EAST AFRICAN JOURNAL OF CRIME AND SECURITY

Volume I, Issue I, 2025, Pages 63–73

# Pedestrian Victimisation on Road Crossings: A Study of Thika Superhighway, Nairobi City County, Kenya

Mike Kiplagat Chepkonga[1]
Nduati Stephen Nguguna[2]

[1]PhD, Senior Lecturer University of Nairobi
[2]Postgraduate Student, University of Nairobi

Citation: Chepkong'a M.K. & Nduati S.N. (2025). Pedestrian Victimisation on Road Crossings: A Study of Thika Superhighway, Nairobi City County, Kenya. East *African Journal of Crime and Security*, 1(1), 63–73.



This article is licensed under a Creative Commons Attribution (CC BY) license https://creativecommons.org/licenses/by/4.0/

**Abstract**

This article examines crime victimisation among pedestrians using overpasses and underpasses along the Thika Superhighway, Nairobi. Grounded in routine activity and victim precipitation theories, the research employed a descriptive mixed-methods design. Primary data was collected from 60 pedestrians (comprising workers, job seekers, and students) through structured questionnaires, supplemented by eight (8) key informant interviews with officials from the National Transport and Safety Authority (NTSA) and the National Police Service (NPS). Findings reveal that potential victims are primarily economically active individuals vulnerable to crimes such as assault, robbery, and sexual violence. A significant majority of pedestrian respondents (84%) identified insufficient law enforcement and the presence of informal traders and homeless individuals within these facilities as major risk factors. Furthermore, 71% of participants expressed that enhanced safety awareness and public sensitisation could effectively mitigate victimisation risks. The study concludes that current security measures are inadequate and recommends a multi-agency security strategy involving NTSA, NPS, KeNHA, and County enforcement units. To improve pedestrian safety, the study specifically advocates for enhanced police presence, the installation of video surveillance, robust street lighting, and prompt investigations to reduce crime rates and secure these critical transit points.

**Keywords**: Pedestrian Victimisation, Crime Prevention, Law Enforcement, Urban Infrastructure

## 1. Introduction

Global fatalities attributable to Road Traffic Accidents (RTAs) have escalated to an annual average of 1.3 million, with approximately 93% occurring in developing nations (World Health Organization [WHO], 2018). Vulnerable road users specifically pedestrians, cyclists, and motorcyclists disproportionately bear this burden, particularly within sub-Saharan Africa. Furthermore, Sapkota et al., (2016) estimate that at least 50% of road accident victims fall within the 15 to 49-year age demographic, a cohort fundamentally regarded as the most economically productive segment of the population.

In the local context, the Kenya Police Service (KPS) Annual Report (2020) identifies pedestrians as the second most prevalent cause of road accidents nationally, trailing only drivers and motorcyclists. This trend is mirrored in Nairobi City County, where pedestrians have consistently remained a primary factor in traffic fatalities from 2017 to the present. Notably, the KPS reports that road traffic accidents in Kenya surged by 15.8% in the 2017–2018 period and by a further 39.3% in 2018–2019. During these intervals, pedestrian-involved accidents rose from 30% to 46.3%, representing a significant proportion of the national variance. This escalation persists despite substantial capital investment in pedestrian crossing infrastructure by agencies such as the Kenya Urban Roads Authority (KURA), the Kenya National Highways Authority (KeNHA), and the Nairobi Metropolitan Services (NMS).

While road safety education and law enforcement are pillars of global safety strategies, evaluation reports on the efficacy of programs managed by KeNHA and the National Police Service (NPS) remain remarkably scarce. Previous scholarship by Wetungu (2010) and Maigo (2018) observe that footbridges and tunnels in Nairobi are frequently underutilized, falling into states of dereliction. Such neglect transforms these facilities into "crime generators," providing concealment for offenders to commit muggings, physical assaults, and sexual violence.

