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Intra-Urban Variation in Residents' Responses to Crime in Ile-Ife, Nigeria

Adewumi Israel Badiora[1*]

[1]*Department of Urban and Regional Planning, Joseph Ayo Babalola University, Ikeji-Arakeji, Nigeria.*

Author's contribution

All work on this manuscript was completed by the sole author who name appeared on the title page.

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ABSTRACT

Aim: This study examined spatial pattern of crime and residents' response to criminal activities in different residential areas of Ile-Ife, Nigeria.
Methodology: Data were obtained through the stratification of the study area into the traditional town centre, middle income, high income and post crisis residential areas. One out of every five street (20%) was randomly selected. Every tenth building (10%) was selected using systematic sampling.
Results: Crime Rate of Occurrence Index (CROI) in the identified residential areas showed that store breaking with index of 3.44 was the most prevalent crime in the traditional town centre. House breaking was the most prevalent crime in the middle income (CROI=4.24) as well as the high income (CROI=3.96) residential areas while attempted rape (CROI= 3.34) was the major challenge in post crisis residential area. Residents' responses to criminal activities through various means showed that burglary proofing accounted for 11.3% and 12.8% of all the residents' responses to crime in the middle and high income residential areas of the town. Fencing accounted for 7.5% of residents' responses to crime in the traditional town centre and 8.9%, 11.7% and 8.2% of residents' crime coping mechanism respectively in middle income, high income and post crisis residential areas. Alarm system and surveillance respectively accounted for 0.4% and 3.0% of neighborhoods security measures in the high income residential area.
Conclusion: The study concluded residents' responses to criminal activities varied along the different residential areas as the prevalent crime differ significantly in their rate of occurrence in the different residential zones.

**Corresponding author: E-mail: wumi_zion@yahoo.com;*

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1. INTRODUCTION

The creation of safety and security through diverse means is one of the very prime norms of an ideal society with good governance. Security is very crucial to the actualization of the conditions for the inclusive city [1,2]. This is because every citizen has right to life, liberty and security. Thus, safety from crime, violence at home, on the streets, in the general environment and observed and perceived feeling of security are viewed as uncompromising products of good governance. In Nigeria for instance, the menace of destitute on streets across the cities is already a social problem to the government and the general public [3]. Criminal activities are assuming dangerous tendencies as they threaten life, property, the national sense of well-being, peace, security, social order and are eventually, reducing the citizens' quality of life [1].

It has been observed that, as the nation-Nigeria becomes increasingly urbanized, the traditional structures and value system that once served as buffer and against criminal behavior have been severely undermined [1]. This has made criminal activities to become popular and there is no part of the life and aspect of the economy that are not affected in this criminal scourge [4]. Therefore, in order to form impressions of a neighbourhood and dwelling's security with a scene of less vulnerability to crime in the country, residents employ visible clues. These visible clues are based on ideas expressed by [5,6]. These spatial planners ascertained that certain features of physical settings, such as indicators of territory and surveillance opportunities like burglary, fencing, and lighting and so on can reduce crime. Newman proposed that residents and/or environmental designers can strategically use these features to defend an area against crime and can also manipulate these to make crime less appealing to perpetrators. It is the residents' responses to crime through the use of these features of physical settings that this paper discussed using Ile-Ife, Nigeria as a case study.

1.1 Literature Review

In the literature, three approaches to crime prevention are identified. These include crime Justice System, Crime Prevention through Social Development and Crime Prevention through Environmental Design. This review shall focus on Crime Prevention through Environment Design.

The approach (CPTED) was originally coined and formulated by criminologist C. Ray Jeffery. Crime prevention through environmental design (CPTED) is a multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts. CPTED is basically concerned with the manipulation of the physical environment in order to deter crime; it is not intended to create an impregnable fortress, but merely to make penetration more difficult and time consuming [7]. At the forefront of this approach is Jacobs [5] who put forward the notion that the physical environment and criminal behaviour were related in an architectural context. Jacobs noted that streets with higher accessibility to the public could attract more eyes from the buildings to the street and this mechanism of natural surveillance can work effectively against crime [5].

Jacobs believes that the development of activity areas within the city, such as commercial, industrial, financial, educational among others have led to the reduction of surveillance of

streets and other public areas and consequently, the reduction of community cohesion and the feeling of territoriality. This brought about the classic statement “Streets with eyes are safe streets”. Similar to the conceptual framework of Jacobs, Hiller argues that "intelligible deformed grid" and "constituted outward facing block" are the main features of spatial configurations that protect areas from crime [8]. Contrary to the position of a territoriality based defensible space system advised by Newman and Poyner who deem passers-by as potential offenders who should be expelled from residential areas, Hillier considers passing strangers often generated by the intelligible through street system as beneficial elements who can in effect protect streets from crime incidences whereas strong inter-visibility of the immediate surroundings of each dwelling within those constituted outward facing blocks allows residents to guard the strangers. It is exactly this mechanism of "strangers protect the streets and residents watch the strangers" which echoes the function of natural surveillance observed by Jacobs in traditional through street patterns and which makes dwelling environments work against crimes.

Following Jacobs, [9] studied the city of Oakland, California. His findings are that crime takes place in areas where the intensity of the pedestrian use of street is at a critical level. He further argues that when pedestrian density is low, there will be virtually no crime, as not enough potential victims are present and the likelihood of rewarding opportunity is small. At this low intensity of use, the neighborhood is safe. As intensity of use increase, enough potential victims are on the scene to warrant the attention of potential offenders; this situation becomes an attractive crime opportunity because adequate surveillance is generally absent. This is the critical intensity zone, where most crimes take place. When intensity increases further and the street or section becomes populated, the street becomes safe again. Jacobs and Angel argued that surveillance is a solution to the intrusion of criminals into residential buildings.

