

ENVIRONMENTAL DEVELOPMENT PLANNING: AN APPROACH TO EFFECTIVE URBAN SECURITY IN KURMIN-MASHI RESIDENTIAL NEIGHBOURHOOD

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Abstract

This research examines effective urban security in Kurmin-Mashi residential Neighbourhood: making changes for security and crime prevention in urban and suburban neighbourhood. Effective urban security refers to programmes of physical design change, public and private management changes, and use pattern changes that are targeted to a place and its crime problems. The aim of this research is to inform and involve law enforcement officials, urban planners and architects, multifamily housing managers and public housing administration about the diverse array of coordinated environmental design and management strategies that can be employed to reduce crime and fear of crime in housing complexes and residential neighbourhoods. The techniques used for this research work is cluster sampling technique. The data collected shows that 36% of the buildings have burglary proof in their windows, 45% have burglary on both windows and doors, 15% has burglary on doors only while 8% has burglary on all opening including balcony. The demographic information obtained showed that Kurmin-Mashi settlement has a household size of 1,288 and population of 13,217. It was gathered that the conspiracy and theft in the study area are mostly compound stealing involving under age young men, while in Kaduna metropolis no information/record was given by the police headquarter but it was said that if there is, it is not always as it is in the study area. The concluded that Insecurity is debilitating to the economic development of the neighborhood. Those who are in authority who claimed to represent the people should listen and follow the aspiration of the wider majority including deepening democratic processes and experiences.

Key Words: *Environmental, Planning, Security and Development*

Introduction

Crime Prevention through Environmental Planning and Design (CPTEPD) is the proper design and effective use of built environment in order to reduce the fear of and incidence of crime in an area and to improve the quality

of life. It is based on the premises that proper design and effective use of the physical environment can produce behavioral effect that will reduce the incidence and fear of crime, thereby, improving the quality of life

(Onokerhoraye, 2016 and Abumere, 2017).

The approach works well with the community oriented and problem-oriented policing models being implemented by law enforcement agencies across the united states. Place-specific crime prevention approaches go beyond narrow theories about environmental design or defensible space (Tamuno, 2014 and Schrader, 2015). The interrogation of strategies to modify the use and management of places has strengthen environmental design and redesign practical approach to crime prevention through environmental design (CPTEPD), physical changes and draws on the results of research on active crime prevention tactics (such as community policing and community crime prevention) to emphasize modification of design, use and management of a specific place to prevent and reduce crime (Sanda, 1994 and Krison, 2013).

Tamuno, 2014 and Schrader, 2015 posited that the strategy present practical lesson/data collected from a varied set of sites operating security anticrime programme that combine physical design changes and management changes effort by municipalities, public housing authorities, private developers, and non-profit organization in city and suburban neighbourhoods are the focus to the information presented should prove useful to practitioners and agencies creating their place-specific crime prevention programmes.

Crime and Crime Prevention

Agboola (2007), Alan-Turner (2010), Abiodun (2015) and Abumere (2014) posited that crime is a social problem with a decidedly territorial component, has two basic effects on people: monetary and social. Studies on the monetary cost of

crime have been carried out by several economists, while studies on the social cost of crime have been carried out by sociologist, victimologists and environmentalists.

Crime Prevention Through Environmental Planning and Design (CPTEPD) is a concept that involves design and the effective use of built environment in order to reduce the fear and incidence of crime in an area and to improve the quality of life through an acceptable planning and design standards. It is based on the premises that proper design and effective use of the physical environment can produce behavioural effect that will reduce the incidence and fear of crime, thereby, improving the quality of life. These behavioural effects can be accomplished by reducing the (Onokerhoraye, 2016 and Abumere, 2017) propensity of the physical environment particularly in terms the possibility of offending as well as individual's perception about their safety is influenced by the design of that environment. Crime prevention through environmental planning and design (CPTEPD) therefore involves the application of a range of design initiatives hopefully, along with the feeling of safety and security that CPTEPD beings, will come a feeling of responsibility for our neighbour which the greatest crime prevention of all is. Crime prevention through environmental design principles are as follows:

1. Territoriality (i.e. territorial behavior)
2. Surveillance (Sanda, 1994 and Krison, 2013).
3. Lighting
4. Landscaping
5. Target hardening
6. Maintenance

Territoriality is an element of CPTEPD which involves an individual's perception of or relationship to his or her environment (Galtung, 1996). A strong sense of territoriality encourages an individual to take control of his or her environment and defend it against attack. A sense of territoriality is fostered by architecture that allows easy identification of certain areas as the exclusive domain of an individual or group.

