

Crime and Infrastructure: A Case Study of Enugu Urban

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ABSTRACT

The research studied crime and infrastructure in Enugu Urban. The research involved the collection of both primary and secondary data. The collection of primary data was done by a reconnaissance survey and the administration of a questionnaire. Secondary data were sourced from Google Earth and the Enugu State Ministry of Lands and Survey. The collected data were analysed using relevant inferential and descriptive statistics. The study finds that the region exhibits a range of criminal activities, including graffiti, rape, robbery, traffic violations, murder, and encroachment into public spaces. The effects of these crimes as provided by the respondents are emotional trauma, fear, depression, and stress; social friendship disconnection; physical injury; migration of residents; loss of life and property; destruction of public infrastructure; depreciation in the value of property; a high vacancy rate; decline in school attendance; disruption of economic activities; and loss of economic livelihood. The physical planning responses to the effects of these crimes are : improvement of infrastructure, government taking over open spaces, enforcing vigilante association, constant neighbourhood surveillance, and provision of police stations. The study recommends initiation of organised vigilante groups; social mix of houses; and security consciousness and enlightenment campaigns as measures to curb crime in the area.

Keywords: crime, violence, physical planning, infrastructure, CPTED, housing, urban planning.

INTRODUCTION

The growth in the rate of urbanization is unprecedented and it is one of the major challenges of urban centres all over the world (UN-Habitat,2007). With this unprecedented urbanization, especially in developing countries, are attendant social problems which include crime and violence (Waller, 2007). In many urban centres, criminal activities and violence are threatening the lives and properties of the citizenry in a dimension that suggests the need for proactive and preventive measures (Agbola, 1997; Ahmed, 2010).In essence, crime refers to an illicit action that is subject to legal consequences imposed by the government, whereas violence is the utilisation of physical force to inflict injury onto an individual or cause property damage. According to Jayamala (2008), crime refers to the violation of orders enforced by society

with punishment meted out to defaulters. The World Health Organisation (WHO, 2010) describes violence as intentional exertion of force or authority that can lead to physical or psychological harm, injury, or death. These definitions suggest that the issues of violence and criminal activity in municipalities are not only interconnected but also pose significant risks to urban security.

The increase in crime rate in Nigeria has been one of the significant social problems and a challenge to physical planning (Ahmed, 2010). Physical planning primarily focuses on the efficient design of a space, encompassing the organisation of its spatial elements to attain the highest feasible level of cost-effectiveness, aesthetic appeal, and convenience (Keeble, 1969). Thus, poor physical planning could be a factor of criminal and violent activities that are assuming dangerous tendencies in Nigerian cities. These activities threaten lives and properties, and also distort the security, peace and social order of a society and, hence, having a negative impact on the quality of the living environment (Agbola, 1997; Ahmed, 2010). In the words of Graif, Gladfelter and Mathews (2014), if a neighbourhood experiences a high crime rate, it would cause such community to decline. The term "decline" in this context encompasses a range of negative outcomes in terms of behaviour, social interactions, psychological well-being, and economic implications. These include a heightened inclination to move elsewhere, less emotional connection to a specific location, diminished feeling of community, and disruption of the objectives of urban planning. Similarly, a deteriorating neighbourhood exacerbates criminal and aggressive behaviour. The characteristics of the area include the existence of hazardous locations, reduced involvement in community matters, instances of vandalism, relocation from the neighbourhood or city, and diminished economic advantages (Graif, Gladfelter & Mathews, 2014; Oladosu, Bwala & Muhammad, 2015). These factors indicate the tangible consequences of municipal crime and violence on urban planning.

Crime and violence, specifically, have been found to differ in intensity and occurrence in different locations and periods (Abodunrin, 1981; Adigun, 2013). Put simply, violence and criminal activity are not universally present in all places and at all times. This demonstrates that the occurrence of criminal activity and acts of violence, along with their resulting outcomes, differ depending on the specific time and location. They manifest not solely inside, but are also shaped by a diverse array of environmental circumstances. Research has substantiated the occurrence of illegal acts in space, which in turn enhances the prospects for such engagement and conduct (Nes & Rueb, 2009). The contact facilitated by spatial proximity can give rise to both secure and insecure communities, which are integral to the overall welfare of society (Kalemlı-Ozcan et al., 2003; Hedayati et al., 2010). Crime and violence are prevalent in areas where there is a combination of both opportunity and offenders. Opportunity, in this context, denotes a conducive setting where criminal activities and acts of violence might flourish. Factors such as a lack of inherent alertness and inadequate illumination might contribute to the conversion of an area into a potential hub for criminal activity.

This study primarily examines the physical planning implications of urban crime and violence in the Enugu metropolis. Enugu is the leading city of the southeastern geopolitical zone, a position it has held since the era of regional administrations in Nigeria. Therefore, it is a metropolis distinguished by a large population and high population density, covering a vast geographical area. Enugu, originally designed as a planned city, is currently undergoing urban decay in its central centre and the expansion of unplanned construction in its surrounding suburbs. Consequently, the city exhibits a juxtaposition of magnificence and squalor, which can foster municipal crime and violence. This study examined the physical planning consequences of the metropolitan violence and criminal activity in Enugu city.

