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Spatio-Temporal Variation and Residents'Response to Crime in Ogbomosa

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SPATIO – TEMPORAL VARIATION AND RESIDENTS' RESPONSE TO CRIME IN OGBOMOSO

AN M.TECH THESIS DRAFT FINAL REPORT

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CERTIFICATION

This is to certify that this work was carried out by **ABODUNRIN, Folasade Oyenike** in the Department of Urban and Regional Planning under the supervision of:

29th July 2009

……. **……..**

(Supervisor) **Date**

Prof. A.A.Adedibu

(FNITP, RTP)

DEDICATION

I dedicate this to the **Merciful God**, who is the essence of my existence.

ACKNOWLEDGMENT

Glory, honour and adoration be unto the Lord Almighty who sustained me

throughout the period of this study. My inestimable appreciation goes to my supervisors. I thanked Prof. Adedibu who supervised this work at the initial stage. I also appreciate the efforts of Prof. Egunjobi who thereafter continues in supervising the work. I thanked the two of them for insisting on logical and semantic clarity in the formulation of my thought and mode of expression.

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Abodunrin, Folasade O.

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ABSTRACT

Against the background of increasing frequency, scope and sophistication of crime in cities of the world generally and Nigerian urban centers in particular and, the insurmountable problems associated with its seemingly uncontrollable tendencies, this study examines the spatio-temporal variations in, and residents' response to urban crime in Ogbomoso, Nigeria. The paper utilizes nine-year (1995-2003) police crime record from the two Police Divisional Headquarters in Ogbomoso metropolis as well as a total of 480 structured questionnaires administered to respondents in the urban high, medium and low density residential areas. Ten major categories of crime were identified and their spatio-temporal pattern described.

The analysis of the total crime cases reported between 1995 and 2003 showed that 47.2 percent cases occurred in the high density residential area followed by 34.7 percent in the medium density and 18.1 percent in the low density residential areas. It was further observed that there is a significant spatial variation in the occurrence of different categories of crime within the three residential densities identified in Ogbomoso between 1995 and 2003. Crime of aggression, crime against property, morality and custom as well as crime of public disorderliness featured prominently in the high density residential areas than in other densities.

The temporal analysis shows that crime trend has decreased in Ogbomoso within the period of study, a feat attributed to more gainful employment for the urban youths, particularly the increase in the use of motor cycle as a major mode of intra-city transportation. The response of residents on individual and community level were identified to include: use security barriers and ethno-cultural security outfit (the Oodua Peoples Congress [OPC]), African traditional protective devices and Vigilante groups, police public relations committee and students anti cultism squad. On planning implications, it is suggested that principles guiding landuse zoning (or allocation), infrastructural planning, and building design be reviewed so as to prevent the creation of danger zone within the urban landscape.

CHAPTER ONE

BACKGROUND INFORMATION TO THE STUDY

1.1 INTRODUCTION

The widening scope of, and increasing sophistication in criminal activities coupled with its seemingly uncontrollable tendencies are some of the nerve-racking social phenomena of concern to social workers and policy makers (Adeboyejo et al 2003). Over a decade ago, reports revealed that one out of every four American household experienced violent crime of theft every year (U.S. News and World Report, 1996). The city of Chicago records seven hundred murders in one year resulting from the use of crack cocaine (The Watch Tower, 1994). The state of security in South Africa is so pathetic that Osaghae (1994) concluded that the country is "structurally violent". In Nigeria, many urban areas have become sites of very raucous and violent crimes featuring different kinds of vices that threaten the security of the people and the liveability of the cities (Ayeni-Akeke, 2001). The past months in the country in particular has witnessed unprecedented upsurge in cases of assassinations, armed robbery, banditry and ritual killings. However, the type or form and, rate of occurrence of crime vary from city to city and over time. It has been argued that, we can perhaps not find a city where there is no appreciable number of people who are frustrated, impoverished or dissatisfied and ready to vent off their grievances through organized criminality, individually or collectively (Ayeni-Akeke, 2001). Suffice to say then, that no city, Ogbomoso inclusive is totally out of crime, though the level may differ.

Crime and delinquency are often seen as "twin pathologies' of urbanization and industrialization. To many observers, crime is integrally linked with these social

developments. Bottoms et al (1997) however argued that there are nations, for example, Japan where comparative studies of recent developments in crime showed that inspite of rapid industrialization and urbanization, there is a less rapid growth in crime rate compared to other economies. This is not to undermine the universal conception that urban crime rates are higher than those in the rural areas in a given nation at a particular point in time. This suggests that urbanism while occupying a significant position in the study of criminal activities; urban social life can also be organized differently in different countries (and in different locations within the country).

The organization of urban social life in respect of residential densities has been particularly identified as having an intricate relationship with the occurrence of crime (Giggs 1973). It is argued that the social, economic, demographic and environmental features of residents and their residential area have significant influence on the type and the intensity of criminal activities suffered. Besides this, the occurrence of crime also varies over time. This is associated with residents' experience of crime over years, individual and collective responses to crime, and the efforts of the criminal justice system and government policies. The study is thus set to investigate the spatial and temporal variation in the occurrence of crime as well as residents' response to it in their respective residential areas.

1.2 STATEMENT OF PROBLEM

The custom of studying crime and urban violence mostly in capital or big cities pervade Nigerian crime research efforts. With the exception of a study carried out on Ile-Ife by Aguda [1994], most studies including those reviewed in this work and others such as Obateru [1994] and Albert [1994], concentrates on major urban centres such as federal capital, former regional capitals, and state capitals. This deficiency might be due to the perceived and observed severity of the problem in these cities coupled with such underlying factors as individualism, alienation and poverty syndrome, which accompany the growth of these huge and impersonal cities. It has however been argued by Ayeni-Akeke [2001] that we can perhaps not find a city where there are no appreciable number of people who are frustrated, impoverished or dissatisfied and ready to vent off their grievances through organized criminality, individually or collectively. Suffice it to say then, that no city Ogbomoso inclusive is totally rid of crime, though the level may differ.

Although the literature on the incidence, types and spatial variation in crime is fast growing (Aguda, 1994; Agbola, 1997; Afon, 2002; Agbola, 2002), there are very few studies on the temporal aspects of crime (Omisakin, 1998; Agbola and Sobanjo, 2001).Even when available, the tradition follows the study of total crime cases reported by category over the period of study as contained in police records, taken the city as a monolithic entity (Agbola 1997; Omisakin, 1998). Past research efforts by the singular act of concentrating on the spatial aspect of crime, had first, neglected the temporal dimension of occurrence of crime by type, in various residential densities and thus largely incapable of identifying socio-political and environmental correlates of crime, which would help formulate appropriate policy. Secondly, their undue reliance on residents'

declaration of crime experienced in determining spatial variation and incidence of crime is fraught based on possible false as well as incomplete declaration by people. It is also an inadequate method of determining offence location (whether in residential area or actual point of occurrence) particularly in a socially mobile community where the possibility of people changing their residences cannot be ruled out. In addition, data generated using this method cannot be subjected to rigorous statistical manipulation for generating objective conclusion on the rate of occurrence of crime whether spatially or 'temporally'. Without prejudice to the commonly held belief that more than fifty percent cases go unreported in Nigeria, police record particularly when correlated over a long period of time as we seek in this study, will prove more useful in arriving at a more scientific conclusion on the rate as well as variation in crime incidence over space.

It is further argued that a combination of the spatial and temporal (spatio-temporal) analysis should: provide insight into the aetiology of this monstrous social phenomenon and facilitate isolation of underlying mechanisms, particularly those associated with political and economic vicissitudes of the nation at large. The isolation of causal factors of crime make possible formulation of appropriate, city-specific policies and programmes. Furthermore, analysis of trend should make possible simple extrapolation of the future pattern and fashioning of policies to pre-empt occurrences, which would then enhance liveability of the cities and national development in general.

Crimes occur not only within but are also influenced and may indeed be compounded by a wide ranging socio-economic and environmental context, summarized in urban residential patterns. It is argued here that there are intricate connection and complex interrelationships between the environment in which urban dwellers live,

incidence of crime and, by logical extension, their response to crime. It should be noted that residential density patterns are characterized with different socio-economic, socio-cultural and physical/environmental factors, which have various implications for, and impacts on the type as well as the rate of occurrence of crime, and the reaction of residents to it.

For instance, such features of high density residential areas as overcrowding, distressful living conditions, absence of basic social infrastructure and recreational facilities, generally low income and acute poverty are undoubtedly favourable factors to social vices. These conditions are capable of promoting high incidence of crime such as affray, abduction, rape, assaults, prostitution, malicious/willful damage and so on. In addition, individualism, segregation and alienation tendencies in the low density residential areas of urban centres tend to promote anonymity which encourages various kinds of crime. The occupational status of the residents in the low density residential area which call for their moving to other places during the day, renders their living environment a ghost zone in the day thus vulnerable to house breaking, burglary and the likes especially when there are no capable guardian. Crimes are not just increasing but have heinous implications on the lives of individuals and the community at large.

Apart from being a socio-economic menace, crime is a serious impediment to development, an undeniable stigma to national image and a significant source of threat to people's safety and wellbeing (Omisakin, 1998). Peaceful and safe existence is becoming a tale of the past in many Nigerian urban centres. Lives are on constant threat at home, on the streets even at places of worship, which supposed to be safe haven. Criminals attack people of diverse social status, destroying lives and looting valuables.

The effects of these devilish operations on the society and its institutions is evident in a new wave of social behaviour featuring isolation, anxiety, individualism, hostility, mistrust, aggressiveness, feelings of hopelessness and helplessness etc. (Madden, 1996). Consequent upon all these crime-associated problems, coupled with residents' realization of how vulnerable their lives are, and the apparent inability of the criminal justice system to cope with the current crime wave, there have emerged various individual and community efforts at safeguarding their lives and properties. These include the formation of vigilante group and/or the use of security guards at community level and the inclusion of various safety gadgets in their buildings. It should however be noted that some of these responses instead of breaking the cycle of crime ends up contributing to it. Thus, the need to investigate the incidence of and residents' response to crime in relation to residential density is a fundamental one.

Against the background of increasing frequency, diversity and sophistication of crime in cities of the world generally, and the insurmountable problems associated with it seemingly uncontrollable tendencies, the study seeks to investigate the scope, incidence, prevalent rates, the spatial distribution as well as residents' response to crime in Ogbomoso: a precolonial urban centre with phenomena growth rate.

1.3 AIM AND OBJECTIVES OF THE STUDY

AIM

The aim of this study is to examine the type, trend as well as intra-urban variations in crime occurrence with a view to isolating aspects of the urban environment associated with the social phenomenon. Against the background of spatial variations in occurrence, the study also seeks to examine residents' response to crime in different urban residential areas.

OBJECTIVES

The specific objectives are to:

(i) examine the temporal variation in crime occurrence between 1995 and 2003;

(ii) investigate the spatial variation in the occurrence of crime in Ogbomoso;

(iii) study various ways by which residents have responded to crime wave in the city;

(iv) identify the spatial variation (if any) in residents' response to crime;

(v) evaluate the underlying social, economic, demographic and environmental factors responsible for (ii) and (iv) above.

1.4 HYPOTHESES

The validity of the following hypotheses will be tested in this study.

(i) There are no significant spatial variations in total crime cases reported in the three residential areas in Ogbomoso between 1990 and 2003.

(ii) There are no significant spatial variations in reported crime cases by category, in Ogbomoso between 1990 and 2003.

(iii) There are no significant temporal variations in the annual reported cases, within the period of study.

(iv) There are no significant spatial variations in residents' response to crime in the study area.

1.5 JUSTIFICATION

Any meaningful and sustainable policies and programmes targeted at curtailing criminal activities in the urban area must take into consideration the socio-economic and physical environmental context within which crime occurs in various residential densities. It is argued here that the residential environment influences the activities and behaviour of individual as well as hinders or creates opportunity for crime to occur. This spatial study should however be coupled with a temporal study of this problem so as to reveal its dynamism and for a proper understanding of its trend. This is needed realizing the fact that the society is dynamic and that criminals advanced daily on their activities.

This study is further justified considering the rate of urbanization in Ogbomoso city. It has long been substantiated that delinquencies (juveinile and adults) and violent acts increases as the city grows in population and expands in aerial extent (Herbert 1976). The establishment of Ladoke Akintola University of Technology (LAUTECH) in 1990 increases the prominence of Ogbomoso and brought an influx of people and business activities with several trailing social vices. While the desirability of the benefits of

urbanization may not be questionable, the “twin pathologies” are. This makes the case of Ogbomoso: a rapidly growing and fast expanding town a source of concern.

Considering the effect of crime and violence on social, economic as well as political processes in the society, it is imperative that the activities of criminals be controlled or even eliminated effectively, if Ogbomoso will ever succeed in performing its civic responsibilities to its residents and the rural hinterland. In addition, adequate or full realization of the dividends of urbanization will never be possible unless the rising tide of crime is effectively suppressed. The observed failure of urban policies and planning regulations provides an added reason for the suitability of this study in Ogbomoso. The consequences of planning failures and urban polices are revealed in the increasing “planless” areas and physical development which deviate from the set planning standards. Couples with these, are residents’ responses, which violate planning regulations. All of these have the propensity of becoming slums in the future thus breeding deviant subcultures. Others include the shortage of housing and its resulting overcrowding, insufficient policing, insufficient recreational and other social facilities and the neglect of the peripheries in the provision of other essential facilities.

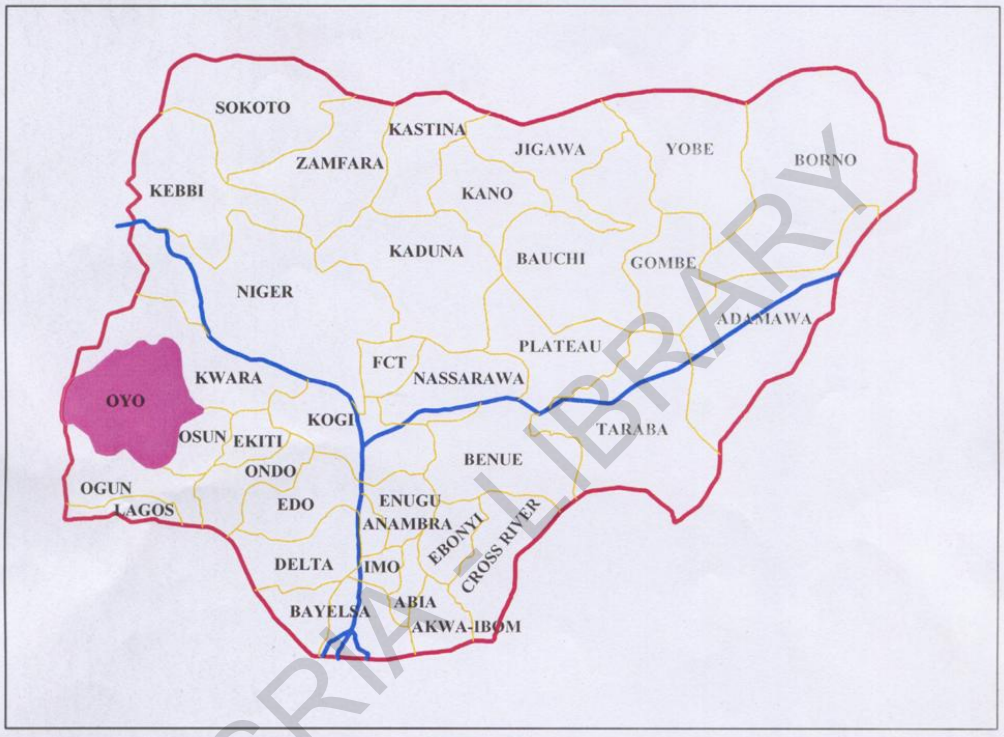
The rate of occurrence of crime has a serious effect on the image of a city and the body responsible for security and safety of lives and property in such city. The ability of the Nigerian Police Force at controlling criminal activities is a major concern to the generality of Nigeria. Perhaps the police are “handicapped” and in need of how best to address the issue, then a study of this nature will prove useful, much more that it is aimed at providing an insight into the existing situation: residents’ socio-economic characteristics, the prevalent crime in their area and the methods of combating it. This

will be a good basis upon which a modification of the currently employed strategies or others may be proposed.

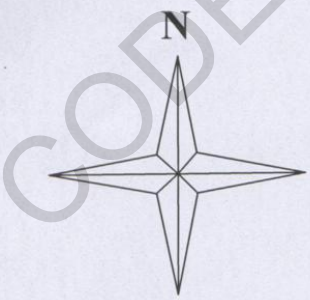
1.6 SCOPE OF STUDY

The study examines variations in the rate and distribution of, as well as response to crime in the various residential densities of Ogbomoso. The temporal and spatial distribution of crime between 1995 and 2003 are parts of the major preoccupation of the study. Another concern of this study is the response of residents to crime. The residents and the police crime records provided the bulk of information used. Observations were also made on the buildings and the living environment. The study covers the two local government areas constituting the township of Ogbomoso. The targeted population are the residents of the various residential districts in the town.