Surveillance as an element of CPTEPD refers to the ability of legitimate occupants of an area to exercise a high degree of visual control over the entire area. This is a principle weapon in the protection of a defensible space in the sense that criminals are less likely to act when there is a high risk of their actions being witnessed. There are two forms of surveillance; natural or informal and artificial or formal surveillance (Sanda, 1994 and Krison, 2013).

Lighting as a principle of CPTEPD refers to the illumination of all areas that surrounds the neighbourhood on guard. Security lighting can be discussed under four headings: the type, colour, quality and its importance (Sanda, 1994 and Krison, 2013).

Landscaping is versatile and can be used to perform a variety of design functions. As An element of crime prevention through environmental design, it can combine effectively with symbolic barriers, surveillance and territoriality to ensure a protected environment and bring about effective security in residential neighbourhood (Agboola, 2007; Alan-Turner, 2010 and Abiodun, 2015).

Target Hardening as an element of crime prevention through Environmental Design which reduces Crime by restricting access to the target area (a building, a street or park etc) to People

who have valid reasons for being there. There are two types of barrier, Physical and symbolic. Physical barriers are substantial in nature and physically prevent movement or access. They include fencing, burglary proofing, heavy metal doors and or gates, Small windows, unbreakable glass windows and some form of landscaping. Symbolic barriers are less tangible (Agboola, 2007; Alan-Turner, 2010 and Abiodun, 2015).

Proper maintenance of landscaping lighting treatment and other features can facilitate the principles of crime prevention through environmental design: territoriality, surveillance, lighting, target hardening and landscaping.

- a) Proper maintenance of lighting fixtures to prescribed standard.
- b) Landscaping which is maintained at prescribed standard.
- c) Minimizing the conflict between surveillance and landscaping as the ground cover, shrubs and trees mature (Agboola, 2007; Alan-Turner, 2010 and Abiodun, 2015).

i. Direct Monetary cost of crime: These include all monetary costs incurred by victims of crime. In a nationwide cost estimate carried out in 1983, Ayoub (2005) include in is calculation of direct monetary cost.

ii. Indirect Monetary cost of crime: These include all the monetary costs incurred by the potential victims to prevent the occurrence of crime (i.e. the monetary cost of crime prevention). Tamuno (2014) included in his calculation of these costs of engaging the services of the police, the cost of legal services, the cost of correction and the opportunity cost of improvement. In addition, there are the cost of security personnel, watchdogs, electronic surveillance apparatus, the cost

of burglar-proofing fences, gates and walls.

iii. *Direct Social Cost of Crime:* These relates to the social effects of crime on victims. The primary social cost of crime is the fear of crime that is generated in people. Schrader, (2015) observed that in the social and behavioral impacts, the fear of crime might be as potent as victimization itself. Fear of crime generates anxiety which may cause people to change their lifestyle, to withdraw into themselves, to fear going out at night, to shun association with strangers and to live a localized social life.

iv. *Indirect social cost of crime:* This cost of crime refers to the social (including environmental) effects of the security device put in place to combat crime, either on the users themselves or in their neighbors. Inclusive here is the isolation of occupants in walled gardens and buildings from their social environment, the difficulty of escaping from fire outbreaks in heavily burglar-proofed buildings, the incessant howling of security dogs and a host of others (Tamuno, 2014 and Schrader, 2015). All of these costs are examined in relation to the study area. The response of fear is to begin to look for ways to safety migrate the incidence of crime and reduce its various costs. This fear can be overcome through the concept called “defensive space”.

The Concept of Neighborhood was postulated by Clarence Perry in 1929 the neighborhood concepts is conceived with the idea of full growth permitting a community spirit, fostered by sustained neighbourly social interactions and at the same time, functions as an integral part of a greater whole tangible (Agboola; 2007; Alan-Turner, 2010 and Abiodun, 2015). In the physical sense, a neighbourhood unit

is the minimum geographical and planning unit, which contains the basic public utilities municipal services and community facilities, required in common by the residents and which provides a physical form conducive to the development of a fuller and richer life of the individual, the family and the community (UN, 2006 and Christ of Church, 2014).