In 2021, the NMS explicitly linked the underutilization of crossing infrastructure and the subsequent rise in pedestrian fatalities on the main carriageways to the fear of criminal victimization. However, this correlation remains empirically elusive due to the "opacity of aggregated data." Current police statistics categorize offences by general criteria rather than specific locations, such as overpasses or underpasses. Consequently, the nexus between criminal victimization and the use of safe crossing infrastructure in developing African nations remains under-explored.

Thus, this study seeks to bridge this gap by identifying the specific environmental and social factors facilitating crime within these spaces to inform robust prevention strategies. Thus, this article utilizes Routine Activity Theory, as articulated by Cohen and Felson (1979), to analyze how the convergence of a motivated offender, a suitable target, and the absence of a capable guardian creates opportunities for crime in transit spaces. Additionally, the article incorporates Victim Precipitation Theory (Wolfgang, 1957) to examine how the demographic and socio-economic attributes of pedestrians may influence the likelihood of victimization, without falling into the fallacy of victim-blaming.

## 2. Literature Review

### 2.1. Global and Regional Perspectives on Pedestrian Safety

Globally, Road Traffic Accidents (RTAs) result in approximately 1.35 million fatalities annually, ranking as a leading cause of mortality across all age groups and the primary cause of death for children and young adults under 30 (World Health Organization [WHO], 2018). Notably, Non-Motorized Transport (NMT) users including pedestrians and cyclists account for the majority of these fatalities, yet they remain frequently overlooked in global traffic system designs.

While extensive research exists on RTAs in developed nations (Ando et al., 2018; Chen et al., 2019), there is a significant dearth of literature concerning the nexus between traffic accidents and crime in developing countries. As Broughton (2007) observes, cultural and socio-economic variations suggest that findings from Western contexts may not be directly applicable to the unique challenges faced in sub-Saharan Africa. Consequently, there is an urgent need to investigate the relationship between infrastructure utilization and criminal victimization within the Kenyan context.

### 2.2. The Trade-off: Safety versus Personal Security

A pedestrian's choice of where to cross a public road often involves a complex trade-off between traffic safety, personal security, and convenience (Rankavat & Tiwari, 2016). While crossing away from designated infrastructure increases the risk of vehicle-pedestrian collisions, many individuals purposefully avoid overpasses and underpasses to minimize exposure to crime-facilitating factors (Demiroz et al., 2015).

In Nairobi, the Nairobi Metropolitan Services (NMS) noted in 2021 that the underutilization of crossing infrastructure is directly linked to a pervasive fear of crime. This fear is not unfounded; previous studies by Wetungu (2010) and Maigo (2018) highlighted that footbridges and tunnels often fall into states of neglect, providing cover for offences such as mugging, physical assault, and sexual violence. Despite these qualitative observations, empirical proof remains elusive partly because national crime statistics are typically aggregated by offence type rather than the specific location of commission.

Recent scholarship indicates that the victimization gap between genders is narrowing (Morgan & Truman, 2020). However, the influence of income and education remains a subject of academic debate. Some researchers argue that lower-income individuals face higher risks due to decreased guardianship in crime-prone residential areas, while others suggest that higher-income individuals are more attractive targets for motivated offenders (Lauritsen, 2001). Similarly, while higher education was linked to reduced assault risks in Seattle (McNeeley & Wilcox, 2015), other data suggests it may increase the risk of personal victimization in different contexts (Tseloni, 2000).

### 2.3. Policy Interventions: Sensitization and Proactive Policing

The United Nations (UN), in its *Road Safety for All* report, emphasizes that achieving Sustainable Development Goal (SDG) 11 improving road safety for vulnerable populations, including women, children, and Persons with Disabilities (PWDs) require collaborative stakeholder engagement (UN, 2019). While sensitization via mass media (radio, billboards, and flyers) is common, there is a critical need for rigorous evaluation of these programs' efficacy.

Parallel to education is the role of proactive policing. Evidence suggests that RTAs and criminal activities often cluster in specific "hotspots" (Wu et al., 2021). Increased police presence in these zones acts as a dual deterrent, influencing driver behavior while removing opportunities for criminal actors (Fell, 2019). However, gaps remain regarding the optimum deployment strategies and the specific enforcement activities required to secure pedestrian infrastructure.