LITERATURE REVIEW

The Idea of Crime and Violence

The understanding of crime can be challenging due to varying societal and national interpretations of criminal behaviour (Moore, 2008). Crime is perceived differently by various segments of society (Clark, 2008). Consequently, this leads to a lack of clarity in defining crime. From a legal standpoint, a crime refers to an action that is subject to punishment according to the law. According to Adesanya (2018), crime refers to human behaviour that goes against the criminal laws established by a state, the federal government, or a local jurisdiction with the authority to enact such laws. Crime refers to the violation of norms or laws, for which a controlling entity, such as legal systems, can impose a conviction. Although all crimes are in violation of the law, not all violations of the law are considered crimes. For instance, violations of contract and other civil laws may only be classified as offences or infractions.

In contrast, Oladosu et al. (2015) argued that violence is the intentional application of brutality with the intention to cause injury or harm to others. Similarly, the Webster dictionary defines violence as the act of using physical force to cause harm or mistreat. When comparing the definitions of violence, crime, and conflict, it becomes clear that there are similarities between them. Therefore, it is crucial to differentiate between these three concepts. The Oxford dictionary defines violence as the state of being violent, characterised by aggressive behaviour or treatment that is shocking and distressing. Conversely, conflict is defined as a condition of disagreement or animosity, a type of combat or contention between opposing ideals and incompatible disparities or requirements within an individual or group of people. It is important to highlight that dispute does not always cause harm, whereas violence does. Crime does not necessarily include violence. Fear is the manifestation of insecurity caused by violence. It is characterised as the institutional, cultural, and psychological consequence of violence, resulting from destabilisation, exclusion, and uncertainty (Moser, 2004).

Nature and rate of Crime and Violence

Adesanya (2018) categorised crimes into six distinct classifications. These crimes are classified into categories such as crimes against individuals, crimes against property, crimes against ethics, hate crimes, white-collar crimes, and organised crimes. Although Crimes against individuals, sometimes known as personal crimes, include murder, violent assault, sexual assault, and robbery. Property crimes encompass the act of unlawfully taking someone's property without causing physical harm, including offences like stealing, burglary, auto theft, or arson. Hate crimes, in contrast, refer to criminal acts targeting individuals or property, motivated by biases related to race, gender or sex identity, faith disability, gender identity or expression, or ethnicity.

Crimes against morals are commonly referred to as victimless crimes since they lack both a complainant and a victim. Prostitution, illicit gambling, and illicit drug consumption are all instances of victimless offences. White collar crimes constitute a distinct category of criminal offences that are perpetrated by individuals who hold positions of high socioeconomic status within society. These crimes are perpetrated by exploiting one's vocation and status. Crimes such as fraud, tax evasion, and other infractions of income tax regulations are classified within these categories of criminal activity. White-collar crimes, while generally escaping public attention unless detected by higher authorities, have significant and widespread consequences that are often underestimated. Often, these cases are not thoroughly examined and receive minimal legal action due to the protection afforded to the perpetrators based on their privileges, race, class,

and gender. Conversely, organised crime is perpetrated by well-organized factions that frequently engage in the trade and dissemination of illicit commodities and services. When discussing organised crime, the drug cartels and the mafia are typically the primary focus.

Krug, Dahlberg, Mercy, Zwi, and Lozano (2002) categorised violence into three types: self-directed, interpersonal, and collective violence. Self-directed violence is a form of violence where the person who does the act is also the one who is harmed. Violence can be categorised into two forms: self-abuse, which includes behaviours like using dangerous medications, and suicidal behaviour, such as jumping into a lagoon. Self-mutilation exemplifies self-inflicted harm. Suicidal conduct encompasses a range of actions, starting from contemplating suicide, progressing to formulating a plan and acquiring the necessary means, trying self-harm, and ultimately, completing the act (known as completed suicide). The concept of suicide is inherently associated with violence and aggression (DeLeo, Bertolote, & Lester, 2002). Suicidal behaviour encompasses thoughts of suicide, actual suicides, and attempted suicides, which are also referred to as parasuicide or willful self-injury in certain nations. There are numerous underlying factors that contribute to suicidal behaviour. The risk factors for suicide are intricate and interplay with one other. The components encompassed in this study include demographic characteristics such as age and sex, psychiatric factors, biological factors, social factors, environmental factors, and aspects pertaining to an individual's lifespan (DeLeo et al., 2002).

Interpersonal violence is categorised into two subtypes. These encompass instances of violence within families and between intimate partners, as well as violence that occurs throughout communities. The former typically involves familial and intimate relationships, predominantly occurring within the confines of one's house. Conversely, the latter pertains to interactions between unrelated individuals, who might or may not be acquainted, and typically transpires outside of the home. Interpersonal violence within families can have psychological repercussions that impact kids, parents, and their relationship both in the short and long run. Instances of family and intimate relationship violence encompass abuse of children, intimate partner violence, and elder abuse, whereas community violence includes juvenile violence, sexual assault, and targeted violence.