FIG. 1.1: OYO STATE IN THE CONTEXT OF NIGERIA



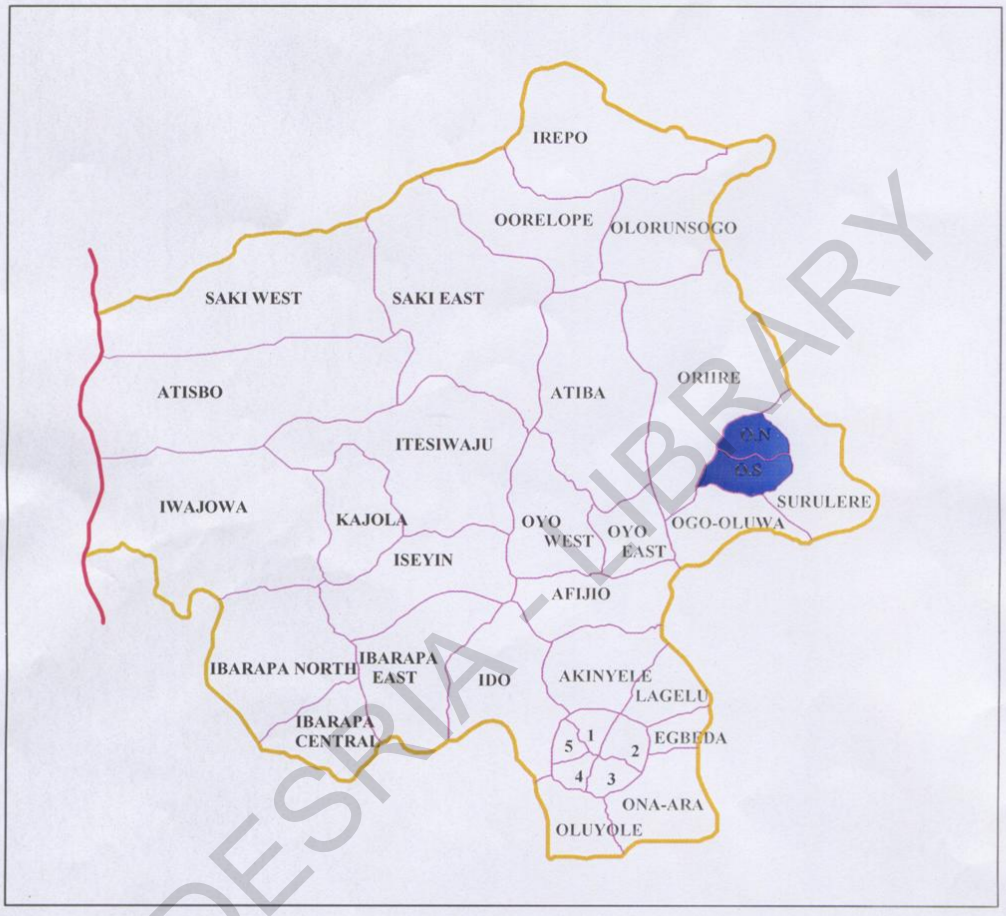
SCALE: 1 : 7300000



SOURCE:Ministry of land Housing and Physical Planning Ibadan,Oyo State.2000.

11

FIG.1.2: OGBOMOSO TOWN IN THE CONTEXT OF OYO STATE



SOURCE: MINISTRY OF LAND, HOUSING AND PHYSICAL DEVELOPEMENT, IBADAN, OYO STATE.2000

FIG. 1.3 RESIDENTIAL DENSITIES IN OGBOMOSO

Source: Ministry of Land, Housing and Physical Planning, Ibadan, Oyo State & Author's Compilation (2004)

SCALE: 1:250

N

LEGEND

- Important places
- Major road
- Round about
- Minor road
- High density
- Medium density
- Low density

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1.7 THE STUDY AREA

The general background information on Ogbomoso will be discussed in this section.

1.7.1 Location

Ogbomoso city lies on latitude 8º10` North of the equator and longitude 4º10` East of the Greenwich Meridian within the derived savannah region of Nigeria. By location, the city serves as the gateway to the northern part of Nigeria, from the south. The city has Oyo town to its southwest, Ilorin to the north while Iwo and Ede lies to the southern and eastern side respectively. Ogbomoso is eighty kilometres drive from the northern part of Ibadan, about two hundred and thirty kilometres northeast of Lagos, at about forty eight south of Ilorin (Kwara State Capital) and at about five hundred and eighty kilometres southwest of Abuja (Federal Capital Territory).

1.7.2 Population

The estimated and actual census figures of Ogbomoso from 1850 to 2002 are shown in table1.1 below. Some of the projected population figures were based on 1963 census because of the general controversies over 1991 census exercise. However, annual growth of 4.0% was used for year 2000 and 2003 because of the observed skyrocketing population growth due to the establishment of Ladoke Akintola University of Technology (LAUTECH).

Table1.1: Population Figure of Ogbomoso (estimated and census) 1850-2002

S/N	Year	Population	Source
1	1850	25,000	Estimate by American Missionary Bowen
2	1853	40,000	Estimate by American Missionary Rev Mann
3	1911	80,000	Census under Colonial Administration
4	1921	84,900	Estimate by Mabogunje A.L. (1961) Yoruba towns
5	1931	86,700	Estimate by Mabogunje A.L. (1961) Yoruba

			towns
6	1952	139,500	Estimate by Mabogunje A.L. (1961) Yoruba towns
7	1963	230,000	National Census
8	1973	280,369	Projected figure from 1963 census, using annual growth rate of 2 %
9	1975	318,265	Projected figure from 1963 census, using annual growth rate of 2.5 %
10	1977	321,600	Projected figure from 1963 census, using annual growth rate of 2.5 %
11	1985	604,800	Projected figure from 1963 census, using annual growth rate of 2.5 %
12	1986	564,465	Estimate extracted from Local Government Publications,1986
13	1990	680,400	Projected figure from 1963 census, using annual growth rate of 2.5 %
14	1991	166,034	1991 census figure
15	1998	593,400	Projected figure from 1963 census, using annual growth rate of 2.75 %

Source: Adapted from Ajao et al (2002)

16	2000	641,821	Projected figure from 1998 (Ajao et al 2002), using annual growth rate of 4.0%
17	2003	721,961	Projected figure from 1998 (Ajao et al 2002), using annual growth rate of 4.0%

Author's Computation (2004)

1.7.3 Historical Development and Growth

The founding date of Ogbomoso was not known but it is believed to have come into existence in the middle of sixteen (16^{th}) century by the union of the leaders of about five earlier settlers. These are Aale who encamped in Okelerin, Okunsile in Oke-Ijeru, Orisatolu in Isapa, Akandie in Akandie and Soun in Igbo-Igbale currently known as Oja Igbo. These five camps grew as independent isolated hamlets until they discovered the existence of each other and started exchanging visits. Their friendship grew into the Alongo Defense League which play significant role in the history of Yoruba race.

Soun's camp serves as the meeting place of the league and due to his apparent audacity; his leadership was unanimously accepted by the others. It was from one of Soun's heroic acts that the name Ogbomoso was derived. It was an offence of murder committed by Soun that led Olugbon of Igbon into handling him over to Alafin of Oyo (the head of Oyo Kingdom) for requisite punitive measures. While in incarceration in Oyo, Soun heard about the spate of military campaigns led by an apparent invisible and invincible man known as Elemoso against Oyo. Soun volunteered and was permitted to fight Elemoso whom he beheaded successfully. This act earned him the appellation, "Eyi ti o gbe ori Elemoso"-later shortened to "Ogbori Elemoso," "Ogbelemoso" and finally "Ogbomoso"-the present name of the town. Many other warriors later joined the Alongo Defense League for mutual protection.

The early 19th century characterized by inter-ethnic rivalry and Fulani wars which set the whole Yorubaland unpeaceful attracted many refugees to Ogbomoso because of the strong defense provided by its walls and the activities of its warriors. The several attempts by the Fulani at invading Ogbomoso after overrunning the surrounding towns were aborted by warriors of the town. To attest for this feat, a shrine was erected in the heart of the town at Oja-Igbo with the following inscription **"OGUN O"JALU OGBOMOSO",** which literally means Ogbomoso has never been captured by war.

Consequent upon the foregoing, the town became a new centre of power with new political alignment being established to ensure peace and stability. The town since then grew in size and population covering an extensive area of land. Contributing to the growth and expansion of the town in the 20th century are various social, economic and political changes coupled with the coming of the colonial administration, the advent of

the missionaries, the establishment of schools and the relative prevailing peace after the 19th century wars. The town became zonal headquarters for several Oyo State Ministries, parastatals, and corporations since 1987. Some small-scaled industries were also established in the city. The prominence of the town however increases with the establishment of Ladoke Akintola University of Technology (formerly Oyo State University of Technology) in 1990. Another significant factor which aided the growth and expansion of the city, is the division of the town in 1991 into two local government areas namely Ogbomoso North and South Local Government Areas having their headquarters at Kinira and Arowomole respectively.

Going by the estimation done by Popoola (1998), in 1950 the total built up area covers about 576 hectares of land .This area encompassed the traditional core area. In 1970, the land mass increased from about 1,024 hectares (about 100 % increase over 1950's figure) to about 2,432 hectares in 1995 (more than 200% increase in less than 20 years).The increase has continue since then. (Popoola, 1998).

1.74 The Spatial Structure of Ogbomoso

Prior to the coming of the colonial master in the 20th century, Yoruba settlements or towns exhibit a relatively common spatial structure. They are "monocentred" with the palace, Oba's market, religious precent or place of worship located right at the heart of the town. The housing structure and some other environmental characteristics are the same. The story however changed with the influence of the colonial masters and the missionaries. The resultant effect is the creation

of a “twin city” with “one modern” (habitation of the whites) and other “traditional” (abode of the indigenes).

Ogbomoso conforms to the general morphology of traditional Yoruba cities with the prominent centre consisting of Soun’s palace, town mosque, Oba’s market and Ogun O’jalu shrine. This is not to overlook the existence of other Central Business Districts such as Takie, Caretaker/Ahoyaya and Sabo, which evolved along the major transportation route (Ibadan-Ilorin road) transversing the town. The prominent centre described above is accessible from various parts of the city being at the converging point of five major streets, which divided the city into the five major districts. It is closely surrounded by the core/ high density residential areas.

Following this portion of the city is the transitional or medium density residential areas. Areas included in this zone are parts of Arowomole, Oke Alapata, Olopemarun, Ahoyaya, Caretaker, Takie, part of Papa, Idi Abebe, Adiatu, Apake, part of Oke-Anu, Saabo,Kara, Oke Ado Sabo, General Area, Oke Ado Akintola, Stadium, Kuye, Gaa Masifa, Owode, E Saanu Aje and Araada market area. The area is characterized by bungalow and brazillian (face-me-face-you) building type with old fashioned two storey buildings. Some of these areas are well linked with roads while others shows a deficiency of this (see figure 1.3).

The next zone are residential areas with distinctive characteristics depicting affluence and a touch of modern day planning in its layout,organization of buildings, road pattern and building type and design. Embedded here include South Local Government layout (Sunsun), High School /Road Safety area, Rounda, Adeniran, part of Papa, Federal Goverment College area, Agboin, part of Oke Anu, Maryland, IsaleGeneral/Olagbemiro

Area, Tobacco/Recreation Club, Lautech area, Oke Owode, Legacy/Low cost and Obandi areas. A close examination of the analysis presented above will reveal a line of agreement with Burgess concentric zone theory (1827) though with some deviations such as the multiple nuclei and the fact that are the spatial analysis of the city does not reveal the zones highlighted in Burgess theory as separate entities but more of an interwoven portion.

Although the town is divided into two local government areas comprising of ten political wards, a very crucial point which needed to be mentioned here is that the political ward delineation of the city does not strictly follow residential area delineation as described above. Some political wards are completely located in the core areas while others show the features of two or three residential densities. Examples of the former are Isale Afon, and Okelerin, in the North Local Government Area and Isoko, Ijeru I, Ijeru II in the South Local Government Area. Included in the second category are Sabo/Tara, Aguodo Masifa and Abogunde wards in the North Local Government Area and Arowomole, Oke Alapata, and Akata in the South Local Government Area.

1.8 METHODOLOGY

1.8.1 TYPES, SOURCES, AND METHOD OF DATA COLLECTION.

The bulk of information needed for this research exercise was obtained from police crime record for the period of nine years (1995-2003) and a structured questionnaire administered to 480 residents. The choice of nine years was based on availability of data in the selected Police Divisional Headquarters.

Primary Data: Types, Sources, and Method of Data Collection.

The primary data obtained using structured questionnaire include: socio-economic and demographic characteristics of respondents; types of crime preventive /controlling measures employed by residents; building features and environmental attributes of respondents' residential areas. Based on constrain of time as well as resource availability 480 questionnaire were administered. In order to distribute the 480 questionnaires, a ratio of 3:2:1 was employed respectively for the high, medium and low density residential areas. This is in line with the generally believed pattern of population distribution within residential areas, (see table1.2).In administering the questionnaire, the study area was stratified into the two existing local government areas. Further stratification was done by identifying the ten political wards in each local government area, out of which three wards were randomly chosen so as to aid easy identification and delineation of various residential densities. The selected wards are: Isale Afon, Okelerin, and Sabo/Tara wards for the north local government and Ijeru I, Isoko and Ibapon wards from the south local government area.

In all the chosen wards, the first building in each randomly selected street was chosen, with subsequent units at interval of every fifth buildings. To cater for residents in landlocked portions of the high density residential area (core area) where buildings were not accessible by roads, buildings were selected at uniform interval of every fourth building off the roads. Following the exhibited characteristics of the political wards in the study area, in which some wards are completely located in the high density residential areas (core areas) and others with the features of two or more residential densities, questionnaire was administered on the basis of the identified residential areas within the

selected wards. Out of the total number of questionnaire distributed, 408 copies were completed and suitable for the analysis (see table 1.2).This represents 85.0 percent questionnaire recovery rate.

Table 1.2: Questionnaire distribution in the Study Area

S/N	LGAs / Residential densities	Ogbomoso North	Ogbomoso South	Total
1	High density	120 (102)	120 (97)	240(199)
2	Medium density	80 (68)	80 (67)	160 (135)
3	Low density	40 (40)	40 (34)	80 (74)
	Total	240 (210)	240 (198)	480 (408)

Source: Authors' Field Survey (2004)

Secondary data: Type, Source, and Method of Collection

The record, which shows all the different types of crime, date and place of occurrence, were obtained from the Divisional Police Headquarters at Ogbomoso North and South Local Government Areas, whose area of jurisdiction covered the whole city. The two Divisional Police Headquarters, (each with a Divisional Crime Unit) take responsibility for all reported cases, and have their scope of service coverage extending beyond Ogbomoso. Nevertheless, reported cases outside the city are not within the scope of this study.

The method of data collection here involved a review of reported cases from the most current cases till 1995. It is expected that this period of study will be sufficient in drawing a solid conclusion as well as present a definite picture/ pattern, on the trend and the spatial distribution of crime within the city.

1.8.2 DATA ANALYSIS

Before subjecting the data collected from the Police to any form of statistical analysis, the residential areas, the various types of crime, year and months when cases were reported were coded. The frequency of occurrence of criminal incidences was also noted For the preliminary descriptive analysis, frequency analysis of all variables contained in the questionnaire and the data extracted from police record was carried out using Statistical Package for Social Scientist (SPSS). This enabled a further identification of variables to be recoded/recomputed for subsequent analysis. A cross tabulation of socio-economic and demographic variables with variables measuring responses to crime was done. Differences in observation were tested with Chi-square statistic, as applicable.

For more rigorous analysis, and emphatic conclusions on the temporal variation in the incidence of crime, Pearson Product Moment Correlation Analysis was used in determining the relationship between year and the incidence of different categories of crime in the study area. Year was taken as the independent variable while frequency of occurrence of crime was taken as dependent variable. Prior to this, in order to present a clearly defined picture of criminal occurrences, the various types of crime recorded were categorized into ten major groups. Attempt at forming a statistical model for predicting the future occurrence of annual total crime was made using the Linear Regression Analysis. Annual occurrence of crime was regressed against year. Furthermore, the spatio-temporal patterns in occurrence of and residents' response to crime were presented using the bar and pie charts together with line graph.

1.9 CONSTRAINTS TO THE STUDY

Factually, the study was a huge success. This is shown by the fact that the desired goal was achieved. This is not to undermine some of the problems, which threatened the recorded success in this exercise.