Public utility areas facilitate crime when they appear dilapidated, lack "ownership," or offer inadequate surveillance (Cozens & Love, 2015). The concept of Crime Prevention through Environmental Design

(CPTED) suggests that the built environment can be altered to reduce criminal opportunities. Research in regional contexts, such as Nigeria, indicates that CPTED is often more effective for public facilities than traditional physical security measures (Badiora, 2014). Key strategies include: 1) Natural Surveillance: Designing spaces that are visible from the street; 2) Maintenance: Promptly removing signs of decay, such as graffiti and waste, which otherwise signal a lack of a "capable guardian" (Fennelly, 2004); 3) Target Hardening: Controlling access, and guarding potential targets to deter offenders (Siegel & McCormick, 2006).

## 2. Methods

### 3.1 Study Design

The research adopted a descriptive mixed-methods survey design to elicit primary data from pedestrians and key informants. This design allowed for the systematic collection of quantitative data through structured questionnaires and the integration of qualitative themes gathered via semi-structured interview schedules, thereby providing a holistic understanding of the research problem. The unit of analysis was the victimization of pedestrians in underpasses and overpasses along the Thika Superhighway in Nairobi City County. The unit of observation included pedestrian users and key informants purposively drawn from the National Police Service (NPS), National Transport and Safety Authority (NTSA), Kenya National Highways Authority (KeNHA), and the Nairobi City County Inspectorate.

### 3.2 Population and Sampling Procedure

The target population comprised all pedestrian users of the designated crossing infrastructure. To define the study sample, the researcher utilized a multi-stage sampling technique. Initially, pedestrians were intercepted at four sampled over/underpasses and screened using inclusion and exclusion criteria; specifically, respondents had to be regular users who self-declared as previous victims of crime or Road Traffic Accidents (RTAs) at those locations. From this initial pool, a sample of 60 primary respondents was selected to complete the questionnaires. This sample size is justified based on the principle of data saturation in descriptive studies; for a specific, localized population such as crime victims in a fixed transit corridor, a sample of 60 is sufficient to reveal significant patterns and recurring themes without redundancy.

In addition to the primary respondents, a total of 8 key informants were selected for in-depth interviews. This group was distinct from the 60 questionnaire respondents and consisted of four institutional experts (one each from the Traffic Police, NTSA, KeNHA, and Nairobi City County Inspectorate) and four long-term vendors one from each sampled site who provided localized longitudinal observations. The inclusion of these 8 informants brought the total study participation to 68, though they are analyzed separately to maintain the distinction between quantitative trends and qualitative context.

### 3.3 Demographic Characteristics of Respondents

The respondent's gender, age group, education level, occupation, and monthly income were identified as critical socio-economic attributes. These variables helped in understanding the vulnerability profile of the users of the Thika Superhighway infrastructure.

Table 1
*Sample Demographic Characteristics (n=60)*

| Attribute | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Gender | Male | 32 | 53.3 |
| | Female | 28 | 46.7 |
| Age Group (Years) | 18 – 24 | 4 | 6.7 |
| | 25 – 34 | 7 | 11.7 |
| | 35 – 44 | 37 | 61.7 |
| | 45 – 54 | 11 | 18.3 |
| | 55 – 64 | 1 | 1.7 |
| Level of Education | Primary | 1 | 1.6 |
| | Secondary | 13 | 21.7 |
| | College/University | 42 | 70.0 |
| | Postgraduate | 4 | 6.7 |
| Occupation | Employed | 33 | 55.0 |
| | Self-employed | 23 | 38.4 |
| | Unemployed | 2 | 3.3 |
| | Student | 2 | 3.3 |
| Monthly Income (Ksh) | Less than 15,000 | 4 | 6.6 |
| | 15,000 – 30,000 | 5 | 8.3 |
| | 30,000 – 45,000 | 6 | 10.0 |
| | 45,000 – 60,000 | 12 | 20.0 |
| | 60,000 – 75,000 | 13 | 21.7 |
| | 75,000 – 90,000 | 7 | 11.7 |
| | More than 90,000 | 13 | 21.7 |
| Total | | 60 | 100.0 |