The phenomenon of collective violence has recently garnered significant public scrutiny (Krug et al., 2002). It can be defined as the utilisation of force by a collective with a shared identity, whether temporary or lasting, over another group of similar or dissimilar character, with the aim of attaining social, economic, or political dominance (Zwi, Garfield, Loretta, 2002). Collective violence manifests in instances of insurgencies, resulting in the displacement of victims from their initial dwellings, so left them without a home. Individuals engaged in this ambiguous act resort to blowing retail stores, airports, houses of worship, and business locations, causing widespread destruction and destabilising the business climate.

Regarding geographic analysis and the prevailing character of violence and crime, Uloma et al. (2014) noted that armed theft is a recurrent type of criminal activity in Nigeria. Acts of violence and crime were classified as criminal activities in both Badiora's (2014) and Badiora & Afon's (2013) studies. The primary criminal acts noted in the historic town centre were store bursting, housebreaking, theft, pilfering, disturbance of public order, child abuse, and car theft. Additional offences encompassed in the list are sexual harassment, fraudulent misrepresentation, deceit, desertion of a child, unlawful entry with intent to commit a crime, attempted sexual assault, petty theft, assuming another person's identity, forcibly seizing a vehicle, armed theft, engaging in prostitution with the intent to commit robbery and possession of stolen goods. Within the residential zone characterised by middle and high-income, residents identified home breaking, burglaries, store breaking, vehicle theft, stealing, and pilfering as the top five most formidable criminal behaviours, as

indicated by research studies. Furthermore, it was observed that all of these criminal categories involved offences committed against properties. The data indicated that home breaking is the primary obstacle in these areas of the town.

Social and Economic Implications of Crime and Violence

An analysis of existing literature on socioeconomic variables and crime reveals a clear and direct correlation between socio-economic and demographic factors and the incidence of criminal activity. The Strategic Policy Brief (2009) states that specific socio-economic factors, such as parental actions, play a substantial role in determining a child's likelihood and future engagement in criminal activities. Poor parenting, characterised by inadequate supervision of a child's daily activities and rejection, can have an impact on a child's likelihood of engaging in criminal behaviour. Furthermore, it is equally evident that when parents engage in criminal activities, it heightens the likelihood of their child following suit.

Education is a significant socio-economic factor that can influence individuals' choices to participate in criminal behaviour. These can be elucidated from many perspectives and distinct vantage points. Higher levels of education lead to greater economic rewards in the job market, which in turn decreases the likelihood of engaging in criminal activities. Moreover, education has the potential to alter prior decisions and choices to participate in criminal activities. Education alters one's perspective and understanding of various subjects and matters. It may have a kind of influence that promotes civilization and enlightenment. Fajnzylber, Lederman, and Loayza (2002) proposed that education has the potential to alter an individual's moral outlook and enhance their sense of morality. As a result, this can influence how individuals perceive crime, viewing it as a morally reprehensible conduct that should be avoided.

Age, sex, and income level are additional factors that influence crime and violence. Weatherburn (2001) asserts that crime and violence primarily concern young individuals, regardless of their gender. The author emphasised that males exhibit a higher propensity for engaging in criminal activities and acts of violence compared to females, particularly in cases involving severe criminal offences.

Factors Influencing the Occurrence of Crime and Violence

In addition to socio-economic considerations, numerous studies have discovered several other elements that exert effect on the occurrence of crime and violence. The challenges faced by urban systems include urbanisation, unemployment, poverty, inequality, political democratisation, inadequate physical design and planning, the concentration of political power, congestion, disorganisation, and moral decadence (UN-HABITAT, 2007; Agbola, 2004; Ahmed, 2010; Siti & Abdullah, 2012; Oladosu et al, 2015). To clarify, the aforementioned causes contribute to the incidence of violence and criminal activity.

Urbanisation has been identified as a contributing factor to the rise in crime rates in several regions of the world. For example, data from Latin America indicates that households in regions with significant population growth are more vulnerable to property crime compared to those in rural areas (UN-HABITAT, 2007). The rapid process of urbanisation imposes greater challenges on authorities to effectively address the public's security and safety requirements (Oladosu et al, 2015). According to the UN-Habitat (2007), the correlation between urban expansion and rising crime rates, particularly in developing nations, can be attributed to three key variables. One reason is that the potential gain from criminal activities is greater in larger cities due to the existence of a wealthier population. Additionally, the huge and diverse population in these places provides more opportunities to conduct crimes. Lastly, there is a greater ease in disposing of the rewards obtained from criminal acts. Put simply, a market that is currently open for purchase. The second

significant factor is that the likelihood of being arrested decreases in these cities. This is because larger cities have a higher concentration of affluent victims, more chances to commit different types of crimes, and a more established market for selling stolen goods. Moreover, the likelihood of apprehending a criminal for their illicit activities is diminished in metropolitan areas. This is due to the fact that larger cities possess a greater population in relation to the existing police resources. Furthermore, due to the diverse nature of people in major cities, establishing collaboration between residents and the police is consistently a challenging endeavour. In major cities, a significant proportion of the population is unemployed, and their initial move to the city was driven by the availability of job opportunities. Therefore, participation in criminal activities is frequently motivated by the frustration that stems from being unemployed.