The most significant of these, which posed itself as a clog in the wheel of this research is the problem of getting the State Police Commissioners` approval for the release of the needed information. Not for the divine favour, intervention of some key personalities, the encouragement received from the project supervisor as well as the maturity displayed by the researcher, the study would have died prematurely at this point. The approval was eventually granted after much consultation. This do not only consumed

money but also wasted a considerable number of weeks out of the period scheduled for the exercise, thus prolonged the period of study.

Closely related to this, is the amount of time spent in retrieving the needed data at the two Divisional Police headquarters. Some of the needed information are not available, even when available the recording pattern made the work tedious and time consuming. This is attributed to poor storage techniques as well as the attitude of the government officials to record keeping. This, call for the attention of the Federal Government. It is suggested that Government parastatals especially Police establishment who are the custodian of security information be furnished with current data processing and storage facilities such as computer systems, metal cabinet,(to avail termite attack), folder files e.t.c. The method of data recording should also be modified by redesigning the format used in keeping this information so as to create room for recording of cogent information.

Another constraint to this study is the huddle of getting residents cooperation in releasing the needed information. Some residents were suspicious as much as reluctant in answering some of the questions posed to them. One cannot actually blame them; the nation has become so insecure that people treasure information on their security with utmost care. This situation has however been envisaged and prepared for by sending interviewers in group of two: a male and a female. It is believed that residents' fear will be allayed on seeing a female. Interviewers are also instructed to make adequate observation on physical security measure which may not be declared by the respondents. A portion of the questionnaire was designed for this.

The literacy level of the respondent had effect on the period of field survey. The residents of the high residential density area which form the largest portion of the

city's population displays lack of western day education as such interviewers have to interpret the questions as well as record the answers. This makes the exercise tedious, time consuming and strenuous.

Despite all these, there are instances of favour and cooperation. For example, the Divisional Police Officers, the Divisional Crime Officer and the Registras show real cooperation in releasing the needed information with the State Police Commissioner's approval. We were also received with refreshments sometimes. In addition, during the questionnaire administration, there are instances of understanding, willingness and cooperation received from the residents for the release of the needed information.

1.10 ORGANIZATION OF REPORT

The project write up is organized into six chapters. The introduction, research aim and purpose, notes on the study area, the research methodology and other background information are contained in the first chapter. Chapter two contains the conceptual framework and review of literature for the study. Chapter three contains the beginning of analysis and interpretation of results. Here the socio-economic attributes of the residents and the environmental factors of the residential areas were discussed. The incidence of crime in the study area together with its temporal and spatial variation in the various residential densities were presented in chapter four. Residents' response to crime and the associated factors are the major preoccupation of chapter five. The summary of research findings, and planning implication of the study are detailed in chapter six.

CHAPTER TWO

THEORECTICAL FRAMEWORK AND REVIEW OF LITERATURE

The chapter documents information reviewed from relevant literature. This serves as the background to the study. Areas covered in the review include residential densities, concept of crime and its categories, the pattern, causes and effects of crime. It also reviews the literature on response to crime. The theoretical framework employed in the study is documented here.

2.1 THEORETICAL FRAMEWORK

2.1.1 Defensible Space Theory

This theory is an environment-centered strategy which focuses on the manipulation of the environment in order to prevent and or reduce crime. “Defensible Space Theory” was proposed by Oscar Newman in 1973 (Newman 1995). The theory implies a form of architectural determinism. Newman proposed his theory against the background of skyrocketing urban crime which he associated with the forms of building design and the physical structuring of the environment of most American cities. He studied the physical features of residential buildings and projects in order to determine which of them gives advantage to criminal incidences. For instance the recreational space designed around project buildings becomes the most vulnerable of the building because it is located away from the traffic as such they are ‘no man’s land’. It was concluded that the built environment provides the precipitate framework where crime can be made more or less easy.

As a means of rectifying the anomalies identified, Newman proposed the defensible space model. Defensible space is a model for residential environments which

inhibits crime by creating the physical expression of a social fabric that defends itself. Newman conceived “defensible space” as a surrogate term for the range of mechanisms- real and symbolic barriers, strongly defined areas of influence and improved opportunities for surveillance- that combine to bring an environment under the control of its residents. A defensible space is thus a living residential environment which can be employed by residents for enhancement of their lives, while providing security for their families, neighbours, and friends.

Newman's idea is that local space can be divided into four categories, namely “private” "semi-private", "semi-public" and "public" zones. This represents the hierarchy of defensible space. Newman prescribed the movement of as much space as possible to the private end of the scale to increase security and prevent crime. He assumed that people will look after their own private and perhaps semi private space, whereas people on the street would provide "natural surveillance" of semi public areas. Surveillance of any sort is difficult in pure public areas and so crime risk would be at greatest. Newman favoured low-rise buildings over high-rise ones. His idea include something of "symbolic" divisions of space, such as low fences that were not true physical barriers but that clearly defined what can be referred to as ‘private’. He supported his theoretical work and drawings with demonstration projects in real world showing major improvements in security.

Newman identified four elements of physical design which individually and collectively contribute to the creation of a secured environment. These include:

- Territoriality: the subdivision of residential environment into zones of influence to discourage outsiders and encourage residents to defend their areas;

- Surveillance: the design of buildings to allow easy observation of territorial areas;
- Image and milieu: the design of buildings to avoid stigma in low-cost or public housing;
- Environment: the juxstapositioning of public housing.

Newman's work comes under crime prevention through environmental designs. Other studies in this area have shown that a physical environment that would by its nature discourage crime can be developed by extending the scope of the elements included in Newman's work. Notable among these writers are Gardner (1981) and Audy (1995). Slightly different from Newman's defensible space, Gardner (1981) identified three zones. These include: the public, semi-public and private zones.

(i) The public zone is generally accessible to anybody with minimal control or close surveillance.

(ii)The semi-public zone is the transitional zone between public and private spaces. This area is accessible to the public, at the same time set off from the public zones using design features that establish definite transitional boundaries. It serves as common use space such as interior courtyard.

{iii}The private zone is the area of restricted entry. Access is controlled and limited to specific individual e.g. private residence.

Gardner (1981), in his documentation identified six elements of Crime Prevention Through Environmental Design (CPTED). These include security barriers, territoriality, surveillance, lighting, landscaping, and physical security planning. Gardner in support of Newman's view agreed that the application of these elements should come after the

division of the environment into distinctively defined areas or zones of defense ("defensible space").

Security Barriers

Barriers in CPTED are used in separating the zones highlighted above. Gardner (1981) identified two types of security barriers. These include the physical and the symbolic barriers.

- The physical barriers are substantial in nature. They physically prevent movement or access. Fencing and some forms of landscaping, burglar proofing, heavy metal doors, locked doors and or gates, small windows or unbreakable glass windows etc are examples of physical barriers used in preventing crime.
- Symbolic barriers on the other hand are less tangible. They define boundary between zones using nearly anything. The use of symbolic barriers do not prevent physical movement or access but rather gives assurance or understanding of who should have access and when access should be made (Agbola, 1997). Low decorative fences, flower beds, changes in sidewalk pattern or materials and use of signs e.g. No Trespassing. A good use of barriers could enhance the territoriality of legitimate occupants.

Territoriality

Territoriality in the words of Gardner (1981) *"involves an individual's perception of, and relationship with the environment. A strong sense of territoriality encourages an individual to take control of his or her environment and defend it against attack"* A strong sense of territoriality is promoted by physical design that allows easy identification of definite area as exclusive domain of a particular individual or group. The ability to

defend one's domain must be coupled with the desire to do so. This desire is derived individually, from feelings of pride and ownership.

According to Gardner, ownership in this context does not essentially indicate a legal one. It can be and very often is a perceived ownership resulting from an individual's relationship with his or her environment. For instance office workers may have a sense of ownership for the office in which they work. Territoriality is achieved or enhanced by the use of buffers or walls around ones' property.

Surveillance

Gardner considered surveillance as the chief weapon in the protection of a defensible space. The ability of the lawful inhabitant of an area to exercise a high degree of visual control over the entire area increases the likelihood of criminal act being observed or reported. There is a minimal probability that criminals will act when there is a high risk of their actions being observed. He specified two forms of surveillance. These include: informal or natural surveillance and the formal or artificial surveillance.

- **Informal Surveillance:** - The environment and or buildings can be developed in such a way that it gives opportunities for informal or natural surveillance to occur. In the opinion of Gardner designs that minimize visual obstruction and remove place of concealment for possible assailant give better protection against crime. Some of the accompanied design strategies under natural surveillance as exemplified by Agbola (1997) include the following:

    a) *"Ensure that features of the landscape, such as trees, shrubs, flower beds do not block the vision of the legimate users of the property and do not create areas of concealment where intruders could hide to perform nefarious activities.*
    b) *Ensure that tree, telephone or electric poles or any other objects do not provide climbing paths to the upper levels of building.*

c) *Endeavour to use glazed windows, expansive windows or other forms of windows that allow a 'see through' whenever the occupants of building are in the house.*
d) *Ensure that the fencing materials eliminate blind spots or places of concealment".*

- **Formal or artificial surveillance** involves the use of different security devices or personnel to ensure visual control over space. Agbola (1997,) included the following in his list of artificial surveillance strategies:

a. *"The use of fixed guard (human guard) posts.*
b. *Organized security patrols, such as vigilante groups.*
c. *The use of security dogs.*
d. *Electronic monitoring which involves the use of electronic*" gadgets like cameras which are positioned in a protected place outside the building to note all activities taken place within viewing range and send signals into a terminal located inside the building. The most sophisticated of these electronic monitoring devices is Closed Circuit Television (CCTV). The use of artificial surveillance is effective in elevators, interior corridors, parking lots and exterior pedestrian pathways.

Lighting

Good lighting is one of the most effective crime determents. The proper utilization of lighting discourages criminal activity, enhances natural surveillance opportunities and reduces fear. Agbola (1997) discussed security lighting under four headings: the type, the colour, the qualities of a good lighting system and the importance of lighting as a security device. In respect of type, he identified searchlights, floodlights, bulbs, florescent tubes – in order of usefulness as a security device depending on the areas to be lightened. On colour, four major kinds of light were identified based on the amount and quality of colour they project. There are high pressure sodium (HPs), low pressure

sodium (LPS), metal halide, and mercury vapour –in increasing order of usefulness, whether in cost or effectiveness.

A good lighting system should allow for overlapping lights to ensure no area is left unlit within the defensible space. In the view of Gardner (1981) an effective lighting system should light-up the criminal without spotlighting the victim. Lighting creates a feeling of temporarity, reduces fear and creates confidence in users of a guarded space. It also encourages the feeling of ownership and proprietorship in the users. Lighting when used sufficiently could combine with other elements of CPTED to prevent criminal activities efficiently.

Lanscaping

Landscaping as an element of CPTED can be used to perform variety of design functions. It can be effectively combined with other elements of CPTED to ensure a protected environment. According to Gardner 1981) when landscaping is used as a symbolic barrier, it marks transition between zones. Landscaping features such as decorative fencing, flower-beds, ground cover, and varied patterns in cement work can clearly show separation between zones. The use of shrub such as evergreen hedges can be employed as substantial barrier in creating obstacles that are more formidable.

Gardner (1981) remarked that landscaping can be critical when viewed from the context of surveillance. In his conception such factors as growth, characteristics of plants and their replacement in relation to potentially vulnerable areas are extremely important. He stated that as a rule visual corridors can be maintained in open, park-like areas as well as in densely planted areas by limiting shrubbery to a maximum height of three feet and

trees to a minimum height of six feet at the lowest branches. The visibility between three and six feet from the ground will always be relatively unimpaired using this approach.

Another function of landscaping in crime prevention is aesthetics. An attractive or aesthetically pleasing environment generates a sense of pride and ownership in occupants which in turn aid their commitment to defend their spaces.

Physical Security Planning

Physical security planning as part of CPTED is not planned to produce an impenetrable fort, but to make access more hard and time-consuming. The extent of difficulty and length of delay are major factors in reducing the likelihood of crime occurrence (Gardner, 1981). The problem associated with physical security of buildings lies in the fact that their designers do not have adequate understanding of crime, criminals and how they operate. The ultimate success of a project will then rely on a good understanding of physical security and issues associated with it coupled with how to integrate these into design. Gardner remarked that the appropriate application of security hardware and the removal of security weakness from a structural standpoint can have a major impact on future crime trends.

Scare Tactics

Agbola (1997) included this in his report. He considered scare tactics as security elements that scare intruders from defensible space. Alarm systems, electric shock and sign like ‘Beware of Dogs’ can be used as scare tactics. Agbola (1997) added the use of African Traditional Protective Devices (ATPDs) (such as charms) to the list.

Gardner (1981) concluded his report by categorically stating that the use of CPTED cannot be restricted to public housing alone. It can be applied to effectively secure one building or an entire city. The study will examine the existence and application of these elements in the study area. The use of barriers in demarcation of defensible space as well as the level of surveillance coupled with instruments of surveillance will be examined.

2.2 LITERATURE REVIEW

2.2.1 CONCEPTUALISING CRIME

> *"There is no such thing as crime in the absolute sense. Definitions as to what crime is differs greatly from culture and at different times in history"*
>
> ***Bloch, 1952***

It is very difficult to give a generalized meaning to crime. Omisakin (1998) argues that a search for a valid universal definition of criminal activities is "chimerical". He explains that, the activities referred to as crime varies in respect to perpetrator, purpose, character and societal response to it. Criminal codes in all communities of the world (primitive or complex) vary greatly within that society and overtime.

According to Lectric Law Library Legal Lexicon (2002), crimes are either "mala in se" or "mala prohibita". They are "mala in se" when those acts are bad in themselves e.g. offenses against moral laws. On the other hand they are "mala prohibita" i.e. bad because they are prohibited as being against sound policy which unless prohibited

would be innocent or indifferent. All attacks against persons and properties are generally considered as “bad in themselves”.

Victims of such evil acts abhor them. Omisakin (1998) however, contended that there are more to crime legally and socially, than these acts. More to it because, many other acts are defined and sanctioned as crime and less because not all attacks against persons and belongings are coded and treated as criminal acts. There are some behaviours which violates commonly held norms and morality but are not necessarily subject to formal prohibition. These are called ‘deviance’. Some crime on the other hand are so ‘westernly’ labeled because they are acts which violates the norms of society’s more ‘powerful’ members. Such acts are legally prohibited and offender treated as guilty.

Majority of the common law offenses are well known and precisely determined as those which are defined by statues, yet there are problems of defining and describing correctly every act which are punishable. In some communities, the crucial and preserving principle adopted is that all immoral acts which tend to the prejudice of the community are punishable by courts of justice. Aguda (1994) thus described crime as a violation of law by committing illegal or criminal acts. This sounds like a formal definition which cuts across different cultures. It allows for objectivity in the conceptualization of crime as well as allows the use of set standards in different places and at different time as basis of judgment.

There are levels of crime. Felonies are regarded as crimes that are more serious while misdemeanours are less serious ones. Whether felonies or misdemeanours, the two are classified as wrongdoing punishable under the law, though the level of punishment differs. For the purpose of this study, crime is considered from the social as

well as the legal point of view. The crimes selected for study are all punishable under the law.

2.2.2. TYPES OF CRIME

Crime has been broadly categorized into four major classes (Omisakin, 1998, 17). These are:

(i) ***Crimes of aggression.*** *This includes murder and attempts wounding, kidnapping, suicide, manslaughter and assault. Offenses of rape, abortion and assault in the course of robbery are excluded from this category.*

(ii) ***Crime of acquisition****. This embraces all illegal means of acquiring money and property. White collar crime such as fraud and embezzlement are classified as a sub category here though analyzed separately from theft. In increasing order of seriousness, the following are placed in this class: larceny, burglary, house breaking, store breaking, unlawful possession and robbery. Counterfeiting and reception of stolen goods are also included in this group.*

(iii) ***Crime against morality and customs****. This includes sexual offenses and various "victimless crime". "Victimless crime" is defined by Swiencicki (2002) as crime committed against public decency and order. Offenses such as vagrancy, gambling and other behaviours considered to be disorderly, non-productive, or against prevailing standards of conduct are included in this group. Sexual assault, defiance and prostitutions are treated as sub categories of this group while drunkenness is another.*

(iv) ***Crimes against public order****. This include instances of overt resistance to authorities such as rioting, assault on police and other officials as well as prohibited political activities.*

It is possible for crime to be violent or otherwise depending on whether the use of force or threat was involved or not, thus there is need for a proper differentiation of violent and violent crime- a fact neglected by Omisakin in his classification. What type of crime can be categorized as violent and non violent crime? In answering this question Tanumo (1991) identifies violent crimes to involve the use of force or threats resulting from despair and desperation. The non-violent ones do not involve the use of threat or

force. This major deficiency was catered for in Swiencicki's (2002) work. He classified crime into three broad groups. These are:

- ***Violent crimes:*** *These are offences against person e.g. murder, homicide, manslaughter and assault*
- ***Property Crimes:*** *Crimes against property such as burglary, theft and autotheft are placed in this category*
- ***Victimless crimes:*** *This category includes all crimes committed against the public decency and order.*

Swiencicki's idea of using targets of criminal activities as basis of classification is in support of Sullivan's work. Sullivan (1996) classifies crime into two broad groups, viz: property and personal crime. He associated violence with personal crime. It is important to recognize that these works failed to acknowledge the possibility of violence being involved in property or victimless crimes.

