in contemporary vehicle keyless entry systems. The utilisation of these systems has witnessed a significant surge in popularity, with their integration becoming increasingly prevalent across a diverse array of vehicles produced by various manufacturers. This trend encompasses both higher-end and mid-range models alike. The observation implies that a diverse spectrum of vehicle owners could potentially face the threat of keyless entry hacking, provided that their vehicles possess vulnerabilities within their security systems. It is imperative for individuals who possess vehicles equipped with keyless entry systems to possess a comprehensive understanding of the potential security hazards that may arise and to undertake suitable actions to safeguard their vehicles. These actions may encompass the utilisation of supplementary security features or the periodic updating of their vehicle's software to rectify any identified security vulnerabilities. In contrast, it is noteworthy to mention that the access points least frequently utilised by perpetrators were keys left in the vehicle and unlocked doors, with each accounting for a mere 12.3% of all reported incidents. The aforementioned statement highlights the significance of adhering to fundamental security measures, such as the act of securing doors and refraining from leaving keys inside the vehicle, as a means to minimise the potentiality of theft.

Robbery Relayed Built Environmental Factors

In this section, it examines the built environmental factors related to robbery incidents.

		Frequency	*Percent*
Valid	*Lonely*	*12*	*75.0*
	Compact	*4*	*25.0*
	Total	*16*	*100.0*

Table no 18: Location
(Source: Field Research, 2021-2023).

Based on the analysis of the data presented in **Table no. 18**, it becomes apparent that the occurrence of robbery in Colombo city is more prevalent in areas classified as "lonely" compared to those classified as "compact." Specifically, 75% of reported robberies took place in lonely areas, while the remaining 25% occurred in compact areas. These findings indicate a potential influence of both natural and built environmental factors on the occurrence of robbery incidents in the city. Lonely areas, which are typified by diminished levels of human activity and restricted visibility, may afford robbers with advantageous circumstances to carry out their activities while minimising the likelihood of being detected. On the other hand, it is worth noting that the existence of elevated levels of activity and improved visibility within confined spaces can serve as deterrents, thereby augmenting the probability of potential thieves being detected and captured.

		Frequency	*Percent*
Valid	*Have*	*3*	*18.8*

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

Do not have	*13*	*81.3*
Total	*16*	*100.0*

Table 19. Security cameras
(Source: Field Research, 2021-2023).

The analysis of the data presented in **Table no. 19** reveals a concerning trend with regards to the utilization of security cameras (CCTV) in establishments within Colombo city as a means to deter robbery-related crimes. Based on the available data, it is evident that a relatively limited fraction of establishments, specifically 3 out of 16 crime scenes (18.8%), have reported the presence of security cameras. Conversely, the overwhelming majority (81.3%) of establishments have reported the absence of such surveillance measures. The dearth of security cameras in establishments within Colombo city potentially exacerbates the prevalence of robbery-related crimes. The lack of closed-circuit television (CCTV) systems within a given environment fosters a setting in which individuals who engage in acts of robbery perceive a diminished likelihood of being recognised or apprehended via video surveillance. Consequently, this perception of reduced risk serves to embolden these offenders, leading to an increased propensity to carry out criminal activities. Hence, it is crucial to prioritise the implementation of security cameras as a highly effective measure for deterring crimes associated with robbery. The implementation of security cameras within Colombo city has the potential to augment the probability of identifying and apprehending individuals involved in criminal activities, consequently leading to an overall improvement in public safety and security.

		Frequency	*Percent*
Valid	*Have natural visibility*	*7*	*43.8*
	Have artificial visibility	*5*	*31.3*
	No visibility	*4*	*25.0*
	Total	*16*	*100.0*

Table 20. Visibility
(Source: Field Research, 2021-2023).

The findings presented in **Table no. 20** offer significant insights into the complex relationship between visibility and environmental factors associated with robbery incidents in the urban context of Colombo city. Based on the available data, it can be observed that out of the total of 16 reported instances, approximately 43.8% took place in areas characterised by natural visibility, while approximately 31.3% occurred in areas with artificial visibility. The remaining 25% of the instances were reported in areas where visibility was completely absent. The results of this study indicate that locations characterised by natural visibility may exhibit a higher vulnerability to incidents related to robbery in comparison to areas with artificial visibility. Nevertheless, it is imperative to recognise the inherent limitation of the study, given the relatively small sample size of only 7 reported instances, all of which occurred in regions with natural visibility. Therefore, it is imperative to conduct additional research using a more extensive sample size in order to authenticate this observation. Moreover, the data highlights that a considerable percentage (25%) of incidents related to robbery occurred in locations characterised by a lack of visibility. The observed outcome