The road types, the dwellings' front door to front door inter-visibility and the degrees of road accessibility all have a highly measurable influence on burglary distribution [10]. Among the three influencing factors, the degrees of inter-visibility exhibit the strongest influence on burglary distribution patterns. In the mean time, the types of street use and the degrees of road accessibility also play an important role in influencing the crime distributions. Segregated areas allowing fewer passers-by entering the areas turn out to be more vulnerable than integrated ones where one finds more pedestrians and vehicle flow. Particularly segregated streets turn out to be extremely vulnerable when combined with low inter-visibility in the areas whereas integrated streets with higher accessibility can be very safe from crime when associated with good inter-visibility. Shu’s research of Taiwan and United Kingdom confirms that more strangers or passers-by in highly accessible streets with strong inter-visibility can be beneficial as crime prevention strategies due to the mechanisms of informal (natural) surveillance generated naturally in these areas.

[11] used the concept of 'territoriality' as basis of his defensible space model. The concept of defensible space suggests that territorial ownership, natural surveillance, image and milieu, and functional location are measures which can be used to mitigate residential crime in urban areas. In his theory, anonymous streets where more strangers appear are considered more vulnerable than dead end cul-de-sacs where strong local inter-visibility in an enclosed area can increase a well defined neighborhood to deter any intrusion of strangers, thus spatial control by local inhabitants is the key to prevent area from crime [6,11]. Hillier viewed this as a positive feature to deter offenders whereas for Newman and Poyner the defensible function of cul-de-sac carriageway which can work efficiently to exclude all possible strangers hence should be better than the through system.

In spite of the different viewpoints of spatial layout on protection from crime, [12] suggested the defensible space patterns provided by Newman as the fundamental system to make areas less vulnerable to crime, especially for residential burglary. Moreover, the scheme of "Secured by Design" advocated by the British Home Office though has long been influenced by Newman's ideology of defensible space patterns, has also noted the controversial findings from Hillier and others [13].

Some CPTED approaches to crime prevention tend to focus on the distance travelled by different criminals to reach their targets. Notable among these are those of Davidson in [14]. Davidson, in his study of residential burglary in Christchurch, New Zealand, sheds light on the travel pattern of burglars. In his words, burglars are opportunists and prefer to commit their offence within a short distance of the location of their activities. He cited the example of England where 54 per cent of breaking-in offences occurred within one mile of the offenders' residence. Davidson concludes that 'if burglars are so opportunistic, increased police patrols are unlikely to do more than displace the event to another place or time'. He then recommended foreclosure of opportunities through Target hardening.

Presenting the spatial pattern of crime in selected cities, [14] using published crime statistics observed pattern that the new techniques of burglary could be likened to that of 'smash and grab' in which the offender 'like a thief in the night' comes in, grabs whatever he wants and goes. With this smash and grab technique, Harries posited, the criminal operates on the assumption that his intrusion time (Ti) would be short enough to ensure escape by the time the police arrive. The Ti factor and the time of police arrival are intercorrelated and also closely related to the micro-environment. To control crime, therefore, Harris suggests that the Ti factor could be lengthened through Target Hardening and various environmental design and security strategies. His response to the problem of crime in our society has occurred in different manners [15]. One of these is fear of burglary syndrome for which Mukoro proposed a new concept geared towards regulating movement patterns, providing space that engenders social cohesion and enhances surveillance. The views held by [5,16,17] emphasize the need for surveillance and a community approach to crime prevention which is different than the personal approach of target hardening.

1.2 The study Area: An Overview

Ile-Ife is predominantly a Yoruba speaking city. The city is situated in the south western part of Nigeria (Figs. 1 and 2). It lies between Latitude 7º15ºN, 7º31ºN and Longitude 4º43ºE, 4º45ºE. Ile-Ife is built around a permanent traditional community with the phenomenon of urban ghetto apparent in the inner city. Consequently, the social divisions are exacerbated by the spatial distribution of separate social groups. Ile-Ife still remains the traditional characteristics of homogeneity, communal land tenure, close kinship and family ties as well as primary group relationship. There has been an incremental growth in the population of Ile-Ife. A town of 92862 people in 1963 (Population Censure Figure) and 178 409 in 1991 (Population Censure Figure) grew to over 480,000 people in 2006 (Population Censure Figure). With the population growth, physical and political expansion, development possibilities as well as urban problems of various form and in varied complexities started. One of these urban problems is crime. A town with crime rate of 1.2% (Police Statistics) in 2000 increased to 2.5% in 2010 (Police Statistics). Furthermore, Ile-Ife recently experience communal crisis (Ife-Modakeke crisis) and criminal activities and delinquent behaviour had always been the characteristics of a post crisis town. All these made the study of criminal activities as it relates to physical, social and economic of Ile-Ife inevitable.

Ile-Ife like other traditional urban centres in Yoruba land is known to have been in existence before the advent of colonialism. The town was built with security wall surrounding it in the early part of the origin. However, developmental activities in Ile-Ife brought about growth outside the city wall and the growth outside the town wall then produced two cities in one: the traditional and the modern city. the combination of these two parts in such Nigerian city revealed three contrasting residential zones linked to three historical periods [17]. These are the pre-colonial development, the zone between pre-colonial and post independent residential development and the post independent development. The pre-colonial development in any African city with long historical origin is the traditional town centre of the city. It could also be referred to as the core while the second is the intermediate or transition zone and the third is sub-urban [18]. Each of these zones is observed to be internally homogenous in terms of physical layout, socio-economic status and environmental amenities available among others and respectively associated with low, medium and high quality residential areas [18].