The study established that the under/overpasses serve an economically active segment of the urban population (93.4%), who are primarily aged between 18 – 54 years (98.3%). Furthermore, a significant majority of the users were actively working (93.4%). These findings imply that any injury or loss of life resulting from crime victimization enroute to work constitutes a major economic loss at the personal, family, and societal levels, as it affects the most productive age bracket of the workforce.

## 4. Findings

### 4.1 Perceived Safety of Pedestrians on Underpasses and Overpasses

The study established a significant disparity in safety perceptions between the two types of infrastructure. As shown in Table 2, a majority (53.3%) of respondents rated underpasses as "Very Unsafe," while overpasses were perceived as relatively safer, with 50.0% of respondents providing a "Neutral" rating (Neither safe nor unsafe).

**Table 2**
*Safety of Pedestrians on Underpasses and Overpasses*

| *Infrastructure* | *Very Unsafe* | *Unsafe* | *Neutral* | *Safe* | *Very Safe* | *Mean* | *Proportion* |
|---|---|---|---|---|---|---|---|
| Overpasses | 1.7% | 33.3% | 50.0% | 11.7% | 3.3% | 2.9 | 59% |
| Underpasses | 53.3% | 45.0% | 0.0% | 1.7% | 0.0% | 1.5 | 30% |
| Overall Mean | | | | | | 2.2 | 44% |

The results indicate that overpasses are perceived to have a 59% degree of safety compared to only 30% for underpasses. This is consistent with opinions from the National Police Service (NPS), which suggest that overpasses benefit from natural surveillance and lighting, whereas underpasses often become enclosed hideouts for criminals.

### 4.2 Crime Prevalence and Types

Pedestrian users are exposed to distinct risks depending on the infrastructure used. As evidenced in Table 3, mugging is the most prevalent crime across both facilities (96.7%). However, underpasses present a significantly higher risk for sexual assault (86.7%) compared to overpasses (3.3%).

**Table 3**
*Crimes Encountered by Users*

| *Crime Type* | *Overpass (f)* | *Overpass (%)* | *Underpass (f)* | *Underpass (%)* |
|---|---|---|---|---|
| *Crimes against Person* | | | | |
| Assault | 12 | 20.0% | 20 | 33.3% |
| Rape | 1 | 1.7% | 3 | 5.0% |
| Sexual Assault | 2 | 3.3% | 52 | 86.7% |
| *Crimes against Property* | | | | |
| Mugging | 58 | 96.7% | 58 | 96.7% |
| Robbery | 53 | 88.3% | 55 | 91.7% |
| Pickpocketing | 12 | 20.3% | 0 | 0.0% |

Key Informants noted that criminals often disguise themselves as informal traders or homeless persons to "camouflage" their activities. This creates a "cahoots" relationship between unscrupulous traders and muggers, particularly at high-traffic points like the Homeland Overpass.

### 4.3 Satisfaction with Law Enforcement Efforts

Respondents expressed general dissatisfaction with policing efforts. Table 4 indicates a mean satisfaction level of 43%, with the vast majority (91.5%) dissatisfied with the frequency of uniformed patrols.

**Table 4**
*Level of Satisfaction with Enforcement Efforts*

| *Enforcement Activity* | *Insignificant* | *Minimal* | *Moderate* | *Sufficient* | *Extensive* | *Mean* | *Proportion* |
|---|---|---|---|---|---|---|---|
| Uniformed Patrols | 5.1% | 91.5% | 1.7% | 1.7% | 0.0% | 2.0 | 40% |
| Undercover Operations | 1.7% | 64.4% | 32.2% | 1.7% | 0.0% | 2.3 | 47% |
| Overall Mean | | | | | | 2.15 | 43% |

The findings in Table 4 indicate low satisfaction with law enforcement efforts at pedestrian crossing facilities along the Thika Superhighway. A large majority of respondents (91.5%) rated uniformed patrols as minimal, while undercover operations were also perceived as limited by most participants (64.4%). The overall satisfaction mean of 2.15 (43%) suggests that pedestrians generally perceive law enforcement presence in these areas as inadequate, potentially contributing to continued crime risks.