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

can be ascribed to the insufficiency of lighting or surveillance measures in these specific areas, thereby making them appealing to potential perpetrators of robbery. In summary, the analysis of the data presented in Table 4.28 underscores the significance of visibility as a crucial determinant in reducing the incidence of robberies in urban settings. Cities possess the inherent capacity to cultivate a more secure urban milieu by employing strategies that augment visibility, whether through natural or artificial modalities. Potential measures to enhance security could encompass the implementation of enhanced lighting infrastructure or the strategic positioning of surveillance cameras. By implementing these strategies, urban areas can effectively mitigate the frequency of incidents related to robbery.

Unstructured interviews with respective police officials

Table 21 presents a comprehensive thematic analysis of unstructured interviews conducted with Police officials in Sri Lanka. The prime intention of these interviews was to investigate the impact of built environmental factors on property crimes. Also, the interviews aimed to establish correlations between built environmental factors and the frequency of criminal incidents; the interviews delved into the diverse initiatives and strategies that have been implemented by law enforcement agencies to address and mitigate instances of property crimes. Accordingly, the interviews were conducted with the objective of offering recommendations to policymakers and urban planners, drawing upon the insights acquired from the data collected.

The thematic analysis conducted in this study has been successfully identified four prominent themes as Built Environmental Factors, the Correlation between Built Environmental Factors and Property Crime, Police Initiatives and Strategies, and Recommendations for Policymakers and Urban Planners. Identified themes has been divided into sub-themes, which serve to encapsulate the primary topics that were addressed during the interview process.

Themes	***Sub-themes***
Built Environmental Factors	• *Poor lighting and inadequate streetlights* • *Physical design vulnerabilities of buildings and surroundings*
Correlation between Built Environmental Factors and Property Crime	• *Urban slum areas lack proper urban planning and infrastructure.* • *Declining economic activity in commercial areas*
Police Initiatives and Strategies	• *Community involvement through neighborhood watch programs* • *Partnerships with urban planners*
Recommendations for Policymakers and Urban Planners	• *Investing in improved street lighting infrastructure* • *Stricter building codes and regulations*

Volume 11, Nomor 2, Tahun 2023 E-ISSN: 2621-5101 P-ISSN:2354-7294

- *Fostering community engagement*

Table 21. Thematic analysis table
(Source: Field Research, 2021-2023).

The **Table no. 21** provides a concise overview of the interview findings, highlighting the significance of built environmental factors, such as lighting and physical design vulnerabilities, in influencing property crime rates. The correlation between built environmental factors and crime incidents is explored, focusing on urban slum areas and commercial areas experiencing economic decline. Moreover, the interview provides insight into the proactive measures implemented by the police force, which encompass community engagement and collaborations with urban planners. Table 21 provides recommendations targeted towards policymakers and urban planners; with a particular focus on the significance of allocating resources towards enhancing street lighting infrastructure, enforcing more stringent building codes and regulations, and promoting community involvement to address the challenges associated with property crime.

The findings provide valuable insights into the association between built environmental factors and urban property crimes in Colombo, Sri Lanka. The available data underscores the importance of multiple factors in influencing the incidence of burglaries, thefts, and robberies. These factors such as locks, security gates, surveillance cameras, sufficient lighting conditions, and high visibility include the presence of sturdy. The findings of the study serve to enhance the intricate dynamics surrounding property crimes. Furthermore, the findings provide valuable insights that can be informed the formulation of targeted strategies and interventions, with the ultimate goal of bolstering urban safety and security in Colombo, and other urban settings that share similar characteristics.