One significant fact that needed to be registered here is that personal intuition or discretion seems to be the underlying factor behind all these classification. This study is however not interested in attempting crime classification but to investigate the occurrence of crime whether violent or otherwise committed against person, property and the general public within the various residential densities of the town. For the purpose of this study violence is considered as the way or manner by which crimes are committed, that is, through the use of force or threat. The categorization employed is borne out of the researcher's ingenuity and lessons from these authors.

2.2.3 URBAN RESIDENTIAL DENSITIES

The past few decades had witnessed the formulation of models and theories attempting to explicate the inner spatial structure of cities. These include: the concentric zones (Burgess, 1927); the sector analysis (Hoyt, 1939); multiple nuclei (Harris and

Ullma, 1939); social area analysis (Shevky and Bell, 1955); factorial ecology (Berry and Horton, 1970); micro-economic theory (Wingo, 1961 and Alonso, 1964). These models have been used in various capacities in the study of urban spatial structure of cities. For instance, in the application of factorial ecology to North America and British cities, three dimensions of variations were noticed (Nelson, 1969). These are:

(a). the axial variation of neighbourhoods by socio-economic rank;

(b). the concentric variation of neighbourhoods according to family structure; and

(c). the localized segregation of particular ethnic groups.

It has however been argued by Ayeni (1979) that the applicability of these models to cities in other parts of the world is limited (if not nil) majorly because of cultural differences and differences in societal value systems. Nevertheless, they have been helpful in identifying the different land uses inherent in the urban space. One of such uses is the residential land use which is of significant interest in this study.

There have been extensive research efforts at analyzing the location and structure of residential areas in the Nigerian cities (Mabogunje, 1968; Okewole, 1977). Onokerhoraye and Omuta (1986) however noted that these indigenous studies failed to agree in totality with the sociological and economic explanations of residential structure location implicit in the theories and models highlighted above. Nevertheless, they identified three major categories of residential areas, which are distinct in social as well as physical patterns. These are low, medium and high quality residential areas.

Adeboyejo and Onyeonoru (2003) explained that the differentiation of the urban landscape into residential densities is an unavoidable consequence of urban development and a resultant effect of the complicated process involved in individual and

family choices and preferences of housing needs, financial capabilities, existing housing supply, communication (information flow) and housing market manipulations. Residential densities differ from each other in physical structure, housing quality, ownership patterns, household structure, and environmental quality, among others. Boskoffs (1962) opined that there are instances where pockets of individual dwelling units exhibit distinctive characteristics in sharp contrast to the general features of the residential areas where they are located. Instances of this are observed in some cities where few rich individuals choose to remain (or locate) in the old familiar (core) residential area rather than relocating in spacious suburbs. Notwithstanding the conclusion holds that there are generally three noticeable residential zones. The features of these residential areas as exemplified by Onokerhoraye and Omuta (1986) are documented as follows.

High Density Residential Area

The high density (or low quality) residential areas are either found in the heart of the cities or at the suburbs. These areas are commonly characterized by aged buildings (built from local materials such as mud burnt bricks) which are closely packed and linked with narrow footpaths. Housing is overcrowded, unsanitary and dilapidated. The areas lack adequate infrastructural facilities and other necessities. The area is best described in the words of Onibokun (1972) as “island of poverty in the sea of relative affluence” while its resident are said to be *“massed in the unkempt and often squalid parts of the cities, living under conditions that are at times subhuman and sharing sub-standard houses in areas which by any standard are slums”*.

Generally speaking, the areas are occupied by low income earner with distinctive socio-economic attributes. This includes low western education, low income as a result of being engaged in low paid occupations such as house servants, gatemen, messengers, craftsmen, traders, labourers, mechanics and painters (Onokerhoraye and Omuta, 1986). Sometimes these people are interspersed with rich traders, which oftentimes are indigenes. The area offer low rent accommodation, which is a major reason why the poor locates there easily.

Medium Density Areas

These areas developed in response to housing need of the growing middle grade income households who are employed in the formal sector of the urban economies. In some parts of this area evidence of western or modern day planning standards is reflected in the organization of buildings, road layouts, building type and materials, provision of in-house facilities and other infrastructural facilities. The building densities as well as the number of occupants per house are smaller than in the high density residential areas. The houses are occupied by indigenes or other immigrants who may be tenants or landlord. The area accommodates largely, the middle income earners, although there are considerable numbers of lower and upper income groups. Majority of the resident are either teachers, higher clerical officers in governments and private establishments, middle level technical officials, policemen e.t.c. Their level of education ranges from primary to post secondary education (Certificate training, NCE, OND).

Low Density Residential Areas

The area comprised the Government Reservation Areas, GRA (the former abode of the colonial masters) and recently laid out housing estates, government and

family layouts. The housing environment is in sharp contrast to other residential areas. The buildings are well arranged, properly linked with roads, with neat surroundings and adequate in-house facilities. The housing density and population per dwelling unit is smaller than in other densities. The residents are the upper socio-economic group with high education and “highly placed” occupations such as higher clerical officers, business tycoons, professionals in different fields, lecturers, top officials in government and private establishments e.t.c. The ethnic composition is heterogeneous including non-Nigerians.

It is necessary to conclude this section by stating that the internal structures of cities are never static. Every town passes through a twin process of growth i.e. the outward extension and the internal restructuring (Smailies, 1970). Each town adds new fabric outside in the form of enlargement and within in the form of replacement. In the three residential areas, old buildings are always replaced by new ones specially consummated with current standard and for new function or the previous one while deteriorated areas (slums) undergo urban renewal process in some countries. This process is continuous but never complete.

Are these highlighted features the same in Ogbomoso? If yes, what effect has these on the incidence of crime in the city? These and many other questions will be answered in this study. Before, it is appropriate to explore the literature on the link between the highlighted spatially varied social, economic, physical and demographic characteristics and the incidence of crime in the various residential areas.

2.2.4 CRIME OCCURRENCE AND RESIDENTIAL AREAS

Previous studies have shown that there is a relationship between residential density and incidence of social problems or social pathologies (Faris and Dunham, 1939; Bagley et al, 1976; Giggs, 1973) among others. For instance the study of McKay and Shaw (1942) showed that juvenile delinquency conforms to a regular spatial pattern; with the highest rates at the inner-city zones and a declining rate with declining distance from the centre. Also, (Afon, 2001) in his analyses of occurrence of criminal activities in Ilorin, found that all categories of crime investigated occurred more in the high density residential area. Nonetheless, some criminal activities are peculiar to certain densities with different degrees of occurrence. This is attributed to the varying social and economic attributes of the residents as well as the environmental characteristics of the residential areas. 'House breaking' was observed to be more in the low density residential area than in the remaining two densities as a result of 'lack of capable guardian' during the day, when 'routine activities' would have caused people to move from their residences to other places thereby rendering the whole area a 'ghost zone'. This is supported by earlier findings (Wikstrom 1991; Aguda, 1994).

Using police record of offences in Stockholm, Wikstrom's study revealed that residential burglaries occurred more in areas of high socio-economic status while family violence are more in poorer public housing areas. He also noted that 'violence in public', vandalism, and theft of and/or, from cars, clustered around the city centre. These findings are not unique in the literature. Some other findings are slightly different. A good example is the study of Agbola (1997) in Lagos, where the incidence of burglary and other crimes such as armed robbery, loitering, street fighting, hooliganism,

prostitution, drug dealing and gambling are found to be more in the high residential density (22.11%) and decreases through the medium (19.49%) to the low (16.99%) density residential areas. These studies conclusively demonstrate that first, there are remarkable geographical variations in the patterning of crime locations and secondly, these variations differ in regards to type of crime. The current study however move ahead to investigate the occurrence of crime in each residential densities using Police crime record which is considered more reliable than residents' declaration or perception of crime occurrence – the path taken by earlier studies.

2.2.5 CAUSES OF CRIME

The causes of crime and violence are by and large similar all over the world" (Obateru, 1994). Shaw and McKay (1942) in seeking to explain their findings on juvenile delinquency focused on the observed cultural heterogeneity and the constant population movements in areas characterized by economic deprivation and physical deterioration. These factors were accounted to have significant influence on delinquency through a process, which they called "social disorganization". This process as seen by Shaw and McKay was later summarized by Finestone (1976) in a passage worth presenting in its originality:

> *"The same selective process which made it relatively easy for the first generation of newcomers to the city to become aggregated in inner city areas also permitted the location there of many illegitimate enterprises and deviant moral worlds. Such moral diversity within inner-city areas meant that it was difficult if not impossible for immigrant communities to insulate themselves from illegimate criminal enterprises and influences. In the face of many*

> *centrifugal pulls, the traditional institutions, the family, the church and the local community became incapable of maintaining their solidarity. Their inability to organize effectively in defense of conventional values meant that they were unable to resist or limit the influence exercised upon their youth by the diverse value system which became rooted in such areas. Continued high rates of delinquents in inner-city areas were a product of the joint operation of locational and cultural processes which maximized the moral diversity of population types at the same time as they weakened the collective efforts of conventional groups and institutions to protect their own integrity."*

Hence in the thought of Shaw and McKay, social disorganization results from the incapability of the structure and culture of a community to employ and express the values of its own residents. This was seen as the beginning of juvenile delinquency since the community did not offer common and clear non-delinquent values and control as their population increases. The locational factor is seen as a serious contributing factor.

Obudho and Owuor (1994) in their study titled "Urbanization and Crime in Kenya" attributed the criminal activities in Kenya to sociological, economical, cultural and political issues. Prominent among these issues is the problem of poverty, urbanization, unemployment, congestion, squatter and slum development and polarization of urban residents along economic, educational and cultural lines.

In Nigeria, among the major causes of crime as exemplified by Omisakin (1998) include a faulty system of education, erosion of traditional values, inadequate homes, poverty and unemployment, urbanization and industrialization and environmental influences. He also attributed the increasing crime rate to an increasing level of development. This he relates to poverty and unemployment arguing that the more unemployed people are, the more they are tempted to commit crime in order to satisfy their needs. Given a final note on this issue, he stated that "…*economies are being*

exploited by individuals who have the ability and capacity to organize crime as business taking advantage of the unemployed frustrated majority"

Agbola (2002) added to this list by highlighting the major causes of crime in Abuja (FCT), to include poverty deriving from marginalization and exclusion, dysfunctional families with uncaring, repressive and abusive parents, corruption, drug and women trafficking, prostitution, social acceptance of the culture of violence imported from foreign films and violent role models, discrimination and degradation of the environment, collapse of traditional ethos and morality which has acted as buffer in the past but which has become discussed in contemporary times. He also emphasized the social exclusion and discrimination which pervades the supply of urban social services between Abuja Municipal (where the rich lives) and satellite towns (occupied by the low and medium class) with the resulting feeling of deprivation by the poor and the release of anger and frustration through violent activities. The planning and the design concept of Abuja were also recognized as a contributing factor to the level as well as type of crime experienced in the city. Although the city was initially designed based on neighbourhood concept with security consideration as one of its key elements but its development gradually negates this. The structure of most of the residential buildings do not allow for surveillance of their public areas as well as their surroundings. Room is therefore given to criminal activities especially when residents must have gone to work. Crime against properties is thus the most common in the city. Onokerhoraye and Omuta (1986). The issue of insecurity in the peri-urban areas of Ibadan is linked with the problems of non-availability, inaccessibility and unreliability of security facilities and services, overcrowding, inability of the local councils concerned to provide required amenities,

inadequate public transport modes as well as the remoteness of these areas from other parts of the city which placed them in a vulnerable and helpless situation in time of crises i.e. criminal attack. (Adeagbo, 2001).

Summarily, the causes of crime highlighted in the studies reviewed above falls under the sociological, economic, cultural, demographic and political problems all within the context of the physical environment. The intensity of these problems however varies with individuals and with groups within various residential areas. For instance while elaborating on the type of residential quarters earlier in this discussion, it was stated that the problem of congestion or overcrowding, poverty, inadequate provision of facilities, unemployment, squatter and slum development are features of the low quality residential areas. This area thus breeds deviant subcultures as well as expose residents to criminal and violent activities. Following the same line of thought, the social, economic, demographic and environmental attributes of the high quality residential areas placed them in a vulnerable position especially in fast growing urban centres where they are distinctively located from other areas and are vividly seen as attractive targets.

2.2.6 EFFECTS OF CRIME

It is essential to note that crime and its consequences (such as fear) have significant reciprocal effects on individuals as well as the community structure and organizations. These effects are otherwise known as the cost of crime. The cost of crime may be monetary or social. It can also be direct or indirect (Sullivan, 1996). From these basic categories, Agbola (1997) formed four combinations. These are direct monetary, indirect monetary, direct social and indirect social costs.

Direct monetary cost as contained in the report of Reynolds (1986) include, personal, property and business losses during criminal attacks. It also include medical expenses for the injured, the intangible cost of loss of lives, pain suffered and all other cost incurred in direct response to crime such as cost of moving as a result of victimization, psychological counseling, increased insurance premium as a result of filing claims e.t.c. The costs incurred by potential victims in trying to prevent crime are classified as indirect monetary cost. These include money spent on locks, guard dogs, and other prevention measures, taxes paid to support society's crime prevention programs (the police, the court system and prisons).

The direct social cost according to Agbola (1997,) is the social effects of crime on victims. The fundamental one is the fear of crime that is generated in people by a belief that one's chances of becoming a victim is high (Kennedy and Silverman, 1985). Fear of crime may be as strong as victimization itself. The study of Camerar et al (1998) in Cape Town confirmed that there is a little difference in the levels of fear between victims and non-victims of crime. Fear of crime produce anxiety, which brings adjustment in people's lifestyles featuring isolation, hostility and individualism. People might because of fear of crime change their residence, jobs, associations or even build their houses with specific designs. These however, have a feedback effect on the community life. Such effects according to Sampson (1995) include:

(i) Physical and psychological withdrawal from community life.
(ii) Weakening of the informal social control processes that inhibit crime.
(iii) Decline in the organizational life and mobilization capacity of the neighbourhood.
(iv) Deteriorating business conditions.
(v) Importation and domestic production of delinquency and deviance.
(vi) Further dramatic changes in the composition of the population.
(vii) Abandonment of urban neighbourhoods.

(viii)Business relocation to the suburbs.
(ix) Loss of economic revenue.
(x) Decrease in economic status and property value.
(xi) Increasing levels of fear in central cities and racial isolation.

These costs are not the same for individual victims. It depends on the type of crime suffered as well as its intensity (brutality) which in turn varies over space depending on social, economic, demographic and environmental attributes of the victim and/ or his/her residential area.

The fourth type of cost is the indirect social cost which refers to the social (including environmental) effects of security devices installed to mitigate crime. These include separation from social life by living inside a tall walled building, the disturbing howling of security dogs, the prison-like burglar proofing materials which make escape from danger (such as fire outbreak) difficult, and so on.

The unprecedented crime rate; the insurmountable problems associated; the apparent inability of the criminal justice system to cope with this social maladjustment coupled with urban dwellers' realization of how vulnerable their lives are, led residents into fashioning various means of protecting themselves and their properties. The following section centres on response to crime.

2.2.7 RESPONSE TO CRIME

Four notable categories of response to crime are identified in the literature: crime control through the convectional justice system (Walklate, 1996; Shaftoe, 2002); social crime prevention (Aguda, 1994; Shaftoe, 2002), and Crime Prevention through Environmental Design (CPTED), which is of particular interest to this study. Whichever form it assumes, Walklate (1996) highlights some questions to be answered such as what

are the main features of these responses? How are they formulated? What dictates their formulation? How does this set the pace for their subsequent development?

The Criminal Justice System

This approach is the most commonly used in crime control. Yongcho (1974) described this approach as one, which involves the entire array of government institutions that functions as the instrument of a society in enforcing the standard of conduct needed for the protection, safety and freedom of individual citizens, and for the maintenance of order. The task involves detecting, apprehending, prosecuting, adjudicating and sanctioning the deviants. This method has been referred to as offender-centered strategy (Walklate, 1996). It embraces two points or two lines of thoughts: those who adopt a tough stance on law and order and those who favor a soft approach (Walklate, 1996). Those supporting a tough stance are really invoking the use of the crime justice system as a deterrent. The second camp viewed that prison are about rehabilitation: not punishment.