### 4.4 Factors Contributing to Crime Hotspots

To further understand the environmental and social drivers of crime, respondents were asked to rate their agreement with several propositions as summarized in Table 5.

**Table 5**
*Observations of Activities at Crossing Facilities*

| *Statement* | *Minimal* | *Moderate* | *Sufficient* | *Extensive* | *Mean* | *Proportion* |
|---|---|---|---|---|---|---|
| Crimes perpetrated in Overpasses | 0.0% | 0.0% | 21.7% | 78.3% | 4.7 | 94% |
| Crimes perpetrated in Underpasses | 0.0% | 0.0% | 56.7% | 43.3% | 4.4 | 88% |
| Informal traders occupy passes | 0.0% | 0.0% | 28.3% | 71.7% | 4.7 | 94% |
| Traders work in cahoots with criminals | 1.7% | 23.3% | 55.0% | 20.0% | 3.9 | 78% |
| Homeless people occupy passes | 0.0% | 1.7% | 59.3% | 39.0% | 4.3 | 86% |

The findings affirm that the crossing facilities are viewed as crime hotspots. Qualitative interviews suggested that even when police are present, their activities sometimes inadvertently discouraged the use of the infrastructure; for instance, officers near Pangani were observed facilitating road crossing at ground level rather than directing pedestrians to the overpass.

### 4.5 Pedestrian Sensitization and Crime Victimization

The study assessed the level of participation in road safety campaigns. Table 6 shows an overall participation rate of 71.5%.

**Table 6**
*Level of Participation in Road Safety Campaigns*

| *Medium* | *Insignificant* | *Minimal* | *Moderate* | *Sufficient* | *Extensive* | *Mean* | *Proportion* |
|---|---|---|---|---|---|---|---|
| Television | 1.7% | 8.3% | 71.5% | 16.9% | 1.7% | 3.80 | 76% |
| Radio | 1.7% | 5.1% | 61.0% | 25.4% | 6.8% | 3.35 | 67% |
| Billboards | 1.7% | 0.0% | 15.3% | 15.3% | 67.7% | 4.60 | 95% |

The findings in Table 6 indicate a relatively high level of participation in road safety campaigns among pedestrians. Billboards recorded the highest level of engagement, with 67.7% of respondents indicating extensive exposure, resulting in the highest mean score (4.60) and participation rate (95%). Television and radio also demonstrated considerable reach, with participation levels of 76% and 67% respectively, suggesting that mass media platforms remain important channels for disseminating road safety information.

**Table 7**
*Effectiveness of Sensitization Channels*

| *Channel* | *Insignificant* | *Minimal* | *Moderate* | *Sufficient* | *Extensive* | *Mean* |
|---|---|---|---|---|---|---|
| Television | 0.0% | 3.4% | 24.1% | 53.4% | 19.1% | 3.88 |
| Radio | 0.0% | 0.0% | 5.2% | 41.4% | 53.4% | 4.48 |
| Billboards | 1.7% | 0.0% | 8.5% | 13.6% | 76.3% | 4.63 |

Billboards were rated as the most effective (Mean 4.63), while posters and flyers were rated as average. During open-ended discussions (not captured in the tables), respondents suggested that to further enhance awareness, agencies should upscale the use of social media (58% support) and place educational materials specifically at the entrance of the passes (28.3%).

### 4.6 Situational Crime Prevention Strategies

There is a very low degree of affirmation (36.5%) that current facilities possess inbuilt situational crime prevention measures.