CONCLUSIONS

In conclusion, this study contributes to the understanding of the complex relationship between built environmental factors and urban property crimes in Colombo, Sri Lanka. The significance of various key factors, such as security gates, security cameras, lighting conditions, visibility, and access points, in influencing the incidence of burglaries, thefts, and robberies within the city is emphasised by the findings. The emergence of security gates has been identified as a significant deterrent against burglaries, underscoring the significance of physical barriers in thwarting unauthorised access. Nevertheless, the efficacy of security cameras was somewhat constrained by the susceptibilities linked to tampering and the removal of DVR boxes. Lighting conditions and visibility were found to play crucial roles in both burglary and robbery incidents, emphasizing the need for improved lighting infrastructure and enhanced visibility through measures such as street lighting and strategically placed surveillance systems. These findings hold implications for crime prevention strategies and urban planning efforts, suggesting the necessity of targeted interventions that focus on strengthening physical security measures, enhancing visibility, and bolstering surveillance capabilities. Policymakers and urban planners should consider these findings when formulating evidence-based strategies to create safer and more secure urban environments. Furthermore, future research should delve deeper into additional factors and socio-economic indicators to gain a more comprehensive understanding of urban property crimes in Colombo and similar

urban contexts, facilitating the development of more accurate and context-specific crime prevention strategies.

Acknowledgment
This research was supported by The Research Council of the University of Sri Jayewardenepura [grant no: ASP/01/RE/HSS/2021/03].

References

Agnew, R. (1992). Foundation for a general strain theory of crime. Criminology, 30(1), 47-87.

Alexander, R., & Nguyen, T. H. (1998). Social disorganization, culture, and economic opportunity as influences on urban black violence. Journal of Research in Crime and Delinquency, 35(2), 156-188.

Bechdolt, B. B. (1975). Crime and punishment: A historical introduction. New York, NY: Macmillan.

Brantingham, P. L., & Brantingham, P. J. (1981). Environmental criminology. Prospect Heights, IL: Waveland Press.

Chambliss, W. J. (1971). The saints and the roughnecks. In W. J. Chambliss & M. Mankoff (Eds.), Whose law? Whose order? (pp. 119-138). New York, NY: Wiley.

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. American Sociological Review, 44(4), 588-608.

Conklin, J. E. (2004). Criminology (8th ed.). Boston, MA: Pearson Education.

Dutkowska, E., & Leitner, M. (2017). The built environment and crime: A systematic review of the literature. Crime Prevention and Community Safety, 19(2), 71-88.

Felson, M. (1992). Opportunity makes the thief: Practical theory for crime prevention. Thousand Oaks, CA: Sage.

Freeman, L. C. (1996). The ecology of crime. In R. A. Block & R. L. Block (Eds.), Crime: A spatial perspective (pp. 13-28). New York, NY: Arnold.

Gebauer, J. E., Hipp, J. R., & Fariss, C. J. (2017). Crime and the built environment: A systematic review of the literature. Criminology, 55(4), 887-920.

Ghani, A. (2017). Crime and urbanization: A review of the literature. Crime and Justice, 46(1), 1-48.

Hindelang, M. J., Gottfredson, M. R., & Garofalo, J. (1978). Victims of personal crime: An empirical study. Cambridge, MA: Ballinger.

Jacobs, J. (1960). The death and life of great American cities. New York: Vintage Books.

Kelling, G. L., & Coles, C. M. (1996). Fixing broken windows: Restoring order and reducing crime in our communities. New York: Free Press.

Krivo, L. J., & Peterson, R. D. (1996). Macro-level sources of racial inequality in the United States: The intersection of race, place, and structural change. Annual Review of Sociology, 22, 305-331.

Malik, A. (2016). Urbanization and crime: A review of the literature. Journal of Criminal Justice, 46, 1-11.

Marshall, I. (2020). Property crime. In J. Scott & B. C. Ward (Eds.), The encyclopedia of criminology and criminal justice (2nd ed., pp. 1-8). Hoboken, NJ: Wiley Blackwell.

McLaughlin, E., & Bowers, K. J. (2016). Crime opportunity and place effects: An evaluation of the role of

environmental context in crime. Journal of Research in Crime and Delinquency, 53(3), 329-359.

Meron, T. (2011). The humanization of international law. Leiden: Brill.

Overseas Security Advisory Council. (2019). Sri Lanka crime and safety report. Washington, DC: U.S. Department of State.

Shaw, C. R., & McKay, H. D. (1942). Juvenile delinquency and urban areas. Chicago: University of Chicago Press.

United Nations. (2018). World urbanization prospects: The 2018 revision. New York: United Nations.

Wilson, J. Q., & Kelling, G. L. (1982). Broken windows: The police and neighborhood safety. Atlantic Monthly, 249(3), 29-38.

Wright, R. T., & Jacques, S. (2020). Property crime. In E. Maguire, R. Morgan, & R. Reiner (Eds.), The Oxford handbook of criminology (6th ed., pp. 671-704). Oxford: Oxford University Press.