Walklate remarked further that whether the 'firm' or the 'malleable' approach, the criminal justice system of crime control has a palliative and not a preventive role. Criminals are only apprehended and punished or rehabilitated after crime must have been committed. This method presume that the cause of offending behavior lies within the individual, who, once having learned the "error of their ways" will cease to offend in the future.

Shaftoe (2002) expressed concern on this method and concluded that a saturation point will soon be reached where putting more resources into policing, incarceration will not only produce diminishing returns but lead to negative consequences for the quality of

life of the population as a whole-since this method is only designed to address symptom not the root of the problem. Considering the fact that personality, attitudes and moral sense predispose some individuals to commit crime, this strategy is more or less effective with particular offenders at particular times. In addition, the utility of this strategy as crime prevention strategy is significantly limited by the conjecture that the cause of crime lies within individual pathology. Walklate concluded by emphasizing that, the causes of crime are more social in origin and that offender-centered strategy is not designed to address this.

Social Crime Prevention

This is a relatively new approach of crime prevention based on the assertion that there is a well- recognized body of research that can isolate factors that contribute to crime. Sociologist and Victimologist pioneered this approach. What does 'social crime prevention' consist of?

Social crime prevention in the words of Shaftoe (2002) consist of "*an interlocking series of interventions that enable people to lead a life where they do not have the inclination, motivation or need to offend against others, whether for expressive or acquisitive reasons"*. He highlighted the elements of a comprehensive social crime prevention programme to include the followings:

- *Support for parents before and after childbirth by health workers.*
- *Parental skill training and family support, by people trained in developmental psychology.*
- *Personal, social and moral education in schools.*
- *Adequate play and youth activities (of the type that children and young people want).*
- *Training and development for useful or meaningful work.*
- *Supported accommodation for people with particular needs or vulnerabilities.*

- *Help to overcome or reduce the damage caused by alcohol and other drug dependencies.*
- *Community based conflict resolution services.*

This approach has been suggested by various authors (Aguda 1994, Obateru 1994). For instance Aguda recommended social restructuring – total restructuring of the national economy so as to provide equal access to basic necessities of life such as food, shelter, clothing, employment. However as laudable as this strategy may be, it should be noted that the role played by the environment in the occurrence of crime cannot be undermined. It is the built environment that provides the framework where crime can be made more or less easy, as such effective crime control must have a strong bearing on the environment. This leads the discussion to the next preventive measure which is the major preoccupation of this study.

Crime Prevention Through Environmental Design (CPTED)

This is an environment-centered strategy which is majorly concerned with manipulation of the environment so as to disallow criminal incidences (Agbola, 1997). According to Walklate (1996) this strategy includes the definite targeting related with situational crime prevention and the more common approach of 'designing out crime'. The goal of this crime prevention programme is to reorganize the environment in order to lessen the chance for crime to take place. The strategy presumes that the built environment provides the impulsive structure where crime can be made more or less easy.

The pioneers of these approaches are Jacobs (1961) and Jeffery (1971). Its famous exponent is Newman (published in Stein, 1995) but Gardner (1981) and Coleman (1985)

has worked more comprehensively on it. Jacobs (1961) is of the opinion that there is a relationship between the physical environment and criminal behaviour. She disputes the general assertion that high density correlates with "trouble" and overcrowding and made a distinction between dense concentrations of dwellings and dwellings that are overcrowded. In her own view the development of activity areas within the city, such as commercial, industrial, financial, educational etc results in reduction of surveillance of streets and other public areas. As a consequence of this there is decreasing community cohesion, feeling of territoriality and the responsibility for one's neighborhood. Angel (1968, cited in Jeffery, 1977) followed the line of thought presented by Jacob. He stated that crime rates have relationship with the social and physical environment, territoriality, accessibility and the behaviour of victims. His findings on the city of Oakland show that crime takes place in areas where the intensity of pedestrian use of street is at critical level. He assumed that areas with minimal use would have a low crime rate because they lacked victims; areas with high use would have a low crime rate because of surveillance factor. Angel acknowledged witnesses, surveillance and community awareness as major solutions to problem crime.

Newman's work "Defensible Space Theory" attracted recognition in the 70s and years later. Details of information on the work of Newman and Gardner are provided under the theoretical framework.

2.2.8 RESIDENTS' RESPONSE TO CRIME IN NIGERIA

Communities and individuals react to crime in Nigeria mostly from the perceived ineffectiveness (or otherwise) of the criminal justice system in combating crime and insecurity in their areas (Agbola, 2002). Several studies have shown that residents' responses to crime in Nigeria are of various forms including crime reporting to police (though waning in use), individual preventive measure and collective activities against criminal occurrences.

Agbola (2002) wrote to explain the reaction of Abuja residents to crime. Included among individuals' attempt at controlling crime are: construction of high walls around residences, construction of massive gates and strong locks, installation of lighting facilities at every corner of the residential environment, use of African power called "juju" or charm. On the community level or collective level, night watchmen are employed to keep watch on neighbourhoods, gates are installed on streets, bumps or speed breakers are put on streets. Others include the use of warning signs to restrict movement and the use of community security check points. Vigilante groups (a variant of night watchmen) are used in some communities such as Kubwa and Dutsen-Alhaji. He also stressed that most cases are handled by the police. An interesting characteristics noted among Abuja residents is that they do not express apathy to happenings around them. He attributed this attitude to their level of exposure and enlightenment. They are actively involved in dealing with cases of apprehended criminals to the extent of lynching culprits but they hardly murder them.

Earlier before this period, it had been revealed by a study that a response to crime in Ilorin varies within the residential densities (Afon, 2001). This includes the use of

African protective power- “juju” referred to as ATPDs by Agbola (1997) and the use of vigilante groups and night watchmen in the core areas. Responses in the medium and low density residential areas are more varied and sophisticated. These include the use of dogs, insurance schemes, high fence walls, special security door locks, burglar alarms, police patrol, window and door grills which are either not in existence or not popular in the core areas. Other responses to fear of crime expressed by the study include the use of barriers across some designated roads within specific period of the nighttime, the use of guns and total reliance on God: the Almighty for protection. The variations in responses were attributed to varying social and economic characteristics of the residents.

Agbola (1997) identified residents’ response to crime in Lagos to include fencing, burglary proofing, surveillance, alarm system, guard dogs, security dogs, security guards, lighting, close circuit TV, African Traditional Protective Device(s) (ATPDs). The commonly employed method out of all these is lighting according to the study. The next one is burglary proofing followed by fencing while the least used is close-circuit system. It was stressed that some houses were remodeled in order to incorporate these security devices. He however identified variations in the rate at which residents remodeled their houses for this purpose. A large proportion of the remodeled buildings are in the high density residential quarters.

The current study will not only examine these preventive methods but will also identify their variations within the three residential areas. The factors responsible for the varying responses (if any) will also be identified.

CHAPTER THREE

SOCIAL, ECONOMIC AND ENVIRONMENTAL ATTRIBUTES OF RESPONDENTS.

3.1 SOCIO-ECONOMIC ATTRIBUTES OF RESIDENTS

The socio-economic attributes of the inhabitants of Ogbomoso can be explained empirically with the information obtained during the survey in respect of sex, marital status, educational attainment, occupation, income, home and car ownership.

3.1.1 Intra Urban Variation in Sex Distribution

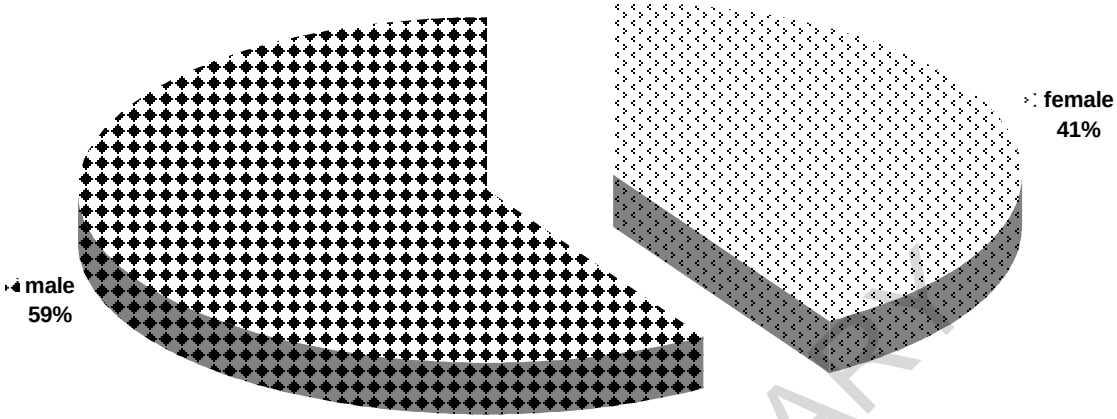
The bulk of the respondents were male (58.8%) compared with the proportion of female (41.2%). There is a little variation in the distribution of both sexes among the residential areas as shown in table 3.1. While the proportion of males was 54.9, 63.2 and 61.8 percent respectively in the high, medium and low density areas, the corresponding percentages for females are 45.1, 36.8 and 38.2 percent. The chi-square analysis performed (P>0.05) indicates that the difference in sex distribution as observed above is not significant at 0.05 level of significance. The implication of this is that the sex distribution of residents in the three residential areas will not be a major source of variation in subsequent observations.

Table 3.1: Intra Urban Variation in Sex Distribution

Urban Residential Areas	Male (%)	Female (%)	Total (%)
High	46.7	54.8	50.0
Medium	35.8	29.8	33.3
Low	17.5	15.5	16.7
Total	58.8	41.2	100

Source: Authors' Field Survey (2004)
Differences not significant at 0.05 level of significance.

Figure 3.1:Sex Distribution of Respondents



3.1.2 Spatial Variation in the Marital Status of Respondents

The analysis of marital status of respondents shows that bulk of the respondents are married (56.4%) followed by the single population (30.4%), then the widowed populace (9.1%) and the divorced which is 2.7% (see table 3. 2).

Considering the residential densities, greater majority of all the categories except the singles live in the high density residential areas with 61.3, 15.1 and 4.5 percent for married, widowed and divorced groups respectively. On the other hand, the medium density area accommodates the married, widowed and the divorced in the proportion of 54.1, 3.0 and 1.5 percent respectively compared with 47.3, 4.1 and 0.0 percent in the low density area. The analysis revealed that the singles dominates the low and medium density areas with 48.6 and 47.3 percent respectively compared with 18.1 percent in the high density area. The chi-square analysis performed indicates that the difference noted is significant ($P<0.05$). The implication of this is that there is a significant relationship between marital status and the section of the city where respondents live. This will undoubtedly influence further analysis, especially residents'

response to crime in respect of territoriality and surveillance. It should however be noted that the analysis of data from the North Local Government conforms to this general conclusion while data from the South Local Government area deviates from it. The first point of deviation in the South Local Government area is evident in the concentration of the married and widowed populace in the high density area with 70.1 and 9.3 percentages compared respectively with 6.8 and 8.8 percent in the low density and 59.7 and 1.5 percent in the medium density area. Another point of deviation from the general picture is the concentration of the single (32.8%) and divorced (3.0%) population in the medium density area compared with 29.4 and 0.0 percent in the low density and 19.6 and 1.0 percent in the high density area respectively. The chi-square analysis performed in respect of South Local Government area gives an indication that there is no significant relationship between one's marital status and where he or she resides (P>0.05).

Table 3.2: Spatial Variation in Marital Status of Respondents.

Status	High (%)	Medium (%)	Low (%)	Total (%)
Single	18.1	38.5	48.6	30.4
Married	61.3	54.1	47.3	56.2
Widowed	15.1	3.0	4.1	9.1
Divorced	4.5	1.5	0.0	2.7
No Response	1.0	3.0	0.0	1.5
Total	100	100	100	100

Source: Author's Field Survey (2004)

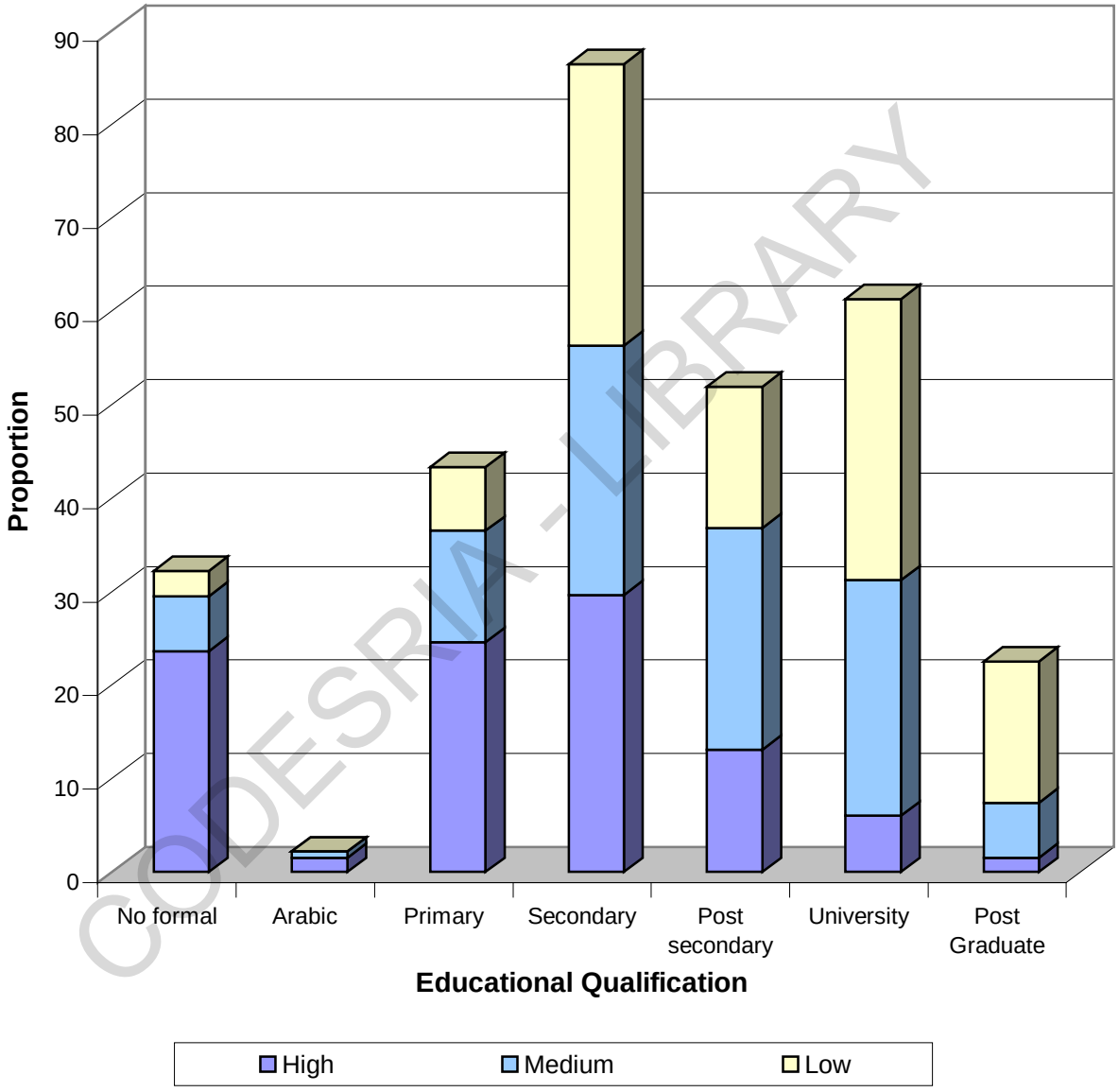
Differences are not significant at 0.05 level of significance.

3.1.3 Spatial Variation in the Educational Attainment of Respondents

The largest percentage (28.7%) of the respondents has secondary education, followed by those with primary education (17.2%) then those with post secondary education (17.0%). While 16.7 percent of the respondents have university education, a small percentage (22%) has postgraduate education (see figure 3.2). Only 1 percent has Arabic or koranic education. A significant proportion has no formal education (14%). Bulk of the respondents who fall within the group of no formal, Arabic, and primary education with 23.6, 1.5 and 24.6 percent respectively live in the high density residential area compared with 5.9,0.7 and 11.9 percent in the medium density and 2.7,0.0 and 6.8 percent in the low density area. An equal proportion (30.1%) of residents with secondary and university education lives in the low density area compared with corresponding 29.6 and 6.0 percent in the high density area and 26.7 and 25.2 percent in the medium density area respectively. A greater proportion of those with post secondary (23.7%) live in the medium density residential area compared with corresponding 15.1 and 13.1 percent in the low and high density residential areas respectively. A significant proportion of respondents with postgraduate education locate in the low density area (15.1%) and the medium density areas (5.9%) compared with 1.5 percent in the high density residential area Summarily, higher educational qualifications are identified with low density residential area followed by medium density area compared with high density area. The differences noted are confirmed to be significant with chi-square analysis performed ($P<0.05$). The implication of this is that there is a significant relationship between educational attainment and residential areas. In other words, respondents' level of education has an influence on their choice of residential area. As such educational qualification increases with decreasing density of development and vice versa. This result will definitely introduce a major source of variation in subsequent analysis, especially in the type of occupation residents does in their various

residential areas. None of the local government area shows a deviation from this general picture.