Traditional Yoruba cities in Nigeria where these zones are identifiable include: Ilorin [20]; Ibadan [19]; and Ogbomosho [18]. Similarly, this particular pattern was also observed in Ile-Ife. They were respectively referred to in this study as the traditional town centre, areas with layout development (middle income residential area) and high income area (Fig. 3). Another physical setting observed in Ile-Ife for the purpose of this study was the post crisis residential area (Fig. 3). This emerged as the communal crisis (Ife-Modakeke crisis).

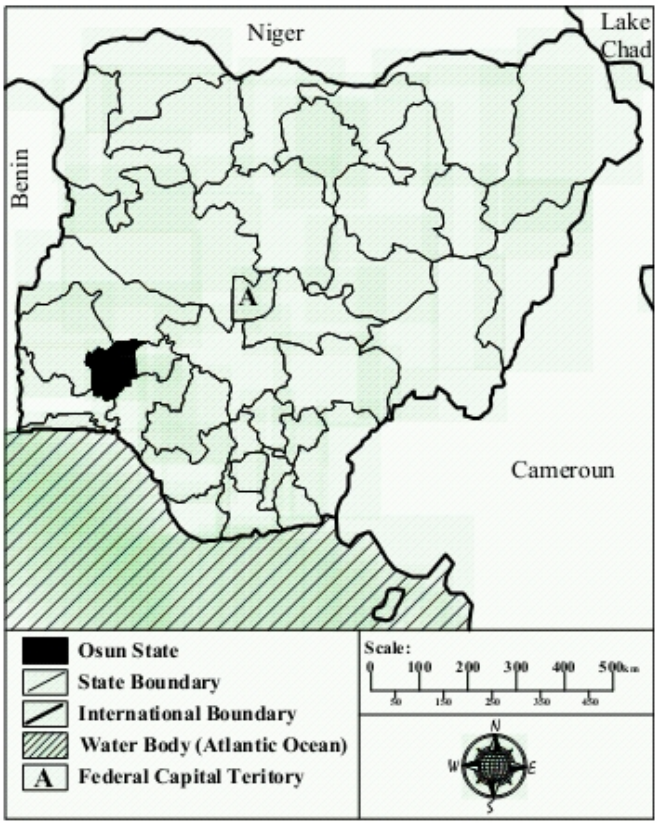

Fig. 1. Map of Nigeria indicating Osun State the study area

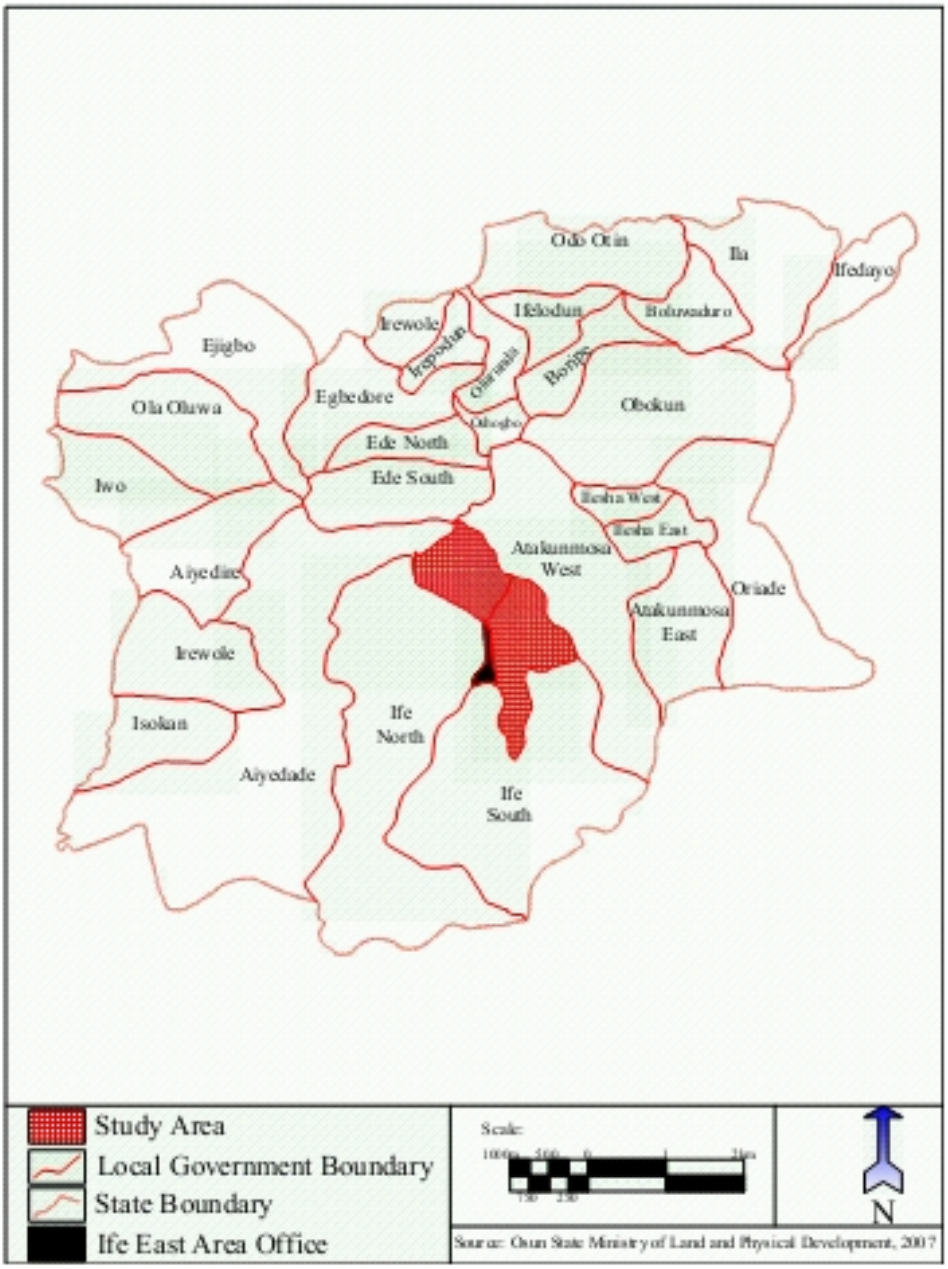

Fig. 2. Map of Osun indicating the Study area

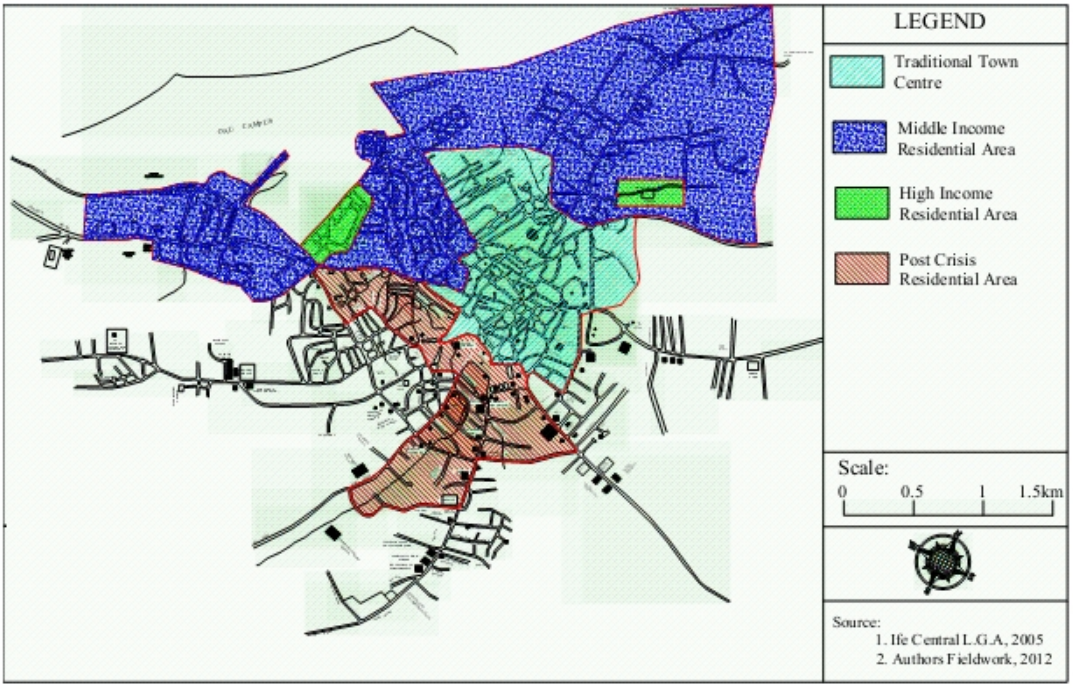

Fig. 3. Map indicating residential pattern in Ile-Ife

Sources (Figs. 1, 2 and 3): Ife Central Local Government area, Osun-State and updated by author.

2. METHODOLOGIES

2.1 Data Collection and Analysis

Data for this study were obtained from both primary and secondary sources. Primary data were obtained through the stratification of the study area into the traditional town centre, middle income, high income and post crisis residential areas. A total of 343 streets were identified from the identified residential areas comprising 83, 147, 41 and 72 respectively. One out of every five street (20%) in each residential stratum was randomly selected without replacement. From the selected streets, a total of 3097 buildings were identified comprising 873, 1386, 294 and 544 building units respectively in the four areas. Every tenth building (10%) was selected using systematic sampling. Questionnaire was administered on household head on each floor of the selected buildings. A total of 357 questionnaires were administered and 334 were retrieved and analyzed.