**Table 8**
*Situational Crime Prevention Measures Available*

| *Measure* | *Insignificant* | *Minimal* | *Moderate* | *Sufficient* | *Extensive* | *Mean* | *Proportion* |
|---|---|---|---|---|---|---|---|
| Clear sightline | 3.4% | 81.4% | 3.4% | 11.9% | 0.0% | 2.2 | 44.5% |
| Sufficient lighting | 1.7% | 76.3% | 1.7% | 16.9% | 3.4% | 2.4 | 48.6% |
| CCTV Surveillance | 74.1% | 25.9% | 0.0% | 0.0% | 0.0% | 1.3 | 25.2% |
| Vandal-proof lighting | 67.8% | 28.8% | 1.7% | 1.7% | 0.0% | 1.4 | 27.4% |

The findings in Table 8 indicate a generally low presence of situational crime prevention measures within pedestrian crossing facilities. Most respondents rated clear sightlines (81.4%) and lighting (76.3%) as minimal, while CCTV surveillance and vandal-proof lighting were largely reported as insignificant. These results suggest that many facilities lack adequate design features necessary to deter crime. A key informant from Kenya National Highway Authority acknowledged these shortcomings, noting that newer infrastructure designs are beginning to incorporate activity generators such as washrooms and commercial spaces to enhance natural surveillance and create safer, more populated environments.

## 5. Discussion

### 5.1 Perceptions of Safety and Environmental Design

The results of this study provide significant insights into pedestrian victimisation along the Thika Superhighway, particularly concerning the structural differences between overpasses and underpasses. Table 2 reveals a stark contrast in the perceived safety of these two facilities; overpasses were rated with a 59% perceived safety level, whereas underpasses reached a mere 30%. This aligns with the observations of Fennelly (2004), who noted that overpasses benefit from natural surveillance and environmental features that contribute to a safer pedestrian experience.

These findings further support the arguments of Saha et al. (2013), who found that pedestrians prefer overpasses due to their visibility and open design. In this study, the higher perceived safety of overpasses can be attributed to better lighting, less exposure to vandalism, and their proximity to active street-level areas, which foster a greater sense of security for users compared to the relatively isolated environment of tunnels. The open design of overpasses allows for improved visibility and natural surveillance, which discourages opportunistic crime and enhances pedestrian confidence in using the infrastructure.

### 5.2 Enforcement Gaps and Law Enforcement Presence

A critical finding highlighted in Table 4 is the pervasive dissatisfaction with law enforcement presence. Over 91% of respondents expressed dissatisfaction with the frequency of uniformed patrols, indicating that the absence of visible security during high-risk periods exacerbates pedestrian vulnerability. This result is consistent with Barnum et al. (2021), who argue that increased police presence has a significant deterrent effect on crime.

The study also supports the work of Shell et al. (2015), which emphasised that effective law enforcement is essential in reducing both violent and property-related crimes. However, the current data suggests a significant gap between institutional mandate and ground-level execution. Despite the

existence of policing structures and mandates to maintain public safety, the lack of regular patrols around pedestrian crossing facilities limits the effectiveness of these security mechanisms.

This situation calls for a strategic and proactive approach where enforcement agencies increase patrols during peak hours and collaborate with local stakeholders to maintain capable guardianship over these transit points. Enhanced coordination between law enforcement agencies, road authorities, and community stakeholders could significantly improve security conditions at these locations.

### 5.3 Physical Disorder and Routine Activity Theory

In relation to the Routine Activity Theory proposed by Cohen and Felson (1979), the findings presented in Table 5 demonstrate that the physical and social condition of the infrastructure plays a pivotal role in pedestrian victimisation. Respondents indicated that the occupation of these spaces by informal traders (94%) and homeless individuals (86%), combined with visible signs of neglect, significantly increased their sense of insecurity.

This aligns with the theory's central premise that crime occurs when motivated offenders converge with suitable targets in the absence of capable guardianship. Signs of physical disorder may signal to potential offenders that criminal activities are unlikely to be detected or prevented. Nawaz Shah (2018) similarly observed that the unregulated occupation of public spaces by vulnerable or idle populations can create opportunities for petty crime and other forms of victimisation.