Figure 3.2:Spatial Variation in Respondents' Level of Education



3.14 Spatial Variation in the Employment Status of Respondents

Almost half of the respondents (41.7%) studied are of the occupational type titled 'private sector unorganized' (see table 3.3). This group embraces all artisans and traders. The

student's population (18.6%) is the next largest population then the 'private sector organized' (13.5%) i.e. those who on private level involve in white-collar jobs. 10.3 percent of the respondents are involved in public service while half of this i.e. 5.1 percent are farmers. Closely following these groups are the retiree/pensioners with 4.9 percent. Almost equal proportion of the residents sampled i.e. 2.2 percent are unemployed seeking or not seeking employment. Only 1% is clergy. The category referred to as unemployed not seeking employment are set of people who are not on any job yet seeking for none e.g. full time house wife.

In line with expectation, the greatest proportion of respondents who are engaged in jobs coded as 'private sector unorganized' (52.3%) are found in the high density residential area. The observation is the same for farmers, retiree/pensioners, unemployed seeking employment and unemployed not seeking employment with 9.0, 7.5, 3.0 and 3.5 percent compared with 2.2, 2.2, 2.2, and 0.7 percent in the medium density area respectively. Contrarily, the low density residential area has the least figure for all these groups. Those who are involved in ministerial work (clergy) dominate the low density area with 1.4 percent compared with 1.0 and 0.7 percents in the high and medium density areas.

An interesting observation is that the greatest proportion of students i.e. 41.9 percent locates in the low density area compared with corresponding 20.7 and 8.5 percents in the medium and low density area respectively. This is attributed to the location of Ladoke Akintola University of Technology in Ogbomoso. It was observed that majority of the elaborately designed buildings erected at the city suburbs are rented out to students for higher economic returns. Another interesting fact revealed by the analysis is that 17.0 and 21.5 percent of the respondents who are involved in private sector organized jobs and public service reside in the

medium density area followed by 13.5 and 8.1 percent in the low density area and 11.1 and 3.5 percent in the high density area. The findings conclusively indicates that highly rewarded white collar jobs are identified with medium and low density areas while unemployment and low paid jobs are found more in the high density residential area. This is probably a consequence of residents' level of education. This is expected considering the high level of education recorded in the low and medium density as discussed in the preceding section.

The above explained variations are however confirmed to be significant with chi-square analysis ($P<0.05$). This indicates a significant relationship between residents' occupation and residential density. With the variation recorded in respondents' level of education and occupation there is likelihood of recording variation in further analysis. Separate analysis of the two local government areas agreed with this general picture

Table 3.3: Spatial Variation in Respondents' Employment Status

Occupational Type	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Private sector organized	11.6	17.0	13.5	13.7
Private sector unorganized	51.8	31.9	31.1	41.4
Farming	9.0	2.2	0.0	5.1
Public Service	3.5	21.5	8.1	10.3
Retiree/Pensioner	7.5	2.2	2.7	4.9
Student	8.5	20.7	41.9	18.6
Clergy	1.0	0.7	1.4	1.0
Unemployed seeking employment	3.0	2.2	0.0	2.2
Unemployed not seeking employment	3.5	0.7	1.4	1.0
No response	0.5	0.7	0.0	0.5
Total	100	100	100	100

Source: Authors' Field Survey (2004)

Differences are significant at 0.05 level of significance

3.15 Intra Urban Variation in the Income Distribution of Respondents

Analysis of the income level of respondents showed that 69.4 percent of the respondents earn less or exactly #7,000:00 per month followed by 12.8 percent who earn between #7,001:00 and #15,000:00, then 6.6 percent who earn between #15,001:00 and #23,000:00 (see table 3.4). The proportion of respondents who earn #23,001:00 - #31,000:00 and #31,000:00 - #39,000:00 are 4.7 percent and 4.9 percent respectively. Those who earn more than #39,001:00 are 4.9 percent in number.

Table 3.4: Intra- Urban Variation in Respondents' Level of Income

Income Group	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
≤ #7,000.00	81.4	51.9	70.6	69.8
#7,001.00-#15,000.00	8.8	20.0	10.3	12.8
#15,001.00-#23,000.00	3.9	11.1	5.9	6.6
#23,001.00-#31,000.00	3.9	5.9	4.4	4.7
#31,001.00-#39,000.00	0.5	3.0	0.0	1.2
≤ #39001	1.5	8.1	8.8	4.9
Total	100	100	100	100

Source: Authors' Field Survey (2004)

Differences are significant at 0.05 level of significance

In line with expectation, further analysis revealed that a significant proportion (81.4 %) of the respondents in the income group of <#7,000:00 are found in high density residential areas compared with 70.6 and 51.9 percent in the low and medium density area. An interesting discovery is that bulk of respondent within the income groups of #7,001:00 - #15,000:00; #15,001:00 - #23,000:00; #23,001.00 - #31,000.00 and #31,001:00 - #39,000:00 representing

20.0,11.1,5.9 and 3.0 percent respectively resides in the medium density residential areas. On the other hand 12.3, 7.0, 5.3 and 6.0 percent of these groups respectively resides in the low density area followed by 9.7, 3.4, 4.0 and 0.6 percents in the high density area. Majority of the respondents earning exactly or more than #39,001 lives in the low density area with 12.3 percents compared with corresponding 9.2 and 1.1 percents in the medium and high density area. Conclusively, the proportion of residents which can be referred to as very low income earner (≤#7000:00) resides significantly in the high density area. Contrarily the residents within the higher income group concentrate in the low density area. Lastly, the medium income groups are found mainly in the medium density area. Concisely, the study observed that monthly income tend to increase with decreasing residential density and vice versa. The chi-square analysis performed confirmed the significance of the variation ($P<0.05$) observed.

The implication of this is that there is a significant relationship between residential density and income. The income group of people determines where they reside in the urban environment of Ogbomoso. This is without much debate as this could be observed in Nigerian urban centres where specific areas are dominated by certain socio-economic stratum. The rich inhabit high browse areas while the poor are massed in slums and squatter settlements. This observation promised to introduce significant variation on further analysis especially occurrence of crime in various residential densities.

3.16 Intra Urban Variation in the Occupancy Status of Respondents

The bulk of the respondents are tenants (61.5%) compared with 35.0 percent who are property owners. This is followed by 3.2 percent who falls under the category 'others' representing those who are not in the stated categories such includes respondents living in their family building. The proportion of landlords (44.2 %) living in the high density residential area is more than that of the medium density area (31.9 %), while those in the low density area

are almost half i.e. 16.2 percent of the landlords living in the medium density area (see table 3.5). Significant proportion (82.4%) of the tenant population dominates the low density area while in the high density area the margin between the tenant (51.3%) landlord (44.2%) population is not too wide. This is attributed to the fact that majority of the students and or youths and LAUTECH staff (who are majorly tenants) locates in the suburban region of the city.

The Chi Square analysis done showed that the variations noted above is significant ($P<0.05$). This implies that residents' occupancy status varies in the three residential areas. Thus, there is a significant relationship between occupancy status and residential area in Ogbomoso. This has a further implication on other analysis in the study.

Table 3.5: Intra Urban Variation in Respondents' Occupancy Status.

Occupancy type	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Tenants	51.3	65.2	82.4	61.5
Landlords	44.2	31.9	16.2	35.0
Others (family)	4.5	2.2	1.4	3.2
No Response	0.0	0.7	0.0	0.2
Total	48.8	33.1	18.1	100

Source: Authors' Field Survey (2004)
Differences are significant at 0.05 level of significance

3.17 Intra Urban Variation in Car Ownership

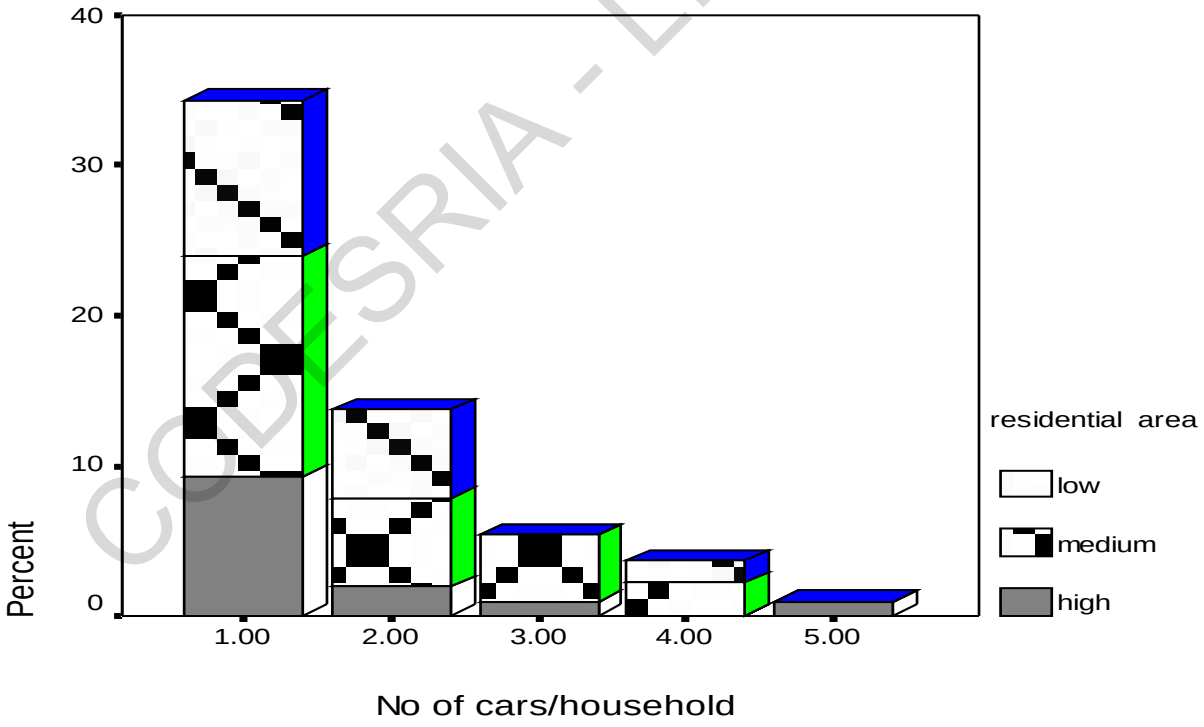
Ownership of car/vehicle is taken as one of the signs of affluence in an urban setting. It is also one of the targets of "property criminals" as such its variations in an urban setting may have further implications for the rate of occurrence as well as residents' response to property crime.

Table3.6: Intra Urban Variation in Respondents' Car Ownership Status

Car ownership	Residential areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Yes	13.1	26.7	21.6	19.1
No	83.9	73.3	78.4	79.4
No response	5.2	0.0	0.0	1.5
Total	48.8	100	100	100

Source: Authors' Field Survey (2004)
Differences are significant at 0.05 level of significance

Figure 3.3: Number of cars owned per household



The analysis showed that 10.1 percent of respondents are in possession of vehicles out of the total number enumerated. The greatest proportion (26.7%) of residents with cars resides

in the medium density area compared with 21.6 percent in the low density residential area and 13.1 percent in the high density residential district (see table 3.6).The variation noted was confirmed to be significant with Chi-square analysis performed ($p<0.05$). This indicates that there is significant intra urban variation in the number of respondents who owned cars. There are however further variations in the number of cars owned in different residential densities. The highest number of car owned is five. This was found in the high density residential area only. The bulk of the population who own one or three car(s) with 14.7 and 4.4 percent reside in the medium density area compared with 9.3, and 1.0 percent in the high density area and 10.3 and 0.0 percents in the low density residential area respectively (see figure 3.3). The larger percentage (2.7%) of the respondents who owned four cars reside in the medium density area compared with 1.5 percent in the low density area and none in the high density area. It is important to state that residents with one car dominates the three residential areas. Further analysis using Chi-Square Statistics showed that the variation recorded is significant, as such; there is a significant relationship between residential density and car ownership on one hand and number of cars owned on the other hand. This has implication(s) for further analysis.

3.2 SPATIAL VARIATION IN ENVIRONMENTAL FEATURES OF RESIDENTIAL AREAS

Information on variables such as building type/design, type of access to building, building usage and activities between the building/fence and the street were examined empirically to explain the physical features of the residential area. Some other physical features noted in residential dwellings are presented in subsequent section as part of residents' response to crime.

3.2.1 INTRA-URBAN VARIATION IN BUILDING DESIGN

The analysis of data collected on building design in the town revealed that there are differences in the type of building found in various residential areas. More than half (51.2%) of the respondents dwells in roomy type of building followed by the traditional compound houses (19.0%) then the bungalow type (13.1%). The flat type represents 9.9 percent. Only 6.4 percent lives in the duplex type of building (see table 3.7).The roomy type of building design dominates all residential densities with 50.3, 56.8 and 43.1 percent in the high, medium and low density residential areas.

The bulk of traditional compound buildings (39.9%) are found in the high density residential areas compared with 0.8 percent in the medium density area and 1.5 percent in the low density area. Flat and duplex type of building are found in equal proportion of 19.7 percent in the low density area compared with 13.5 and 6.0 percent in the medium density area and 3.5 and 1.7 percent in the high density area respectively. The bungalow type was found mainly in the medium density residential area with 23.3 percent followed by 16.7 percent in the low and 4.0 percent in the high density areas.

The variation explained above was found to be significant (P<0.05) with chi-square analysis performed. This revealed the existence of a significant relationship between residential areas and building type. This is in line with expectation owing to the fact that the high density residential area which is the oldest portion of the city contains old building design. While the medium density contain a mixture of early post-colonial day storey buildings and some modern building designs, the low density area housed the more modern fashioned building designs. The existence of the modern type of building however small in proportion explains the presence of some medium or high income earner in the core area. The only traditional building surveyed in the suburban area was found in a village which used to be at the outskirts of the town but which has been absorbed in the town by the process of urbanization and city expansion. The variation observed is likely to have impact on the type as well as the incidence of and response to crime in various residential areas studied.

Table 3.7: Intra Urban Variation in Building Design.

Building Design	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Traditional compound	39.9	0.8	1.5	19.1
Flat	3.5	13.5	19.7	9.9
Roomy	50.9	56.4	42.4	51.3
Duplex	1.7	6.0	19.7	6.5
Bungalow	4.0	23.3	16.7	13.2
Total	100	100	100	100

Source: Authors' Field Survey (2004
Differences are significant at 0.05 level of significance

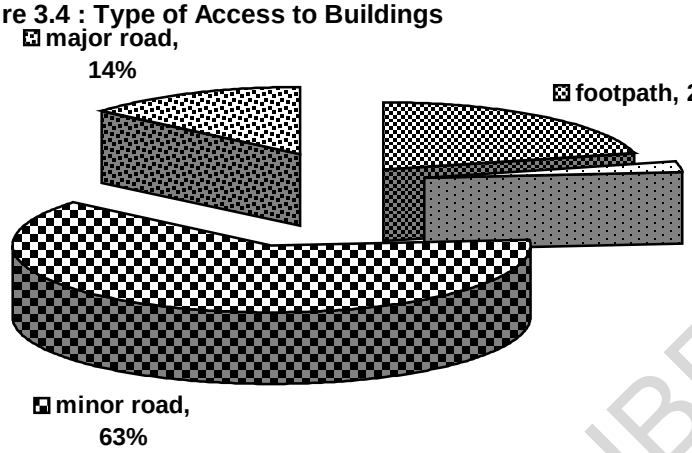
3.2.2 ACCESS TO BUILDINGS IN VARIOUS RESIDENTIAL AREAS.

Access to buildings is considered important when considering property crime. Ease of physical access in relation to both road networking and features of building, which makes entry difficult or otherwise are important. For instance, a criminal will consider it more burdensome to steal properties that are bulky from landlocked buildings where access to the road is time consuming even if they brought a vehicle to convey it. On the contrary, buildings with minor or major roads seem to be freely accessible, all other factors being equal. It is however difficult to run away with stolen properties in areas with dead end street or close (cul- de - sac) except with a good understanding of the road networking of such places. Criminals are likely to consider operating in such area more risky because of the fear of being caught.

As shown in figure 3.4, bulk of the building sampled are linked with minor roads (62.5%) followed by 21.1 percent landlocked buildings and those linked with major roads (14 %). Further analysis showed that majority of the buildings (33.5%) that are landlocked i.e. not accessible by roads are located in the high density residential areas while the greatest proportion (26.4%) of buildings which are accessible by major roads locates in the low density area followed by 11.6 percent in the medium density area (see figure 3.4). Majority of the buildings linked with minor roads (70.5%) or close roads (4.7%) are found in the medium density areas. It is surprising that such a high proportion (70.5%) of buildings is linked with minor roads in the high density area. This is attributed to the fact that the heart of Ogbomoso city is relatively accessible though the roads are not of required standard because they are superimposed on physical development. Further analysis using the Chi-Square Statistics confirmed the significance of this variation. ($P<0.05$) This implies that there is a significant

relationship between residential densities and access type. The effect of this variation is likely to be seen in further analysis especially the occurrence of property crime.