This study investigated the rate of occurrence of criminal activities in Ile-Ife from the perception of the residents. To determine this, residents were provided with a list of crime identified in the literature. They were further instructed to indicate the rate of occurrence of each of the identified crime type. Residents were to express their opinion using one of five Likert scales of 'very frequent' (VF), 'frequent' (F), 'just frequent' (JF), 'not frequent' (NF) and 'not at all frequent' (NAF).

The analyses of the ratings indicated by the residents from the Likert's scales adopted evolved into an index called "Crime Rate of Occurrence Index" (CROI). To arrive at CROI,

weight value of 5,4,3,2 and 1 were respectively attached to 'very frequent' (VF), 'frequent' (F), 'just frequent' (JF), 'not frequent' (NF) and 'not at all frequent' (NAF). The index for each type of crime was arrived by dividing the Summation of Weight Value (SWV) by the total number of responses.

The SWV for each type was obtained through the addition of the product of the number of responses to each type and the respective weight value attached to each rating.

This is mathematically express as

$$\mathrm{SWV} = \sum_{i=1}^{5} x_i y_i \quad \ldots\ldots (1)$$

Where:

SWV = Summation of Weight value;
x_i = number of respondents to rating i;
y_i =the weight assigned to a value (i=1, 2, 3, 4, 5).

The index for each identified crime type thus takes a value of between 5 and 1. The nearer the value to 5, the higher is the occurrence that residents attached to such crime type under consideration.

$$\boldsymbol{CROI} = \frac{\boldsymbol{SWV}}{\sum \boldsymbol{x_i}} \quad \ldots\ldots (2)$$

The mean index for each of the residential area and that of Ile-Ife were computed. This was obtained by summing the indices of all crime types and dividing by the number of the identified crime types (n=32). The mean index of traditional town centre, middle income residential areas, high income residential areas and post crisis residential areas were denoted respectively by $CROI_a$, $CROI_b$, $CROI_c$ and $CROI_d$ while that of Ile-Ife was denoted by $CROI_e$. Findings are as presented in the Table 1.