As stated in the strategic planning brief (2009), unemployment is a reliable indicator of engagement in criminal activities, specifically property crime rather than violent crime. According to UN-HABITAT (2007), there is a suggestion that young people who are severely unemployed are at a higher risk of engaging in criminal activities and violence, both as offenders and victims.

Poverty and inequality are acknowledged as significant risk factors associated with elevated levels of violent behaviour and crime in urban regions (Oladosu et al, 2015). It is apparent that a substantial portion of the Nigerian populace resides below the poverty threshold. Some individuals possess immense wealth and openly display it in front of those who are less fortunate. The impoverished are commonly regarded as socially marginalised by the affluent. The impoverished and marginalised members of society endeavour to diminish the disparity of inequality, which often compels them to engage in criminal activities targeting the affluent.

Another cause of crime and violence is political democratization. Reports from a recorded trend over a period of fifty years in forty-four highly industrialized countries revealed that there is a direct proportion between increase in political democratization and crime (UN-HABITAT, 2007). A change in government sometimes disrupts the social and economic tempo of a society, thus, leading to a short term increase in crime and violence (Oladosu et al, 2015). In Nigeria for example, there are cases of violence and crimes as a result of politics in urban centers. Political opponents use the unemployed youths to perpetuate violence on the basis of discrediting one another. It is no longer news that electioneering period in Nigeria is accompanied by documented cases of violent attacks. Also, the recent gubernatorial election in Ekiti also confirmed this (Vanguard Newspaper, 2018).

Insufficient urban planning, design, and administration jeopardise the safety of people and their possessions (UN-HABITAT, 2007). The study states that the physical structure and arrangement of cities influence the regular movements of criminals and victims, as well as the opportunity for crime. Additionally, it is believed that 10 to 20 percent of crimes involve elements related to environmental design and management.

Effects of Crime and Violence on Physical Planning

The costs and impacts of violence and criminal activity have a significant influence on several aspects of the urban setting and individuals to a considerable degree. The costs and consequences of acts of violence and crime can have either immediate or enduring impacts. A community with an elevated rate of crime is believed to result in a decrease in the quality or desirability of that neighbourhood. Decline, in this context, encompasses a wide array negative psychological, behavioural, social, and economic outcome (Graif, Gladfelter, Mathews, 2014). The dissatisfaction of inhabitants with their neighbourhoods has psychological implications, including the desire to relocate, fear among residents, and a decrease in the sense of belonging and attachment to the place or community. The social psychological consequences encompass a decline in

residents' inclination to be present on the street to interfere in occurrences, as well as a sense of mistrust and diminished collaboration among neighbours. The residents have various behavioural repercussions, such as a decrease in their engagement in activities, avoidance of places that are viewed as unsafe, reduced involvement in local affairs, and even relocation from the neighbourhood. The economic consequences encompass a decline in property prices, a fall in socioeconomic status, and a rise in vacancy rates. This hampers economic progress, damages public infrastructure, disrupts economic sources of income, and results in loss of life as well as property (Taylor, 2014). Consequently, crime and violence have wider ramifications for physical planning.

Physical Planning Strategies and Crime and Violence

Various ideas have examined potential methods by which neighbourhoods influence crime. One of the oldest ideas, social disorganisation, suggests that factors such as socioeconomic deprivation, residential mobility, and ethnic heterogeneity weaken neighbourhood social control and increase crime rates. Connections to individuals and organisations facilitate the implementation of social regulation (Bursik & Grasmick, 1993). Further development of the theory proposed that in addition to social connections, communal productivity diminishes crime in neighbourhoods (Sampson, Raudenbush, Stephen & Earls, 1997). Furthermore, a widely accepted perspective posits that unattended items are more susceptible to criminal activity, particularly in locations and periods of heightened vulnerability (Cohen & Felson, 1979). Frequently, the various elements of normal activities are evaluated using indicators such as the unemployment rate (which serves as a substitute for motivated criminals) and the amount of time spent away from home (indicating a low degree of guardianship). Alternatively, another set of hypotheses examined the correlation between local value systems and the rise in criminal activity. Finally, another sub-cultural hypothesis (known as relative deprivation or strain approach) suggests that the socioeconomic position of one's classmates or neighbours may influence the likelihood of engaging in criminal behaviour. However, starting in the early 1970s, research revealed the complex relationship between crime and the physical environment (Newman, 1971; Kruger, 2005).

Studies have demonstrated that the characteristics of the physical surroundings can act as a backdrop for criminal activity and aggression. Conversely, the physical surroundings also provide a sense of security. Consequently, specific settings have the ability to generate a sense of security, whereas alternative contexts might instigate apprehension, even in areas with minimal crime prevalence. Consequently, inadequate physical planning leads to the manifestation of criminal activity and violence.

Physical planning, also referred to as planning for cities and regions, land use planning, or suburban and rural planning, focuses on the optimal use of land. Keeble (1969) provided a definition of urban planning as the "art and science" of organising the utilisation of land, placement of structures, and establishment of transportation networks in order to achieve the highest possible level of efficiency, convenience, and aesthetic appeal. The objective of physical planning is to arrange land uses in a way that promotes convenience, organisation, and visual appeal. Inadequate planning, design, and management are the primary variables linked to crime and violence (Oladosu, Bwala & Muhhammad, 2015). A prior study demonstrated that a meticulously designed setting leads to a significant decrease in the incidence of crime.