Figure 3.4 : Type of Access to Buildings



3.2.4 SPATIAL VARIATION IN THE USE OF BUILDINGS

The analysis revealed that the dominant use of buildings is for residential purpose (52.8%) followed by mixed uses of residential and commercial (45.1%). The least proportion goes to residential/educational uses. High density area has the largest proportion (47.7%) of buildings with residential/commercial activities followed by 43.4 and 41.8 percent in the medium and low density areas. The medium density area housed the greatest proportion (55.9%) of buildings subjected to residential use only. This is followed by 50.0 and 53.7 percent in the high and low density areas (see table 3.8). It is necessary to point out that this variation is significant when subjected to Chi-Square Statistics ($P<0.05$). This indicate that there is a significant relationship between residential density and the type of uses to which buildings are subjected to. The implication of this for occurrence of crime is evident. The use to

which a building is 'dedicated' determines the kind as well as the number of people entering such building, which could invariably influence level of security of lives and properties especially when the building is used concurrently for residential and other uses.

Table 3.8: Spatial Variation in the Use of Buildings.

Uses	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Residential only	50.0	55.9	53.7	52.8
Commercial/Residential	47.7	43.4	41.8	45.1
Educational/Residential	0.0	0.0	1.5	0.3
Recreational/Residential	0.6	0.0	3.0	0.8
Residential/Religious	1.7	0.7	0.0	1.1
Total	100	100	100	100

Source: Authors' Field Survey (2004)

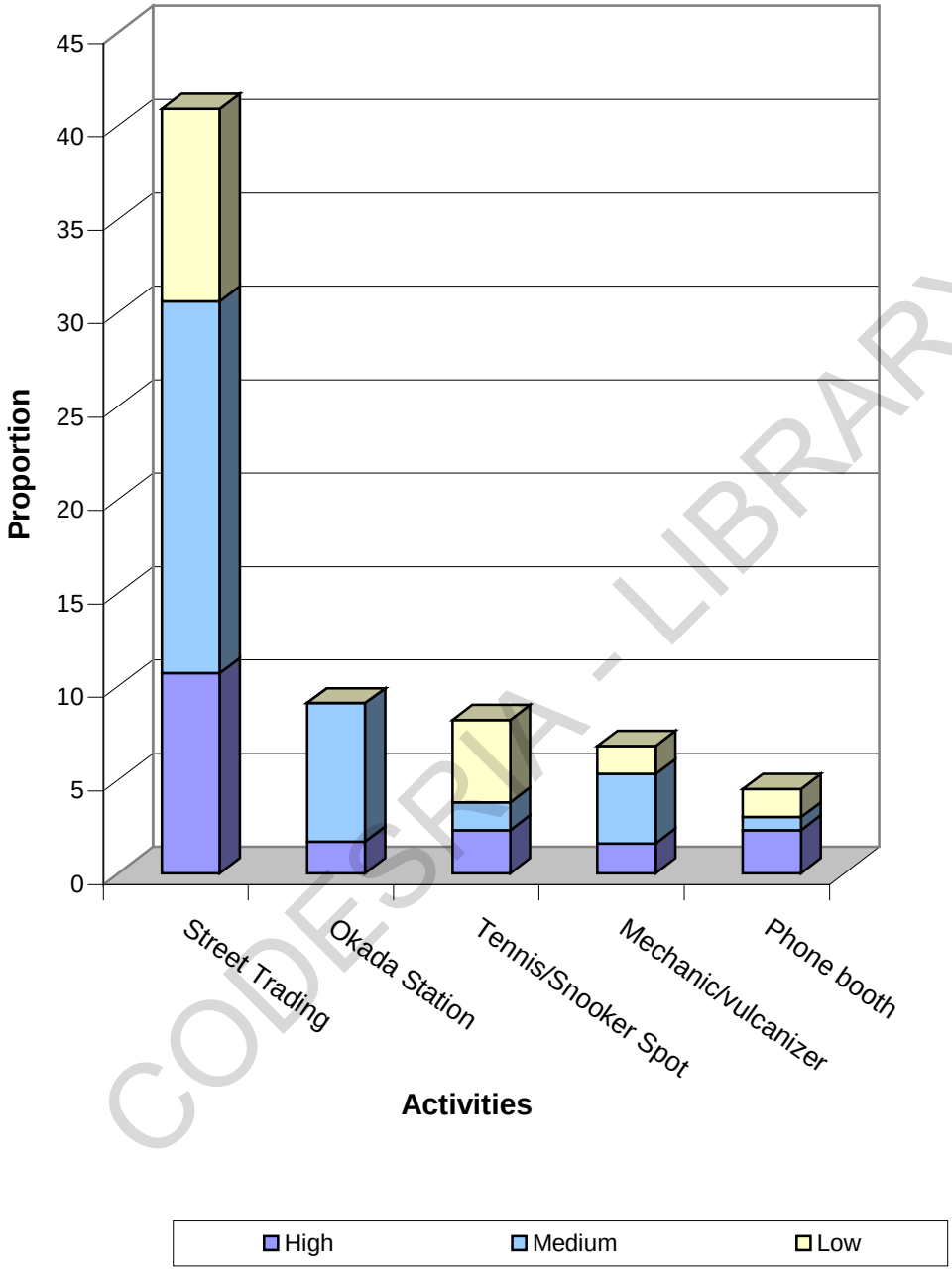
Differences significant at 0.05 level of significance

3.2.5 INTRA URBAN VARIATION IN THE ACTIVITIES BETWEEN BUILDING / FENCE AND THE STREET

Analysis of the activities found in the frontal part of residential dwellings revealed that 13.9,4.2, 2.4 1.6 and 1.3 percent of the dwellings respectively had street trading activities, mechanic/vulcanizer workshop, table tennis/snooker spots phoning booth and Okada station respectively located around the premises (see figure 3.5). A small proportion of buildings had shops located between the fence and the street (apart from those in built into the residences). Further analysis revealed that the greatest proportion (19.9%) of the buildings with street trading activities are found in the medium density area compared with 10.7 and 10.3 percent in

the high and low density residential areas. A significant proportion of buildings with mechanic/vulcanizer workshops (1.6%), and Okada station (1.7%) are found in the high density area compared with 3.7 and 7.4 percent in the medium density area and 1.5 and 0.0 percent in the low density area respectively. A major proportion of the buildings with tennis/snooker spot are found in the low density area (4.4%) compared with corresponding 2.3 and 1.5 percent in the high and medium density area. Significant proportion of buildings (2.3%) with phoning booth are found in the high density residential area compared with 1.5 and 0.7 percent in the low and medium density areas. The remaining buildings have nothing at the frontal part. This has implication on the calibre as well as the number of people that will be attracted to these buildings. Some of this crowd may commit illegal activities under the disguise of patronage of services rendered in these buildings.

Figure 3.5: Activities Between Buildings/Fence and the Street



CHAPTER FOUR

CRIME OCCURRENCE IN OGBOMOSO (1995-2003)

It is generally believed that the rate of occurrence of crime in the urban centres increases with increasing level of urbanization and modernization. This section presents the empirical verification of the assertion in respect to Ogbomoso city using the data obtained from the two Divisional Police Headquarters in Ogbomoso.

4.1 CATEGORIES OF CRIME IN OGBOMOSO

Police records revealed that there are more than one hundred types of reported crime cases reported in Ogbomoso. These were all utilized for the study. However, for a concise and clear presentation these were classified into ten groups in this study based on summaries from the literature (Omisakin, 1998; Sullivan, 1996; Tanumo, 1991). The categories are: Crime of aggression, Crime of acquisition, White collar crime, Crime against property (damage), Crime against morality and custom, Crime against government officials on duty, Crime of public disorderliness, Crime against public laws/regulations, Crime of cultic/witchcraft and related offences, and Other crimes.

1. **Crime of Aggression**: This include attempt to commit suicide, suicide, attempt to commit felony, assault, assault occasioning harm, wounding, kidnapping, forcible entry, unlawful homicide, murder, threatening life with violence, assault and stealing, grievous harm, suspected murder, shooting incidence. This category scores 28.3 percent of the total crime cases recorded in the town between 1995 and 2003.

2. **Crime of Acquisition**: This embraces all illegal means of acquiring money and property. It include: deprivation of property, auto theft, unlawful possession of arm, obtaining money under false pretense, store breaking, conspiracy and stealing, stealing, house breaking and stealing, suspected stolen goods, unlawful possession, armed robbery/robbery and attempted robbery. Others include entering and stealing, shop breaking and stealing, factory breaking and stealing, stolen vehicle/motorcycle, office breaking and stealing, receiving stolen properties, suspected stolen goods, suspected armed robbery. This group accounted for 48.8 percent of all crime cases recorded.
3. **White Collar Crime**: This involves all illegal means of acquiring wealth within the learned/literate community. This supposed to be broadly included under 'crime of acquisition' but is classified separately in this study because of its stringent connection with certain socio-economic stratum of the community. It is not a category of crime, which is opened to all and sundry. The offences included here are corrupt gift to agent, counterfeit stamps, falsification of register, forgery, personification with intent to commit felony, personification, cheating issuing bounced cheque, fraud, exam malpractices, and election malpractices. 1.7 percent of all crime cases recorded within the period of study fall under this category.
4. **Crime against Property:** This involves all action(s) taken toward the destruction of properties. Included here are damage to crops, arson, malicious damage, cruelty to animals, fire incidence. This accounted for 4.5 percent of all crime cases reported within the period of study.

5. **Crime against Morality and Custom:** This involves all sexual crimes, abuse of children, marriage/ family related offences and actions against prevailing (or communally accepted) standards of conduct. The following are placed under the category: indecent assault, defilement, attempt to procure abortion, abduction of a girl less than 18 years, abandoning and exposing child, abortion, attempted rape and rape. Others include child stealing, molestation, supplies of medicine to procure abortion, 'failure to provide necessary', absconded housewife/child, bigamy, illegally operating a brothel and sacrilege. This category represents 6.5 percent of the total crime cases reported in the town between 1995 and 2003.
6. **Crime against Government Officials on duty:** This category includes action(s) taken against government officials while performing their lawful duty. It is differentiated from other type of assault because the crime can only be committed against government officials on duty. The Nigerian Police criminal code also places it separately. The only offense included here is serious assault with 0.6 percent occurrence.
7. **Crime of Public Disorderliness:** These are actions and inactions, which can bring disorderliness into the community. Included here are breaking into place of worship, affray, negligent acts causing harm, idle and disorderly person, conduct likely to cause breach of peace, failure to suppress riot, rouges and vagabond, student unrest and going armed to cause fear. The category scores 5.1 percent of the total crime cases recorded within the period of study.
8. **Other Crimes against Public Law/Regulation:** This category includes contempt of court, escape from lawful custody, resisting arrest, giving police false

information, assessing after fact, screening of offender, unlawful detention, weed suspected to be Indian hemp, hoarding, and harbouring of offender. This group represents 0.4 percent of all crime cases reported within the period of study.

9. **Crime of Cultic/Witchcraft practices and related offenses:** This includes offenses such as membership of suspected secret cult, offense in relation to witchcraft and trial by ordeal, all of which accounts for 0.3 percent of all cases reported in the town within the period of study.
10. **Other Crimes:** Included in this group are offences which have not been categorized above and which are not substantial enough to be a group. These following are placed in this group: missing person, suspected person, demanding and occurring, sudden and unnatural death. This group represents 2.9 percent of all cases reported within the period of study.

The highest occurring crime in Ogbomoso between 1995 and 2003 as revealed by the analysis (see table 4.1) is crime of acquisition (48.8%) followed by crime of aggression (28.3%), crime against morality and custom (6.5%) and crime of public disorderliness (5.1%). These are followed by crime against property (4.5%), White collar crime (1.7%), crime against government officials on duty (1.6%), crime of cultic/witchcraft practices and related offences (0.3%), and crime against public law/regulation (0.4%).

Table 4.1: Percentage Occurrence of Various Categories of Crime in Ogbomoso

S/N	Categories	Occurrence (%)
1	Acquisition	48.8
2	Aggression	28.3
3	Against Morality and Custom	6.5
4	Public Disorderliness	5.1
5	Against property (damage)	4.5
6	White collar Crime	1.7
7	Against Government officers on duty	1.6
8	Cultic/witchcraft practices	0.3
9	Against Public law/regulation	0.4
10	Others	2.9
	Total	100

Source : Author's Computation (2004)

4.2 TEMPORAL VARIATION IN THE INCIDENCE OF CRIME IN OGBOMOSO (1995 - 2003)

(A). Temporal Variation in Occurrence of Total Annual Crime Cases.

The analysis of the data collected from the Police revealed that there is temporal variation in the occurrence of crime in Ogbomoso within the period of study (see table 4.2). The significance of the variation observed is confirmed with Chi-square analysis ($P<0.05$). This implies that there is a significant relationship between year and the occurrence of crime. Thus, the null hypothesis earlier stated is rejected while the

alternative one is accepted. The implication of this is that the variation in the incidence of crime noted does not occur by chance. In order to establish the nature of the relationship observed Pearson Correlation Analysis was performed. The results of analysis of the data presented in table 4.2 shows a negative correlation with r-value of -0.594 between year and frequency of crime occurrence. This indicates that the illustrated fluctuation between 1995 and 2003 tends towards a decrease. Major decreases were for instance noted in 1996 (12.2%), 1998 (6.8%) and 2002 (6.0%). A P-value of 0.046 shows that the observed decrease is statistically significant at 0.05 level of significance, hence as year increases, the incidence of crime in Ogbomoso decreases.

In details, the analysis showed that the total annual crime cases reported in Ogbomoso decrease from 14.9 percent in 1995 to 12.2 percent in 1996. This is followed by an increase (15.1 %) in 1997 and a sharp decrease (6.8%) in 1998 then a gradual increase from 11.6% in 1999 to 12.3% in year 2000. There was a remarkable increase in the total crime cases reported in year 2001 (13.8%). In 2002, the total number of crime reported reduced to 6.0%. Finally, a mild increase was witnessed in 2003 with 7.4% crime cases recorded (see table 4.2).

Figure 4.1 presents the temporal variation in the annual crime cases reported in each residential density. The graph showed that the three residential densities have almost the same characteristic or form.

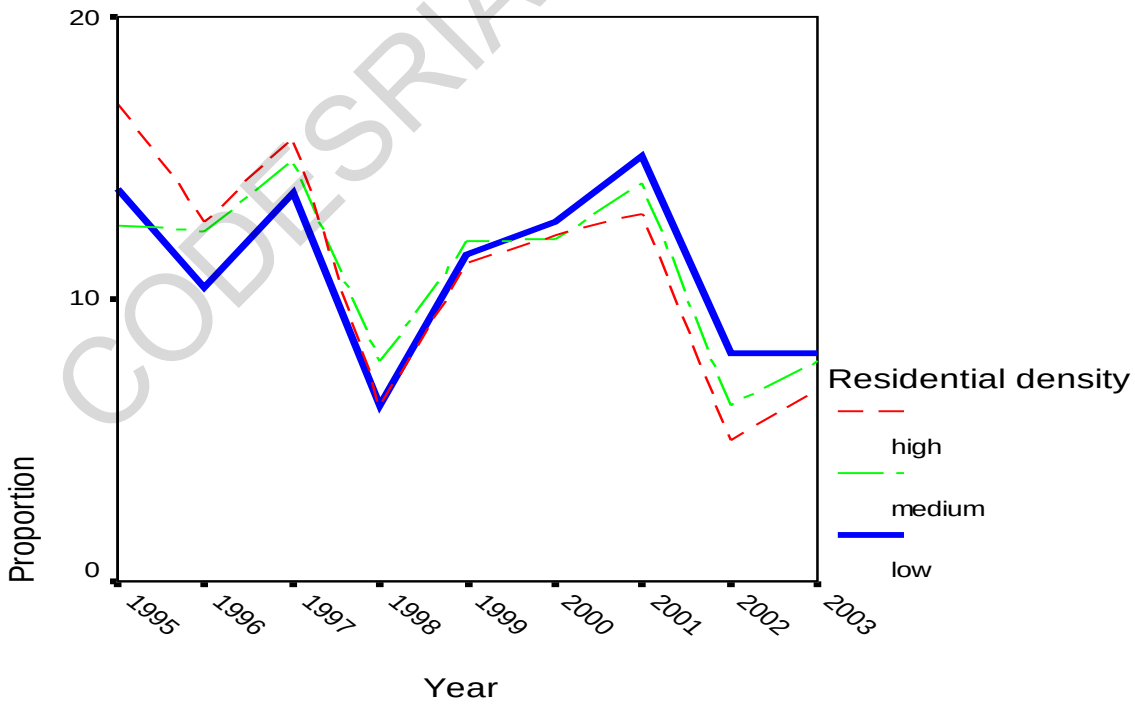
Table 4.2: Percentage Annual Occurrence of Crime in Ogbomoso (1995-2003)

S/N	Year	Occurrence (%)
1	1995	14.9
2	1996	12.2
3	1997	15.1
4	1998	6.8
5	1999	0.6
6	2000	12.3
7	2001	13.8
8	2002	6.0
9	2003	7.4
	Total	100

Source: Author's Computation (2004)

Differences are significant at 0.05 level of significance

Figure 4.1: Temporal Variation in Annual Crime Cases Reported in the Three Residential Densities.