Deterrents: Threat and Risk Assessment brochure was to aid homeowners in self protection from unskilled, opportunistic burglars and their common entry methods. However, every individual, home, or neighborhood is different and may dictate or require specific security strategies. Constable Henri Berube, CPP of the peel regional police has identified five threat levels in a residential setting.

- Level 5: Opportunistic/Unskilled Burglars
- Level 4: Professional/Skilled Burglar (Tamuno, 2014 and Schrader, 2015)
- Level 3: Home Invasion/Robbery
- Level 2: Stalking/Domestic Violence
- Level 1: Terrorist Threat

Methodology

Study Area

Kurmin-Mashi neighborhood is located within Kaduna South Local government Area. It is located between latitude $10^{\circ} 20'$ and $10^{\circ} 33'$ North and longitude $7^{\circ} 45'$ and $7^{\circ} 55'$ East and occupies an area of approximately 453 square kilometer and has a population of 29,478 people with 4211 number of household (NPC, 2006).

Sample Size: The sample size of the survey work is 2.8% of the total household in the survey area. This sample size was adopted from Crejice and Morgan. 4316 of 2.8% represents 121 sampling units.

Sampling Technique: The techniques used for this study is cluster sampling technique. With this technique, Kurmin-mashi was divided into four clusters in

accordance with the existing major streets and each cluster was administered with questionnaires as shown in the table below.

Table 1: Sampling and Questionnaire Distribution

S/NO	Cluster Sample	No. of Questionnaires
1	A: (Layin Kasuwa)	40
2	B: (Layin Sojoji)	28
3	C: (Layin Mekanike-Down Garage)	31
4	D: (Layin Yan-Boko)	22
Total		121

Data Analysis

Having used the cluster sampling technique, a systematic approach was employed for the survey, in each of the cluster, every 3rd household was selected was administered questionnaire until the

sample size desired was achieved. This selection was however based on the combined use of sample ratio and sample interval. The sample ratio used in this study is ratio 1:3 and sample interval is three.

Result and Discussion

Current Land Use Characteristics of the Study Area

In realization of the objective of this study, valid information regarding Kurmin-mashi which is related to urban security was collected from various sources.

Table 2: Land Use Characteristics of Kurmin-Mashi

S/No.	Landuse	Area in Hectares	Percentages
1	Residential	24	45.20
2	Circulation	18	35.6
3	Open spaces	6.5	12.30
4	Public uses	1.6	3.00
5	Commercial	1.6	3.00
6	Educational	1.05	2.0
Total		52.75	100

The existing land use statistics of the study area as collected through survey show that residential area take up 45.20% of the whole area; while circulation takes up the next 36.6%, open space takes 12.30%, public land use takes 3.0% commercial land use take 3.0% and education takes the least percentage which is 2.0% as shown in table 3.

Table 3: Security in the Building

Burglary	No	Percentage
Not available	6	5
Available in window only	36	30
Available in door only	26	22
Available on both door & window	45	37
Available on all opening including balcony	8	6
Total	121	100