Urban planners have contended that the impact of poor urban planning on crime and violence may not be significant, as there exist instances of inadequately planned towns with relatively low rates of crime worldwide. However, urban planners generally agree that a carefully designed environment can contribute to the reduction of crime and violence (Oladosu et al, 2015). Research has demonstrated that modifying the

opportunities for crime to occur in the environment can lead to a decrease in the crime rate. (Soomeren, 2000). Furthermore, Moreso, Dung-Gwom, and Oladosu (2004) noted that there is a significant correlation between the number of households and the extent of ethno-religious conflict in emerging nations.

The inadequate urban planning, design, and administration (UN-HABITAT, 2007) jeopardise the safety of both human lives and property. Hence, the inadequate urban design of cities might act as a fertile environment for criminal activities. According to Oladosu et al. (2015), the two primary approaches to decrease crime and violence are crime and prevention of violence, and crime and violence management. Violence and criminal activity prevention tactics aim to prevent persons from becoming victims by minimising the likelihood of crime or violence occurring. On the other hand, crime and violence control techniques primarily aim to decrease the likelihood of individuals engaging in criminal behaviour by implementing remedial measures like cultural, social, or economic interventions. Preventive techniques encompass the implementation of physical planning measures to mitigate crime and violence.

Incidents of crime and violence occur within the realm of outer space. In order for violence and crime to occur, three essential factors must be present. The individuals involved in the situation might be categorised as the perpetrator, the recipient of harm, and a supportive atmosphere. The characteristics of the physical setting can increase the likelihood of violent or criminal activity taking place. They influence the mindset of a possible wrongdoer towards a probable crime location, their evaluation of the circumstances around a potential crime scene, and the presence of surveillance in the vicinity of a site. The selection of perpetrators to engage in illicit activities within a particular location is influenced by several factors, including the ease of entry to the region, the perceptibility and susceptibility of potential targets, the likelihood of being observed, and the availability of escape routes in the event of detection. These constitute the viewpoints of those who have committed offences. The perspective suggests that the nature of a crime is impacted by the level of familiarity between the perpetrators and the victim (Gardiner, 1978).

This suggests that the environment has the potential to impact the frequency of crime and violence. In his study on 'Discouraging crime through city planning', Schloomo (1968) as cited by Oladosu et al (2015) observed that the physical environment can have a direct impact on crime. This can be achieved by delineating territories, controlling access through the establishment or removal of boundaries and transportation networks, and enhancing surveillance by both law enforcement and the public.

RESEARCH METHODOLOGY

The collection of primary data was accomplished by conducting a reconnaissance survey and administering a questionnaire. Crime and violence are societal problems; so, self-reporting and field observations were appropriate methods for gathering data. The survey was conducted among the inhabitants of Enugu Metropolis. The questionnaire examined many socioeconomic aspects of residents, including gender, age, educational attainment, years of schooling, occupation, income level, household size, and period of residency in the neighbourhood. The questionnaire inquired about the occurrence of crime and violence, their impact on physical planning, and the corresponding reactions in physical planning.

The study population consisted of the inhabitants of the three local government areas within Enugu Metropolis, which are Enugu East, Enugu South, and Enugu North.

The sample size for this investigation was determined via multi-stage sampling. In order to do this, the three primary phases were implemented. The following steps were undertaken:

1. The study area was identified and divided into separate residential zones that were uniform in nature.
2. Streets were identified and chosen from each of the residential zones.
3. Households were selected from the identified streets to produce the sample size for the survey.

During the initial phase of the multi-stage sample process, Enugu Metropolis was divided into three separate and uniform residential zones using stratification. These locations were categorised based on their levels of density, which were classified as high, medium, and low.

The residential zones were stratified based on existing street maps and house enumeration numbers provided by the National Population Commission. The total number of streets in each zone was established during the preliminary survey. The preliminary study revealed the presence of 32 residential communities in Enugu. These neighbourhoods can be categorised as 12 high-density, 10 medium-density, and 10 low-density residential zones.

Later on, the method of random sampling was used to choose one neighbourhood out of every five in each residential zone. To clarify, a total of 20% of the identified neighbourhoods were chosen. The table below displays the quantity of neighbourhoods chosen from each residential density. Through a random selection process, four communities were chosen inside the high-density zone, two within the middle zone, and two within the low-density residential zone. Consequently, a grand total of eight residential zones were chosen at random from Enugu City to form the sample.

Table displaying specific neighbourhoods within various residential zones within the designated study area.