2.2 Research Findings

The research findings are discoursed under the various headings below. Unless otherwise stated, the tables through which information are summarized are the products of the survey carried out by the author between October, 2011 to February, 2012.

2.3 Types and Rate of Occurrence of Criminal Activities in Ile- Ife

It was evident from the Table 1 that those crime types perceived to have higher rate of occurrence in the traditional town centre included store breaking, house breaking, stealing and pilfering, breach of public peace, child abuse and vehicle theft. Other included sexual harassment, false pretences cheating, child abandonment, burglary, attempted rape, pick pocketing, impersonation, vehicle hijacking, robbery, prostitution robbery and receiving stolen properties. All these crime types had their rate of occurrence index higher than $CROI_a$. The average crime rate occurrence index ($CROI_a$) for traditional town centre was

2.41. The five most occurring crime types in the traditional town centre included store breaking, house breaking, stealing, and breach of public peace as well as child abuse.

The CROI of each of these crimes were 3.44 for store breaking, 3.27 each for both house breaking and stealing. Breach of public peace had CROI=2.96 while the index for both child abuse and vehicle theft was 2.91each. Sexual harassment had CROI=2.81. Hence, store breaking was the major challenge in this part of the town. Slave dealing was perceived as the least occurring types of crime identified in this area. The C*ROI* of this crime type was put at 1.56.

Those crimes perceived to have higher magnitude of occurrence in the middle income residential areas included house breaking, burglary, store breaking, vehicle theft, stealing and pilfering, robbery and internet scam. Others were drug offences, breach of public peace, sexual harassment, attempted rape, unlawful possession, rape, false pretences cheating, prostitution and pick pocketing. All these crime types had their CROI above the average ($CROI_b$) for this area. The $CROI_b$ was 2.40. Residents were of the opinion that house breaking, burglary, store breaking, vehicle theft as well as stealing and pilfering were the five most challenging criminal activities in the middle income residential areas of the town. It was noted that all these crime types were crime against properties. The rate of occurrence indices computed for these crimes were 4.24, 4.09, 3.81, 3.74 and 3.45 respectively. The findings revealed house breaking as the major challenge in this part of the town. Residents perceived that manslaughter was the least occurring types of crime identified in the study area. The index of this crime type was 1.35.

The average crime rate of occurrence index ($CROI_c$) was 2.35. Crime types such as house breaking, store breaking, burglary, vehicle theft robbery, rape, false pretences cheating and sexual harassment all had their CROI above $CROI_c$. Others included vehicle hijacking, stealing and pilfering, attempted rape, internet scam, prostitution, child abuse, impersonation and pick pocketing. All these are likely to have higher magnitude of threat in the high income residential areas. Residents perceived that the five frequently occurring crime in this part of the town included house breaking, store breaking, burglary, vehicle theft and robbery. An index of 3.96 was computed for house breaking while store breaking had index of 3.88. While the occurrence index of burglary was put at 3.85, vehicle theft and robbery had rate of occurrence indices of 3.79 and 3.38 respectively. As obtainable in the middle income residential area, the findings also revealed house breaking as the major challenge in this part of the town. House breaking involves the use of physical force to gain access to, and entering, a house with intent to commit a felony inside especially in the day time.

The average crime rate of occurrence ($CROI_d$) index was 2.77. With an index of 3.34, attempted rape was perceived to be the major challenge in post crisis residential area. This may accrued to the fact that this area has a generally low reputation with large number of youngsters, gangsters and houses a large number of school dropout. It recorded the highest level of drug abuse (CROI=2.78) when compared with other residential areas. Drug use and alcohol have been shown to play a disuniting role in sexual assaults. Other crime types which constitute major challenge included breach of public peace, house breaking, and sexual harassment, pick pocketing, stealing and pilfering, child abuse, store breaking, drug offences, prostitution and burglary. Others were robbery, internet scam, and unlawful possession, child abandonment, receiving stolen properties, impersonation and assassination. Residents were of the opinion that suicide was the least occurring types of crime in the area. The mean deviation of this crime type was -0.85.

Table 1. Types and rate of occurrence of criminal activities different residential areas

Traditional town centre		Middle income residential area		High income residential area		Post crisis residential area		Ile-Ife township	
Crime related activities	CROI	Crime related activities	CROI	Crime related activities	CROI	Crime related activities	CROI	Crime related activities	CROI
Store Breaking	3.44	House Breaking	4.24	House Breaking	3.96	Attempted Rape	3.34	Store Breaking	3.25
House Breaking	3.27	Burglary	4.09	Store Breaking	3.88	Breach of Public Peace	3.33	House Breaking	3.14
Stealing and Pilfering	3.27	Store Breaking	3.81	Burglary	3.85	House Breaking	3.27	Burglary	3.05
Breach of Public Peace	2.96	Vehicle Theft	3.74	Vehicle Theft	3.79	Sexual harassment	3.27	Vehicle Theft	3.03
Child Abuse	2.91	Stealing and Pilfering	3.47	Robbery	3.38	Pick pocketing	3.25	Stealing and Pilfering	2.92
Vehicle Theft	2.91	Robbery	3.42	Rape	2.77	Stealing and Pilfering	3.23	Robbery	2.81
Sexual harassment	2.89	Internet Scam	2.99	False Pretences Cheating	2.67	Child Abuse	3.20	Sexual harassment	2.63
False Pretences Cheating	2.88	Drug offences	2.81	Sexual harassment	2.65	Store Breaking	3.14	Breach of Public Peace	2.61
Child Abandonment	2.88	Breach of Public Peace	2.76	Vehicle hijacking	2.56	Drug offences	3.06	Attempted Rape	2.6
Burglary	2.83	Sexual harassment	2.69	Stealing and Pilfering	2.50	Prostitution	3.05	Internet Scam	2.49
Attempted Rape	2.83	Attempted Rape	2.67	Attempted Rape	2.50	Burglary	3.02	False Pretences Cheating	2.48
Pick pocketing	2.77	Unlawful Possession	2.64	Internet Scam	2.48	Robbery	2.97	Pick pocketing	2.48
Impersonation	2.56	Rape	2.63	Prostitution	2.42	Internet Scam	2.97	Unlawful Possession	2.4
Vehicle hijacking	2.54	False Pretences Cheating	2.57	Child Abuse	2.40	Unlawful Possession	2.95	Prostitution	2.39
Robbery	2.51	Prostitution	2.50	Impersonation	2.40	Child Abandonment	2.92	Rape	2.35