In the context of the Thika Superhighway, these findings suggest that the failure to adequately maintain and manage pedestrian facilities contributes to a cycle of disorder that may encourage criminal activity. This dynamic resonates with the "broken windows" perspective, where visible neglect and disorder can escalate into more serious criminal behaviour. Consequently, regular maintenance, improved sanitation, and the regulation of informal activities within these spaces are essential strategies for reducing crime risks and improving pedestrian safety.

### 5.4 The Efficacy of Public Sensitisation

The role of public awareness, as detailed in Table 7, contributes significantly to the study's recommendations. While over 71% of respondents reported participating in road safety campaigns, the effectiveness of these campaigns varied considerably by communication medium. Billboards were rated as the most effective medium (Mean = 4.63), followed by radio (Mean = 4.48), while posters and flyers were rated significantly lower as "average" or "poor" communication tools.

These findings are consistent with Mayhew et al. (2017), who found that high-visibility public education campaigns can promote safer behaviours among road users. The prominence and accessibility of billboards and radio messages allow them to reach a wider audience and reinforce safety messages more effectively.

However, the limited impact of print media such as flyers (Mean = 3.02) highlights the need for a more targeted and contemporary communication strategy. As noted by Fisher et al. (2016), modern communication approaches—including social media platforms and interactive digital campaigns—tend to resonate more strongly with contemporary urban populations. Therefore, while sensitisation efforts remain an important component of crime prevention and pedestrian safety strategies, their effectiveness depends on the strategic selection of communication channels that maximise reach, engagement, and behavioural impact.

## 6. Conclusion

The findings of this study demonstrate that pedestrian victimisation along the Thika Superhighway is a multi-dimensional challenge rooted in the intersection of environmental design, institutional enforcement gaps, and social displacement. The research concludes that the structural nature of pedestrian facilities significantly dictate safety outcomes, with overpasses offering superior natural surveillance compared to the isolated and enclosed environments of underpasses. This disparity in safety suggests that current urban infrastructure in Nairobi often fails to meet the basic security needs of the economically active population it is intended to serve.

The study further concludes that the presence of informal traders and street families within these facilities has created a complex security dilemma. While these individuals occupy the space for economic or survival reasons, their unregulated presence provides a "cloak of invisibility" for criminal actors. Consequently, the under-utilisation of safe crossing infrastructure is not a matter of pedestrian defiance but a rational response to a calculated risk of victimisation.

The findings necessitate an urgent transition from fragmented road safety initiatives toward a cohesive, multi-agency security framework. Planning agencies such as KeNHA and KURA must prioritize "target hardening" through vandal-proof lighting and surveillance, while the National Police Service should adopt hotspot policing to disrupt criminal-trader syndicates. Furthermore, public sensitization must shift toward high-visibility digital platforms, supported by county-level regulation to ensure pedestrian facilities remain clear and dedicated exclusively to transit.

## References

Ando, R., Higuchi, K., & Mimura, Y. (2018). Data analysis on traffic accidents and urban crime: A case study in Toyota City. *International Journal of Transportation Science and Technology*, *7*(2), 103–113. https://doi.org/10.1016/j.ijtst.2018.01.002

Badiora, A. I. (2014). Crime prevention through environmental design (CPTED) and its application in Nigeria: A review. *Journal of Environment and Earth Science*, *4*(22), 10–19.

Barnum, T. C., Nagin, D. S., & Pogarsky, G. (2021). Sanction risk perceptions, coherence, and deterrence. *Criminology*, *59*(2), 195–223. https://doi.org/10.1111/1745-9125.12266

Broughton, J. (2007). The correlation between motoring and other types of offence. *Accident Analysis & Prevention*, *39*(2), 274–283. https://doi.org/10.1016/j.aap.2006.07.006

Chen, P., Sun, J., & Wang, K. (2019). Exploring the relationship between traffic accidents and crime in urban areas. *Safety Science*, *118*, 456–465. https://doi.org/10.1016/j.ssci.2019.05.048

Clarke, R. V. (2009). Situational crime prevention: Theoretical background and current practice. *Police Management Studies Quarterly Journal*, *3*(3), 344–356.