Residential Zone	Number of Neighbourhoods	Number of Selected Neighbourhoods
High	12	3
Medium	10	2
Low	10	2
Total	32	7

Source: Author's Survey (2018)

Selection of Households for Survey

After finishing the process of randomly selecting neighbourhoods, the last step involved identifying the streets inside each of the chosen neighbourhoods. Based on an initial assessment and data gathered from Google Earth, it was determined that there are a total of 433 streets in the designated residential areas across the three zones. The distribution revealed that there existed 109, 145, as well as 179 streets in the middle, high, and low density residential zones, correspondingly. Therefore, a selection was made of 10% of the total streets in each residential zone. A total of 44 streets were chosen throughout all residential areas. The

distribution is as follows: eleven (11) streets in the high residential zone, fifteen (15) streets in the middle residential zone, and eighteen (18) streets in the low residential zone.

Subsequently, the task at hand involves pinpointing residential structures situated along the designated thoroughfares. Based on data gathered from Google Earth and the authors' on-site investigation, it was determined there were 805, 789, & 781 buildings in the medium, high, as well as low residential zones, correspondingly. A systematic sampling procedure was employed to select each tenth building (10%) on the chosen streets. The method of random sampling was utilised to select the initial house where the head of the household was chosen. A total of 238 surveys were administered using this approach. The table below provides specific information regarding the quantity of questionnaires distributed in low, middle, and high residential areas.

Table showing Streets and Estimated Number of Houses where samples were derived

Residential Zone	Total No. of Streets	No. of Selected Streets (10 %)	Total No. of Buildings on the Selected Street	No. of Selected Buildings
High	109	11	805	81
Medium	145	15	789	79
Low	179	18	781	78
Total	433	44	2375	238

Source: Author's Survey (2018)

Secondary data, such as the number of streets and buildings and maps, were sourced from Google Earth and the Enugu State Ministry of Lands and Survey, respectively. The collected data were analysed using relevant inferential and descriptive statistics.

DISCUSSION OF FINDINGS

Findings revealed that there was a proportional representation of both genders in all the neighbourhoods, with males (41.7%) and females (58.3%). It was also discovered that most of the respondents had tertiary education (61.9%); thus, they had a better understanding of the activities in their environment. Most of the respondents are civil servants (65.4%), with the highest age range of 40-59 years (55.7%). Most of the residents have lived for over 12 years; as such, they are capable of understanding the occurrence and implications of crime and violence in the study area. Also, most of the residents are civil servants with an income range of N60,000-N99,999 (33.1%). Furthermore, the majority of the residents live in rented apartments (60.5%)

The study region exhibits a range of criminal activities, including graffiti, rape, robbery, traffic violations, murder, and encroachment into public spaces. The effects of these are reflected in the responses provided by the respondents, and they are cases of emotional trauma such as fear, depression, and stress; social friendship disconnection; inflicting physical injury; migration of residents; loss of life and property; destruction of public infrastructure; depreciation in the value of property; a high vacancy rate; a decline in school attendance; disruption of economic activities; and loss of economic livelihood.

The physical planning responses to the aforementioned effects are: improvement of infrastructure, government taking over open spaces, enforcing vigilante association, constant neighbourhood surveillance, and provision of police stations.

Residents’ Responses to the Improvement of Infrastructure

Presented in the table below are findings on residents’ responses to the improvement of infrastructure in the study area. In the high density residential area, 89.6% of the respondents suggested that there should be improvements to the infrastructure, while 10.4% did not agree with that. In the medium density area, the proportion of respondents who suggested that there should be improvement in infrastructure accounted for 84.4%, while 15.6% did not agree with that. Information from the low density residential area revealed that 81.0% suggested that there should be improvements to infrastructure, and 19.0% did not agree with that. In summary, 85.7% of the respondents suggested that there should be infrastructure improvement, while 14.3% responded in the negative. This suggests that enhancing the infrastructure in the studied area will effectively address the problem of violence and criminal activity in the study area. This finding, alligns with those of Demombynes & Özler, (2005) and Montolio (2018).

Table displaying residents' feedback regarding infrastructure enhancement

Measures	Response	Neighbourhood Density							
		High		Medium		Low		Total	
		Count	%	Count	%	Count	%	Count	%
Improvement of Infrastructure	Yes	86	89.6	54	84.4	51	81.0	191	85.7
	No	10	10.4	10	15.6	12	19.0	32	14.3
	Total	96	100	64	100	63	100	223	100

Source: Author’s field survey (2018)

Residents’ Responses to Government taking over open spaces

Presented in the table below are findings on residents’ responses to the government taking over open spaces in the study area. In the high-density residential area, 49.0% of the respondents suggested that the government should take up open spaces, while 51.0% did not agree with that. In the medium-density area, the proportion of respondents who suggested that the government should take up open spaces accounted for 45.3%, while 54.7% did not agree with that. Information from the low density residential areas revealed that 39.7% suggested that the government should take up open spaces, and 60.3% did not agree to that. In summary, 45.3% of the respondents suggested that there should be improvement in infrastructure, while 54.7% responded in the negative. Therefore, the study suggests that the government's acquisition of open spaces does not have a substantial impact on the prevalence of violent and criminal activity in the examined region. This finding is at variance with the position of Ajayi et al. (2020).