Table 1 continued……

Prostitution	2.49	Pick pocketing	2.41	Pick pocketing	2.31	Receiving Stolen Property	2.89	Drug offences	2.32
Receiving Stolen Property	2.44	Vehicle hijacking	2.39	Breach of Public Peace	2.29	Impersonation	2.88	Vehicle hijacking	2.31
Internet Scam	2.41	Receiving Stolen Property	2.27	Drug offences	2.23	Assassination	2.84	Child Abandonment	2.27
Rape	2.29	Murder	1.24	Kidnapping	2.19	Rape	2.69	Impersonation	2.25
Manslaughter	2.23	Cultic and related harms	2.14	Unlawful Possession	2.19	False Pretences Cheating	2.70	Receiving Stolen Property	2.25
Drug offences	2.09	Child Abuse	2.01	Cultic and related harms	2.15	Vehicle Theft	2.73	Cultic and related harms	2.04
Unlawful Possession	2.02	Impersonation	1.98	Child Abandonment	2.08	Arson	2.73	Kidnapping	1.93
Arson	1.94	Child Abandonment	1.89	Receiving Stolen Property	1.90	Cultic and related harms	2.75	Arson	1.9
Kidnapping	1.93	Arson	1.79	Assassination	1.79	Slave Dealing	1.77	Assassination	1.9
Cultic and related harms	1.90	Child stealing	1.79	Suicide	1.65	Murder	2.03	Child stealing	1.7
Assassination	1.85	Kidnapping	1.70	Slave Dealing	1.58	Kidnapping	2.63	Child Abuse	1.69
Child stealing	1.82	Assassination	1.67	Attempted suicide	1.54	Vehicle hijacking	2.59	Attempted suicide	1.68
Attempted suicide	1.80	Slave Dealing	1.58	Arson	1.54	Attempted suicide	2.39	Suicide	1.58
Murder	1.62	Attempted suicide	1.36	Attempted murder	1.46	Attempted murder	2.25	Attempted murder	1.56
Attempted murder	1.62	Attempted murder	1.28	Child stealing	1.42	Child stealing	2.05	Slave Dealing	1.55
Suicide	1.56	Manslaughter	1.25	Murder	1.42	Manslaughter	1.95	Murder	1.51
Slave Dealing	1.56	Suicide	1.19	Manslaughter	1.35	Suicide	1.92	Manslaughter	1.44

The average crime rate of occurrence index ($CROI_e$) for the study area was 2.27. Residents also perceived that the five most occurring crime types in Ile-Ife were store breaking, house breaking, burglary, vehicle theft and stealing. An index of 3.25 was computed for store breaking, 3.14 for house breaking while 3.05, 3.03 and 2.92 were respectively for burglary, vehicle theft and stealing. The peculiarity of this is that, they are all crime against properties. Store breaking was further established as the most occurring crime in the town while manslaughter was the least occurring types of crime in the study area. This study established therefore that average rate of occurrence index decreases as distance increases from traditional town centre to middle income area and towards the low income residential area.

2.4 Crime Coping Mechanism in Ile-Ife

In this section, residents' reactions to criminal activities through various means ranging from individual houses to neighborhood measures were examined. The findings were presented in Tables 2 and 3. Presented in Table 2 were findings in respect with individual houses coping strategies while 3 presented summary of neighborhood or joint responses to the fear of crime in different residential areas of Ile-Ife. The most widely used individual houses coping strategies was lighting (Table 2). This response accounted for 15.3% of the crime coping mechanisms used by residents. It however accounted for 24.6% of residents' responses to the fear of crime in the traditional town centre and 14.3%, 15.7% and 11% of residents' crime coping mechanism respectively in middle income, high income and post crisis residential areas. Therefore, many households appeared to attach importance to lighting to illuminate their surroundings and exposed intruders approaching their dwelling in the night. Some of the lighting system observed in the course of the survey ranges from electric bulb, fluorescent tubes, floodlights and searchlights.

Next to lighting was burglary proofing. This accounted for 12.6% of the crime coping mechanisms in Ile-Ife. Burglary proofing was observed to be installed on windows and doors. However, burglary proofing was a major feature in the middle and high income residential areas of the town. It respectively accounted for 11.3% and 12.8% of the residents' responses to fear of crime in these areas. Fencing accounted for 7.5% of residents' responses to the fear of crime in the traditional town centre and 8.9%, 11.7% and 8.2% of residents' crime coping mechanism respectively in middle income, high income and post crisis residential areas.