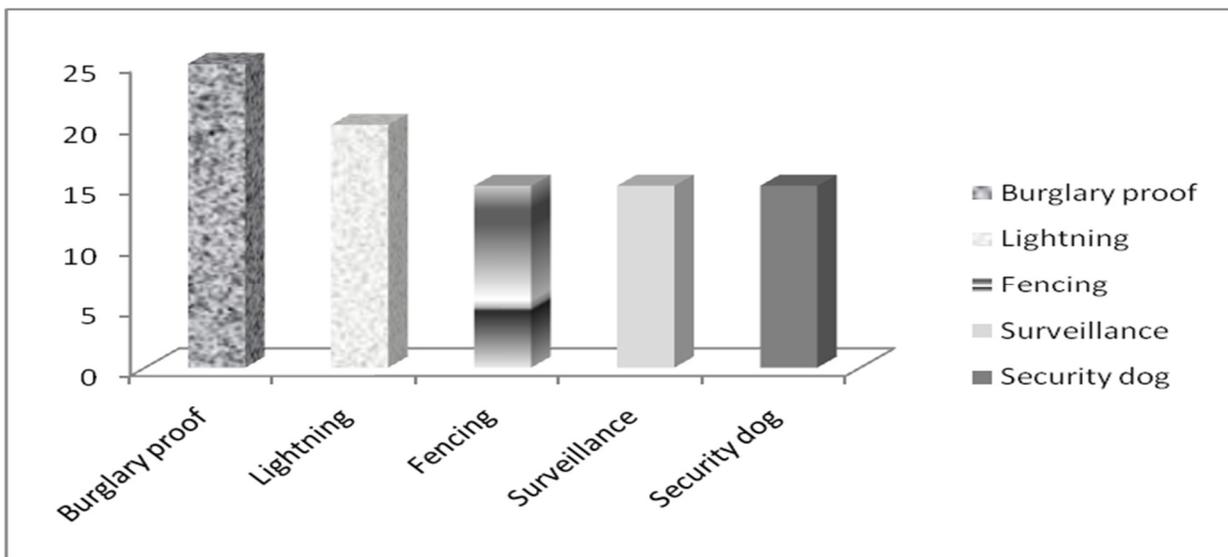


Fig. 1: Types of Security Devices Used in the Neighbourhood

The data collected shows that 36% of the buildings have burglary proof in their windows, 45% have burglary on both windows and doors, 15% has burglary on doors only while 8% has burglary on all opening including balcony as shown in figure 1.

Table 4: Materials for Burglary Proof

Materials	No.	Percentage
Wire mesh	93	77
Iron/steel work	28	23
Total	121	100

Observation shows that 23% of the burglary proofs used on windows are made or iron/steel while 77% are made of wire mesh as shown on table 4.

Table 5: Security Facilities Available In Buildings

Facilities	No.	Percentage
Security dogs	52	43
Security guards	61	51
Alarm system (Other methods)	8	6
Total	121	100

The survey conducted reveals that 43% of the house in the study area uses security dogs to protect their houses, 51% uses security guards, while 6% of the houses uses other methods not disclosed.

Table 6: Probable Violence/Disorderly Behavior in the Neighborhood

Behavior	No.	Percentage
Burglary	24	19
Armed robbery	7	6
Loitering	30	26
Drugs Abuse	24	19
Prostitution	16	13
Fighting	20	17
Total	121	100

The survey conducted revealed that 30% of behavioural pattern in the neighbourhood are loitering, 16% are prostitute, 24% are drug abuse addicts, 24% are burglaries, 20% are always fighting and 7% are armed robbery. It has been deduced that most of the disorderly behaviors committed in the neighborhood are done in the night.

Table 7: Inventory from Police Crime Bulletin Record Book

S/NO	Type of crime	Weekly	Monthly	Yearly
1	Criminal bridge of trust	2-4	-	-
2	Conspiracy and theft	1-2	-	23
3	Robbery cases	-	-	-
4	Witch-craft (secret society)	-	1-2	-
5	Drugs abuse	3-5	-	-

Source: Kurmin-mashi Police Station, 2020

It was gathered that the conspiracy and theft in the study area are mostly compound stealing involving under age young men, while in Kaduna metropolis no information/record was given by the police headquarter but it was said that if there is, it is not always as it is in the study area.

Summary of Findings

- a) The 45% of the land uses in the study area are residential buildings while commercial buildings account for 3% of the total land use.

- b) Only 42% houses have burglary proof in their windows of which majority are for doors and windows burglar proofing while 73% are made of strong steel/iron materials.
- c) Loitering and burglary are the predominant crime in the neighbourhood.
- d) Most houses in the neighbourhood has security guard (51%), some has security dogs (43%) while others use security alarm systems (6%).
- e) The inventory from Kurmin-mashi police station indicates that criminal

bridge and drug abuse are more rampant in the neighbourhood.

- f) Observation shows that 77% of the houses in the neighbourhood did not adopt crime prevention through environmental design strategies, such as territoriality, surveillance, target hardening as measures to curb crime.

Conclusion

Insecurity is debilitating to the economic development of many states and communities. Those who are in authority and claim to represent the people should listen and follow the aspiration of the wider majority including deepening democratic processes and experiences. It is imperative to conclude by saying that “It is our belief that achieving neighbourhood security in Kurmin-mashi is achievable, if all identified observations, suggestions and advice are put into context.

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