Table showing residents’ responses to the government's takeover of open spaces

Case	Response	Neighbourhood Density							
		High		Medium		Low		Total	
		Count	%	Count	%	Count	%	Count	%
Govt. taking over open spaces	Yes	47	49.0	29	45.3	25	39.7	101	45.3
	No	49	51.0	33	54.7	38	60.3	122	54.7
	Total	96	100	64	100	63	100	223	100

Source: Author’s field survey (2018)

Residents’ Responses on Enforcing Vigilante Association

Contained in the table below are findings on residents’ responses to enforcing vigilantes in the study area. In the high density residential area, 92.7% of the respondents agreed to enforcing vigilante associations, while 7.3% did not agree to that. In the medium density area, the proportion of respondents that agreed to enforcing vigilante associations accounted for 93.8%, while 6.2% did not agree to that. Information from the low density residential area revealed that 88.9% agreed to enforcing vigilante associations, and 11.1% did not agree to that. In summary, 91.9% of the respondents agreed with enforcing vigilante associations, while 8.1% responded in the negative. This suggests that implementing vigilante organisations will reduce the prevalence of violent and criminal activity in the research area. This finding is in agreement with Jack-Rabin et al. (2023) and Akinlabi & Ihemeje (2021)

Table showing residents’ responses on enforcing vigilante association

Case	Response	Neighbourhood Density							
		High		Medium		Low		Total	
		Count	%	Count	%	Count	%	Count	%
Enforcing Vigilante Association	Yes	89	92.7	60	93.8	56	88.9	205	91.9
	No	07	7.3	04	6.2	07	11.1	18	08.1
	Total	96	100	64	100	63	100	223	100

Source: Author’s field survey (2018)

Residents’ Responses on Constant Surveillance of Neighbourhood

Shown in the table below are findings on residents’ responses to constant neighbourhood surveillance in the study area. In the high density residential area, 93.7% of the respondents agreed to constant neighbourhood surveillance, while 6.3% did not agree to that. In the medium density area, the proportion of respondents who agreed to constant neighbourhood surveillance accounted for 93.8%, while 6.2% did not agree to that. Information from the low density residential area revealed that 92.1% agreed to constant neighbourhood surveillance and 7.9% did not agree to that. In summary, 93.3% of the respondents agreed to constant neighbourhood surveillance, while 6.7% responded in the negative. This suggests that maintaining ongoing surveillance of the neighbourhood will reduce the frequency of violent and criminal activity in the research region. This finding agrees with that of Cole, (2019) and Montolio, (2018).

Table showing residents’ responses on constant surveillance of the neighbourhood

Case	Response	Neighbourhood Density							
		High		Medium		Low		Total	
		Count	%	Count	%	Count	%	Count	%
Constant Neighbourhood Surveillance	Yes	90	93.7	60	93.8	58	92.1	208	93.3
	No	06	6.3	04	6.2	07	7.9	15	6.7
	Total	96	100	64	100	63	100	223	100

Source: Author’s field survey (2018)

Residents’ Responses to the Provision of Police Station

According to the table beneath, which displays the responses of residents about the availability of police agencies in the research area, it can be noticed that 80.2% of inhabitants in the high density neighbourhood recommended the establishment of police departments, while 19.8% did not. Within the medium density area, 89.0% of respondents agreed with the establishment of police stations, while 11.0% did not. Statistics obtained from the low density residential area indicate that 84.1% of the residents approved with the establishment of police stations, while 12.7% expressed disagreement. In the metropolis, 83.9% agreed to the provision of police stations, while 16.1% did not. This finding shows that there are inadequate police stations, and the provision of more will help curb crime and violence in agreement with Montolio (2018).

Table showing residents’ responses to the provision of police station

Case	Response	Neighbourhood Density							
		High		Medium		Low		Total	
		Count	%	Count	%	Count	%	Count	%
Provision of Police Station	Yes	77	80.2	57	89.0	53	84.1	187	83.9
	No	19	19.8	07	11.0	10	12.7	36	16.1
	Total	96	100	64	100	63	100	223	100

Source: Author’s field survey (2018)

Effectiveness of Security Agencies against Crime in Enugu Metropolis

Table showing Relative Effectiveness Index of Security Agencies in Enugu Metropolis

Rank	Security agencies	SWV	REI	Mean Deviation
1	Vigilante/Neighbourhood Watch	896	4.02	0.42
2	Nigeria Security and Civil Defense Corps	842	3.78	0.12
3	Police	756	3.39	-0.21
4	Local Government Officers	718	3.22	-0.38

Mean = 3.60

Source: Author’s field survey (2018)

As presented in the table above, the findings of the study reveal that in all the neighbourhoods of the study area, the vigilante/neighbourhood watch is identified by residents as the most effective security apparatus. This is because it has an REI of 4.02. The Nigeria Security and Civil Defence Corps is also identified as having a high efficiency index by residents (REI = 3.78). Furthermore, these two security agencies had a rating higher than the mean value (3.60). Hence, they have a positive mean deviation value of 0.42 and 0.12, respectively. This indicates that the security agencies of vigilante/neighbourhood watch and Nigeria Security and Civil Defence Corps are effective against crime. Conversely, the security agencies of police (REI = 3.39) and local government officers (REI = 3.32) had a mean deviation value less than the mean value. As a result, residents rate them poorly in terms of their ability to combat crime.