It was further discovered that fencing was predominantly used in middle income and high income residential areas. Most houses in the traditional town centre were not fenced except few modern houses that were scattered within the area. Considering fencing as observed in the study area, it was evident that the general appearance of most of the buildings in middle income and high income residential area was that of fortresses. A cursory look of Table 3 gave an insight that strong assertion of territoriality were made through the building of fences in middle income and high income residential areas of the town. In the course of the survey, observation report indicated that houses with concrete fences were the most common.

Materials on the fence wall such as razor wire, broken bottles and iron bars were also notable crime coping strategies in the residential areas of Ile-Ife. It took account of 5.6% of crime coping mechanisms used by residents. It was however a common feature of fences in the middle income and high income residential areas of the town. It respectively accounted for 6.9% each of residents' crime coping mechanisms in these areas. This strategy took account of only 1.3% of residents' response to the fear of crime in traditional town centre.

This was because (except a very few modern buildings) most of the houses in this part of the town were not fenced. It was also noticeable in the post crisis residential areas of the town.

Insurance scheme accounted for 8.15% of the residents' responses to fear of crime in the entire Ile-Ife. It was further observed to be predominantly used in the high income residential areas of the town having accounted for 11% of the total residents' responses to the fear of crime in this part of the town. This strategy was least used in the traditional town centre when compared with other residential areas of the town. It accounted for 6.1% of residents responses to the fear of crime in this area. This was accrued to the fact that insurance scheme is a crime coping strategy used by the educated [7]. The socio-economic profile of residents of Ile-Ife revealed that a very few residents with higher educational status reside in the traditional town centre. Equally important measure was the use of human security guide. This accounted for 5.3% of residents' response to the fear of crime in Ile-Ife. However, this particular strategy was very common in the middle income residential area of the town having accounted for 7.7% of the total residents' responses to the fear of crime in this part of the town. This strategy is particularly important as human security measure sometimes combine human judgment, skill and wisdom with sophisticated security equipment such as cutlasses and firearms to deter criminal activities.

The use of security dogs was also noticed in some individual houses in the town as approximately one out of every twenty-five household had a guard dog in their houses. Furthermore, alarm system, surveillance (the use of closed circuit television system to watch surroundings) and security camera were not very common among the household. These strategies respectively accounted for 3.8%, 2.5% and 3.1% of the crime coping mechanisms used by residents of Ile-Ife. Because of the cost of installation, these strategies were mainly used in middle income and high income residential areas. For instance, while only 2.9% of crime coping mechanisms in the post crisis residential area were burglar alarm system, it was 5.6% and 6.3% of residents' responses to the fear of crime in middle and high income residential areas respectively. This was not used at all in the traditional town centre. Similarly, security camera was also not used at all in the traditional town centre. However, surveillances were observed in all the identified residential areas but more pronounced in the high income residential areas of the town.

A fewer household rely on African traditional methods (Juju) as a guide against criminal treat. This particular type of coping strategy was predominantly used in traditional town centre and post crisis residential areas of the town. It respectively accounted for 4.47% and 4.29% of residents' responses to the fear of crime in these areas. It should be noted at this juncture that more comprehensive security transcends individual houses. The issue of security of residential buildings is not limited to the individual dwellings alone.

Table 2. Security and defense characteristics of individual housing

House safety strategy	Traditional town centre		Middle income residential area		High income residential area		Post crisis residential area		Ile-Ife township	Percentage (%)
	freq	%	Freq	%	freq	%	freq	%	freq	%
Insurance scheme	22	7.03	84	8.60	34	11.11	30	6.13	170	8.15
Burglary Proof	62	9.81	110	11.26	39	12.75	52	10.63	263	12.61
Fencing	39	7.46	87	8.91	34	11.11	49	8.02	209	10.02
Razor Wire/Broken Bottles and Iron bars	4	1.28	67	6.86	12	6.92	34	6.95	117	5.61
Alarm System	00	00	55	5.63	9	6.34	31	2.94	95	4.55
Self Guide	00	00	7	0.72	2	0.65	29	5.93	38	1.82
Gun	00	00	16	1.64	2	0.65	16	3.27	34	1.63
Security Dog	7	2.2	42	4.30	6	1.96	27	5.52	82	3.93
Cutlass/axe/stick	18	5.75	45	4.61	1	0.33	30	6.13	94	4.51
Human Guide	4	1.28	70	7.17	9	2.94	28	5.73	111	5.32
African Traditional(charms)	14	4.47	5	0.51	4	1.31	21	4.29	44	2.11
Faith(Religion)	58	18.53	121	12.39	38	12.42	33	6.75	250	11.99
Security Camera	00	00	37	3.79	12	3.92	15	3.07	65	3.11
Special Security Door Lock	00	00	32	3.26	18	5.88	13	2.66	63	3.02
Surveillances	7	0.92	19	4.92	29	9.48	7	1.43	52	2.49
Lighting	77	24.60	140	14.32	48	15.69	54	11.04	319	15.29
Total	313	100.0	977	100.0	306	100.0	489	100.0	2086	100.0

Higher than the total survey because of multiple response

Tools put into place to discourage crime perpetrators from intruding in the neighborhood include securities facilities provided to make things difficult for crime perpetrators to intrude into the neighborhood. These security strategies were considered. From the summary presented in Table 3, it was evident that 4.64% of neighborhood crime coping mechanism was the use of bumps on the street. This strategy was common feature of the streets in middle income, high income and the post crisis residential areas. It accounted for 5.5% of the total neighborhoods responses recorded in middle income residential areas, 5.6% each in high income and post crisis residential areas of the town. However, while bumps can help slow down the speed of criminals, it should be effective against vehicle hijacking. Only a few streets have security check points and street gate.