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, *44*(4), 588–608. https://doi.org/10.2307/2094589

Cozens, P., & Love, T. (2015). A review and current status of crime prevention through environmental design (CPTED). *Journal of Planning Literature*, *30*(4), 393–412. https://doi.org/10.1177/0885412215595440

Demiroz, F., Argun, M. T., & Akca, D. (2015). Safe cities and CPTED: A review of environmental design and fear of crime. *International Journal of Security and Networks*, *10*(1), 1–15.

Fell, J. C. (2019). Approaches for reducing alcohol-impaired driving: Evidence-based legislation, law enforcement strategies, and environmental interventions. *Forensic Science Review*, *31*(2), 161–184.

Fennelly, L. J. (2004). *Handbook of loss prevention and crime prevention* (4th ed.). Elsevier Butterworth-Heinemann. https://doi.org/10.1016/C2010-0-66453-4

Fisher, T., & Larsson, A. (2016). Modern communication in road safety: The shift toward digital engagement. *Transport Policy*, *45*, 112–124.

Kenya Police Service. (2020). *Annual crime report*. National Police Service.

Lauritsen, J. L. (2001). The social ecology of violent victimization: Individual and contextual effects. *Criminology*, *39*(1), 13–40.

Maigo, J. M. (2018). *Utilization of pedestrian footbridges and tunnels in Nairobi: Challenges and opportunities for crime prevention* [Unpublished master's thesis]. University of Nairobi.

Mayhew, D. R., Simpson, H. M., & Pak, A. (2017). The road safety monitor: Pedestrians and cyclists. *Traffic Injury Prevention*, *18*(1), 45–52. https://doi.org/10.1080/15389588.2016.1193170

McNeeley, S., & Wilcox, P. (2015). Street codes, routine activities, neighbourhood context and victimization. *British Journal of Criminology*, *55*(5), 921–943. https://doi.org/10.1093/bjc/azu116

Nawaz Shah, S. (2018). Informal settlements and urban crime: A case study of public spaces in Pakistan. *Urban Studies Journal*, *12*(4), 88–104.

Rankavat, S., & Tiwari, G. (2016). Pedestrians' risk perception of traffic crashes and personal security. *IATSS Research*, *40*(1), 46–54. https://doi.org/10.1016/j.iatssr.2016.05.001

Saha, D., Alluri, P., & Gan, A. (2013). Prioritizing locations for pedestrian safety improvements. *Transportation Research Record*, *2393*(1), 146–154. https://doi.org/10.3141/2393-17

Sapkota, D., Bista, B., & Adhikari, S. R. (2016). Economic cost of road traffic injuries in Nepal: An estimate from the perspective of the healthcare system and victims' families. *Asia Pacific Journal of Public Health*, *28*(6), 485–496. https://doi.org/10.1177/1010539516664162

Siegel, L. J., & McCormick, C. R. (2006). *Criminology in Canada: Theories, patterns, and typologies*. Thomson Nelson.

Tseloni, A. (2000). Personal victimization and socio-economic status: Cross-national evidence from the International Crime Victims Survey. *British Journal of Criminology*, *40*(2), 261–281.

United Nations. (2019). *Road safety for all: Promoting Sustainable Development Goal 11*. UN Press.

Wetungu, N. J. (2010). *Factors influencing the utilization of pedestrian overpasses in Nairobi City* [Unpublished master's thesis]. University of Nairobi.

Wolfgang, M. E. (1957). Victim precipitated criminal homicide. *Journal of Criminal Law and Criminology*, *48*(1), 1–11.

World Health Organization. (2018). *Global status report on road safety 2018*. https://www.who.int/publications/i/item/9789241565684