Table Showing Relative Effectiveness Index of Security Agencies in Medium Density Neighbourhoods of Enugu Metropolis

Rank	Security Agency	SWV	REI	Mean deviation
1	Vigilante/Neighbourhood Watch	169	4.23	0.57
2	Nigerian Security and Civil Defense Corps	166	4.15	0.49
3	Police	142	3.55	-0.11
4	Local Government Officers	108	2.70	-0.96

Mean (Medium) = 3.66

Source: Author’s field survey (2018)

As presented in the table above, the findings of the study reveal that in the medium density neighbourhood of the study area, the vigilante/neighbourhood watch is identified by residents as the most effective security apparatus. This is because it has an REI of 4.23. The Nigeria Security and Civil Defence Corps is also identified as having a high effectiveness index by residents (REI = 4.15). Furthermore, these two security agencies had a rating higher than the mean value (3.66). Hence, they have a positive mean deviation value of 0.57 and 0.49, respectively. This indicates that the security agencies of Vigilante/Neighbourhood Watch,

Nigeria Security, and the Civil Defence Corps are effective against crime. Conversely, the security agencies of police (REI = 3.55) and local government officers (REI = 2.70) had a mean deviation value less than the mean value. Hence, they are rated low by residents in terms of their effectiveness against crime.

Table Showing Effectiveness Index of Security Agencies in Low Density Neighbourhoods of Enugu Metropolis

Rank	Security agency	SWV	REI	Mean deviation
1	Vigilante/neighbourhood watch	366	3.85	0.20
2	Local Government Officers	361	3.80	0.15
3	Nigerian Security and Civil Defense Corps	350	3.68	0.03
4	Police	310	3.26	-0.39

Mean (Low) = 3.65

Source: Author’s field survey (2018)

As presented in the table above, the findings of the study reveal that in the low density neighbourhood of the study area, the vigilante/neighbourhood watch is identified by residents as the most effective security apparatus. This is because it has an REI of 3.85. The local government officers are also identified as having a high effectiveness index by residents (REI = 3.80). Furthermore, these two security agencies had a rating higher than the mean value (3.65). Hence, they have a positive mean deviation value of 0.20 and 0.15 respectively. This indicates that the security agencies of vigilante/neighbourhood watch and local government officers are effective against crime. Conversely, the security agencies of Nigeria Security and Civil Defence Corps (REI = 3.68) and police (REI = 3.26) had a mean deviation value less than the mean value. Hence, they are rated low by residents in terms of their effectiveness against crime.

CONCLUSION

Based on the effectiveness of security agencies across the residential neighbourhoods, the responses gathered showed that the use of Vigilante/Neighbourhood Watch and Nigeria Security and Civil Defence Corps was the most effective with an REI of 4.02 and 3.78, followed by police with an REI of 3.39, and local government officers with a REI of 3.22. In other words, neighbourhoods should be encouraged to have vigilantes, or in most cases, coordinate their young men to be on night watch for security purposes. Furthermore, the government should deploy its trained security agencies, such as the Nigerian Civil Defence Corps, in order to assist residents in mitigating the occurrences of crime and violence.

To mitigate these effects of crime in Enugu metropolis, a community based approach to urban crime and violence is seen as the solution. Several authors agree with this approach, they include Echezue & Patrick, (2022), Ijah & Patrick, (2019), and Mathéy & Matuk, (2014).

RECOMMENDATION

This study offers the following recommendations to combat crime in the Enugu metropolis

Initiation of organised vigilante groups

Neighbourhood associations such as landlords and other community development associations should be encouraged by the government to be more security conscious and should deliberate and agree on modalities of operating an organised vigilante group. Such groups should be totally and wholly domiciled in the local neighbourhood. With little or no influence from external parties, apart from being seen as partners with the government in solving problems of crime and violence. This recommendation is in tandem with the works of Jack-Rabin et al., (2023) and Akinlabi & Ihemeje, (2021)

Social mix of houses

Certain residential neighbourhoods in Enugu have frequent daytime desolation, while others exhibit significant nighttime tranquility. This is likely a result of housing segregation. Promoting a diverse composition of residences is advised. This initiative aims to sustain the vitality of local areas by fostering activities that ensure their vibrancy both during daytime and nighttime. These operations may involve the creation of facilities such as educational institutions, theatres, and housing in abandoned locations, among other possibilities. Additionally, it is advisable to motivate owners of vacant buildings to refurbish, finalise, and inhabit their homes within a specified timeframe. Government entities responsible for urban development should prioritise comprehensive development that fosters a crime-free and violence-free environment. The efficacy of this approach is validated by Zahnow, (2018) and MacDonald, (2015).

Security consciousness and enlightenment campaigns

Often, residents are unaware of the security issues around them; hence, they fall victim to criminal and violent activities. Hence, it is important that relevant security agencies, such as the police and some Non-Governmental Organizations interact in security matters, organise regular security campaigns that could enhance security consciousness among residents, and inform them of the security happenings around them. Such campaigns would go a long way towards increasing residents' consciousness of their security environment and their confidence in the security agencies. A similar recommendation is made by Signé, (2018) and Omemu, (2015).

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