Security check points accounted for 5.3% while the use of street gate accounted for 6.52% of the residents joint coping mechanisms in Ile-Ife. These strategies were common features of streets in the high and middle income residential areas of the town. Similarly, only a very few streets had a warning signs in the town. These streets were mostly found in middle income and high income residential areas of the town.

There is no doubt about the fact that an environment/street not well illuminated will be attractive to criminals. The use of street light accounted for 18.0% of neighbouhood responses to fear of crime in the traditional town centre, 11.8%, 11.9% and 13.2% of neighbouhood crime coping mechanisms respectively in middle income, high income and post crisis residential areas. It was evident therefore that street light was mainly used in the traditional town centre and post crisis residential areas of the town. It was also observed that street lights were strategically positioned in some areas in the post crisis residential area in order to make criminal activities less attractive.

It was established that the most widely used of neighbouhood strategies was vigilante group. This particular strategy accounted for 16.1% of joint residents' responses to the fear of crime in Ile-Ife. The use of vigilante group accounted for 21.6% of neighbouhood responses in the traditional town centre, 14.9%, 9.3% and 18.5% of neighbouhood crime coping mechanisms respectively in middle income, high income and post crisis residential areas. The study therefore established that neighborhood security facilities were jointly provided in all the four identified residential areas of the town. .

A considerable numbers of streets in the middle income areas and traditional town centre had night watchmen (Human Guide) to keep vigil on the street. Equally important measure was the use of police patrol which accounted for 9.2% of crime coping mechanisms the study area. This is particularly important as police officers use sophisticated firearms to deter criminals. Security measures such as alarm system and surveillance were mostly found in the high income residential areas. These mechanisms respectively accounted for 0.4% and 3.0% of neighborhoods security measures in the high income residential area.

It was therefore discovered that different housing and neighborhood strategies were used at varying proportion in different residential areas identified. In order to validate this, Chi-square values for these strategies was computed. This is presented in Table 4.

Table 3. Security and defense characteristics in neighbourhood

Street/ Neighbouhood safety strategy	Traditional town centre		Middle income residential area		High income residential area		Post crisis residential area		Ile-Ife township	Percentage (%)
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Police Post/Patrol	46	12.57	39	5.24	31	11.52	41	12.55	157	9.22
Vigilante Group	79	21.58	111	14.92	25	9.29	59	18.50	274	16.09
Street Gate	7	1.91	67	9.01	11	4.09	26	8.15	111	6.52
Human Guard	70	19.13	86	11.56	39	14.50	37	11.60	232	13.62
Road Bumps	5	1.37	41	5.51	15	5.58	18	5.64	79	4.64
Guide Dog	0	0.00	0	0.00	1	0.37	0	0.00	1	0.06
Alarm System	0	0.00	0	0.00	1	0.37	0	0.00	1	0.06
Street Lighting	66	18.03	88	11.83	32	11.90	42	13.17	228	13.39
Military Personnel	1	0.27	7	0.94	3	1.12	10	3.13	21	1.23
Restriction of Vehicular Movement	38	10.38	82	11.02	35	13.01	31	9.72	186	10.92
Restriction of human Movement	41	11.20	115	15.46	41	15.24	33	10.35	230	13.51
Closed Circuit Television	1	0.27	16	2.15	8	2.97	2	0.63	27	1.58
Warning Signs	1	0.27	44	5.91	10	3.72	6	1.88	61	3.58
Security Check Point	11	3.01	48	6.45	17	6.32	14	4.39	90	5.28
Total	366	100.0	744	100.0	269	100.0	319	100.0	1703	100

Higher than the total survey because of multiple response

Table 4. Chi-square test of significant differences in residents' responses

S/N	Safety strategies	Pearson chi-square	Degree of freedom (df)	Assumption significant
1	Security and defense characteristics of individual housing	290.134	3	0.000
2	Security and defense characteristics in neighborhood	124.559	3	0.001

It was therefore discovered that significant variation exist in the used of these strategies. This was confirmed for security and defense characteristics of individual housing at X^2= 290.134 while for security and defense characteristics in neighborhood, X^2= 125.559. These were significant at p=0.000 and 0.001 respectively.

3. CONCLUSION AND RECOMMENDATIONS

Conclusively, there was a significant difference in residents' response to criminal activities as the prevalent crime in different residential zones varies along the different residential areas of Ile-Ife. However, from the major findings summarized above, the following recommendations are made to prevent crime in Ile-Ife.

Residents should be more security conscious by installing special security door lock in their individual houses. Strategies to reduce crime in Ile-Ife must also be anchored on a policy framework that is tailored to address the physical planning of Ile-Ife. Well-connected streets are important in helping to protect dwellings from the prevalent of burglary, store breaking and house breaking. Door-to-door intervisibility between houses on both sides of roads is an important factor as well. All these will ensure natural surveillance.

It was observed that the traditional town centre and post crisis residential area of the town are usually deserted especially in the night. This has made it possible for burglars to operate particularly in the area of store breaking. Thus, there is need to keep these places alive by promoting activities that will keep these parts of the town visible in the day and night. Such activities could involve the establishment of public places such as club houses, cinema and other recreational activities. In addition, there should also be inclusion of adequate and functional streetlight to illuminate these areas in the night.

Post crisis residential areas features high rate of abandoned properties, unoccupied buildings as well as run-down buildings and fewer undeveloped plots of land that has grown trees and bushes. All these could be hideout for criminals and gangsters. In fact, this situation has constituted part of the reasons for the high rate of crime recorded in this area. Therefore, government should call on the owners of these properties to renovate, complete and occupy or make their properties functional within a reasonable given period of time.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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