(B) Temporal Variation in the Occurrence of Different Categories of Crime

There is a substantial variation in the incidence of different categories of crime within the period of study. Crime of aggression has it highest score in 2001 with 16.2 percent followed by 15.9, 15.7, 14.2, 13.0, 9.7, 5.5, 5.1 and 4.6 percent respectively in 1995, 2000, 1999, 1997, 1996, 2003, 1998 and 2002 (see table 4.3). The result displayed in table 4.3 shows a negative correlation (r = -0.04) between year and frequency of occurrence of crime of aggression. This implies that the observed fluctuation between 1995 and 2003 tends towards a decrease. However a P-value of 0.46 shows that the observed decrease is not statistically significant at 0.05 level of significance.

The highest number of crime of acquisition was recorded in 1997 with 18.2 % followed by 14.4, 14.0, 12.0, 10.0, 9.8, 8.5, 7.0 and 6.1 percent in 1995, 1996, 2001, 2000, 1999, 1998, 2003 and 2002 (see table 4.3). There is a negative correlation (r = -0.43) between year and frequency of occurrence of crime of acquisition. This indicates that the observed fluctuation between 1995 and 2003 tends towards a decrease. However a P-value of 0.12 shows that the observed decrease is not statistically significant at 0.05 level of significance (see table 4.4).

2003 has the highest cases of white collar crime with 22.8 percent followed by 19.0 and 13.9, in 2002 and 2001 respectively. An equal proportion of 10.1 percent cases of white collar crime occurred in 1995, 1996 and 1999. These are followed by 6.3 percent in 2000 and an equal proportion of 3.8 percent in 1997 and 1998 (see table 4.3). There is a positive correlation (r = 0.75) between year and frequency of occurrence of white collar crime. This shows that the observed fluctuation between 1995 and 2003 tends towards an

increase, with increasing years. This relationship is however confirmed to be statistically insignificant at 0.05 level significance (P= 0.10, see table 4.4).

Cases of crime against property (damage) occurred mainly in 1995 with 15.8 percent followed by 14.0 percent in 2001. An equal proportion of 13.5 percent occurred in 1997 and 2000.Following these are 10.7, 9.3, 8.8, 7.4 and 7.0 percent cases occurring in 1996, 2002, 2003, 1999 and 1998 respectively (see table 4.3). There is a positive correlation (r = 0.52) between year and frequency of occurrence of crime against property (damage). This indicates that the observed fluctuation between 1995 and 2003 tends towards an increase. However a P-value of 0.75 shows that the observed increase is not statistically significant at 0.05 level of significance (see table 4.4).

Crime against morality and custom occurred more in 1999 with 16.5 percent followed by 15.8, 13.9, 13.2, 11.9, 10.0, 7.4, 5.8 and 5.5 percent in 1995, 1997, 2001, 2000, 1996, 2003, 1998 and 2002 respectively (see table 4.3). There is a positive correlation (r = 0.07) between year and frequency of occurrence of crime against morality and custom. This indicates that the observed fluctuation between 1995 and 2003 tends towards an increase. However a P-value of 0.43 shows that the observed increase is not statistically significant at 0.05 level of significance (see table 4.4).

The occurrence of crime against government officers is higher in 2001 with 23.0 percent followed by 16.2, 13.5, 12.2, and 9.5, in 1995, 1998, 1996, and 2003 respectively. An equal proportion of 8.1 percent occurred in 1999 and 2000 respectively. This is followed by 5.4 and 4 .1 percent in 2002 and 1998 respectively (see table 4.3). A positive correlation (r = 0.29) exist between year and frequency of occurrence of crime against government officers. This indicates that the observed variation tends towards an

increase. A P-value of 0.22 however shows that the observed increase is not statistically significant at 0.05 level of significance (see table 4.4).

The highest frequency of crime against public law and regulation was recorded in 2001 with 29.4 percent followed by 23.5, 17.6, and 11.8 percent in 1997, 1999 and 1995 respectively. An equal number of cases (i.e. 5.9%) occurred in 1996 and 2002. No instance of crime against public law and regulation occurred in 1998 and 2000 (see table 4.3). There is a positive correlation (r = 0.17) between year and frequency of occurrence of crime against public law and regulation. This reveals that the observed fluctuation between 1995 and 2003 tends towards an increase, with increasing years. This relationship is however confirmed to be statistically insignificant at 0.05 level significance (P= 0.33, see table 4.4).

Crime of public disorderliness occurred more in 1995 with 16.2 percent followed by 13.7 percent in 1999. An equal proportion of 12.9 percent occurred in the year 2000 and 2001.This is followed by 12.4, 10.8, 10.0, 6.2 and 5.0 percent in 2003, 1996, 1997, 2002, and 1998 respectively (see table 4.3). There is a positive correlation (r = 0.57) between year and frequency of occurrence of crime of public disorderliness. This indicates that the observed fluctuation between 1995 and 2003 tends towards an increase. However a P-value of 0.06 shows that the observed increase is not statistically significant at 0.05 level of significance (see table 4.4).

Crime of cultic /witchcraft practice and related offenses has the highest frequency in 1996, 2001 and 2002 with an equal proportion of 6.3 percent followed by an equal proportion of 18.8 percent in 1999 and 2003. Similarly an equal proportion of 12.5 percent occurred in 1995 and 2000 (see table 4.3). No cases of crime of cultic/witchcraft

practices was recorded for 1997 and 1998. A positive correlation (r = 0.58) exist between year and frequency of occurrence of crime of cultic /witchcraft practices. This indicates that the observed variation tends towards an increase. With 0.05 as P-value, the observed increase is statistically significant at 0.05 level of significance (see table 4.4).

The last category coded as others has the highest frequency in year 2000 with 22.9 percent followed by 18.6, 13.6, 11.4, 10.0, 9.3, 5.7, 5.0, and 3.6 respectively in 1996, 2001 1995, 2003, 1999, 1997, 2002 and 1998 (see table 4.3). There is a positive correlation (r = 0.27) between year and frequency of occurrence of other crime. This reveals that the observed fluctuation between 1995 and 2003 tends towards an increase, with increasing years. This relationship is however confirmed to be statistically insignificant at 0.05 level significance (P= 0.24, see table 4.4).

Table 4.3: Annual Occurrence of Different Categories of Crime

S/N	Crime category	1995	1996	Y 1997	E 1998	A 1999	R 2000	2001	2002	2003
1	Aggression	214 (30.1)	131 (22.5)	176 (24.4)	69 (21.4)	192 (34.7)	212 (36.1)	219 (33.4)	62 (21.8)	74 (21.0)
2	Acquisition	334 (47.0)	326 (56.0)	423 (58.8)	197 (61.2)	228 (41.2)	233 (39.7)	279 (42.5)	143 (50.2)	163 (46.3)
3	White collar	8 (1.1)	8 (1.40)	3 (0.4)	3 (0.9)	8 (1.4)	5 (0.9)	11 (1.7)	15 (5.3)	18 (5.1)
4	Against property	34 (4.8)	23 (4.0)	29 (4.0)	15 (4.7)	16 (2.9)	29 (4.9)	30 (4.6)	20 (7.0)	19 (5.4)
5	Against morality & custom	49 (6.9)	31 (5.3)	43 (6.0)	18 (5.6)	51 (9.2)	37 (6.3)	41 (6.3)	17 (6.0)	23 (6.5)
6	Against government officers	12 (1.7)	9 (1.5)	10 (1.4)	3 (0.9)	6 (1.1)	6 (1.0)	17 (2.6)	4 (1.4)	7 (2.0)
7	Against public order	2 (0.3)	1 (0.2)	4 (0.6)	0 (0.0)	3 (0.5)	0 (0.0)	5 (0.8)	1 (0.4)	1 (0.3)
8	Public disorderliness	39 (5.5)	26 (4.5)	24 (3.3)	12 (3.7)	33 (6.0)	31 (5.3)	31 (4.7)	15 (5.3)	30 (8.5)
9	Cultic/witchcraft practices	2 (0.3)	1 (0.2)	0 (0.0)	0 (0.0)	3 (0.5)	2 (0.3)	4 (0.6)	1 (0.4)	3 (0.9)
10	Others	16 (2.3)	26 (4.5)	8 (1.1)	5 (1.6)	13 (2.4)	32 (5.5)	19 (2.9)	7 (2.5)	14 (4.0)
	TOTAL	710 (100)	582 (100)	720 (100)	322 (100)	553 (100)	587 (100)	656 (100)	285 (100)	352 (100)

Source: Author's Computation (2004)

Table 4.4: Summary of Pearson Product Moment Correlation Analysis on Year and the Occurrence of Different Categories of Crime.

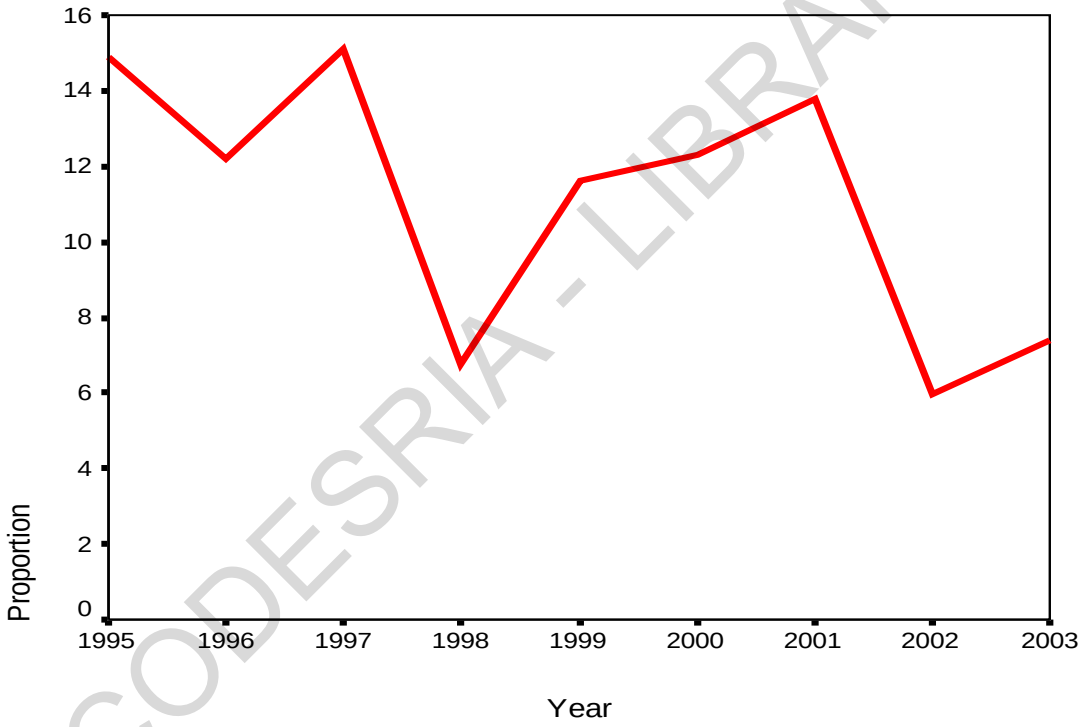
S/N	Crime Category	r value	P	Comment
1	Aggression	-0.04	0.46	Insignificant negative relationship
2	Acquisition	-0.43	0.12	Insignificant negative relationship
3	White collar	0.75	0.10	significant positive relationship
4	Against property	0.52	0.75	insignificant positive relationship
5	Against morality & custom	0.07	0.43	insignificant positive relationship
6	Against government officers on duty	0.29	0.22	insignificant positive relationship
7	Against Public law & regulation	0.17	0.33	insignificant positive relationship
8	Public disorderliness	0.57	0.06	insignificant positive relationship
9	Cultic/Witchcraft practice	0.58	0.05	significant positive relationship
10	Others	0.266	0.244	insignificant positive relationship

Source : Authors' Computation (2004)

4.3 CRIME TREND IN OGBOMOSO BETWEEN 1995 AND 2003

The analysis of data collected from the Police revealed that the rate of criminal incidence in Ogbomoso between 1995 and 2003 has decreased, as stated earlier. The graph in figure 4.2 showing the trend reveals a downward slope indicating a gradual decrease in the occurrence of crime regardless of category between 1995 and year 2003. This explanation is valid for both North and South Local Government areas.

Figure 4 2: Trend of Crime in Ogbomoso.



The prevailing trend has a significant implication for urban policy. Contrary to the general assertion that social vices increases with increasing level of urbanization, Ogbomoso's case deviates from this. The trend of occurrence of crime in Ogbomoso has reduced gradually from 1995 to 2003 despite the increasing population and the physical

expansion. The timely question to ask at this junction is: what are the reasons behind this?

In the opinion of the Police, this is attributed to increased Police patrol and effective monitoring of criminal activities in the city. It is also attributed to the effort of the Police Public Relation Committee (PPRC) which was set-up to effect a good relationship between the police and the resident of Ogbomoso as well as to engage the people in effective policing of their living environment. The Committee was constituted to include the police, the community and various trade and artisan's unions' representatives together with some hand picked few elites in the town. Their monthly forum addresses the issue of security as well as supply information to the police on criminal hideouts and activities in the town. Through this committee, the police confessed to have been able to monitor the activities of criminals in the town effectively. The efforts of PPRC at ensuring peace and tranquility is recognized by the residents as they added that the decision or resolution of PPRC during their meetings get conveyed to the residents during community meetings organized in the medium and high density residential areas and are further shared in different compounds for maximum circulation of information. The high commitment to PPRC, shown by the residents of Ogbomoso is highly rewarded by the relative peace being enjoyed in the town. Besides this, there are other factors recognized to have contributed to the reduced criminal activities.

The efforts of the hired local security personnel's and the vigilante group consisting of landlords and tenants at policing various neighbourhoods are highly applauded and regarded as contributing to the reduced criminal tendencies in the medium and high density areas of the town. In the low density residential area however members

of Odua Peoples Congress (OPC) are employed in policing neighbourhoods. The efforts of OPC members are complemented with the efforts of Students Anti Cultism Squad (SACS) constituted by Ladoke Akintola University of Technology (LAUTECH) Student Union Government to monitor student activities and ensure safety of lives and properties especially in the low density residential area inhabited by students of Ladoke Akintola University of Technology. SACS not only ensured that LAUTECH students are not molested or harmed by secret cult members and criminals but also that no student is involved in criminal activities.

In addition, the increasing employment opportunities in the low socio-economic stratum of the city consequent upon the use of Okada as a commercial mode of transportation was regarded as helpful in reducing criminal activities. The use of Okada as a transport mode was recognized as a means of getting the residents, which had been involved in "next to nothing jobs" gainfully employed and thus make crime less attractive to them. This factor was acknowledged by the Police as well as the residents.

Finally, the reduced crime rate (especially property crime) in the city is also considered as the long-term effect of the death of one notorious criminal popularly known as 'governor'. The man held the land in his sway from the early sixties until early nineties (precisely 1993) when nemesis caught up with him. His sudden death championed by students of Ladoke Akintola University of Technology (LAUTECH) led to a massive slaughtering of criminals in the town. The students and the residents collaborate to destroy criminals and set their properties ablaze. Consequently, many criminals ran out of the town for cover.

4.4 PREDICTION OF FUTURE OCCURRENCE OF ANNUAL TOTAL CRIME CASES

Following the establishment of a significant relationship between year and percentage occurrence of crime, the study proceeds to ascertain the rate of this change in order to formulate a model which can be used in predicting future occurrence of crime. Using the data presented in table 4.2, percentage occurrence of crime was regressed against year within the period of study. The result showed that there is no significant linear relationship between year and the occurrence of crime in Ogbomoso. This implies that a statistical model for predicting the future occurrence of crime cases cannot not be formulated with the available data.

4.5 SPATIAL VARIATION IN THE OCCURRENCE OF CRIME IN OGBOMOSO

Having presented the trend of occurrence of criminal activities, it is important to analyze its spatial distribution within the period of study. This is the major preoccupation of the current section.

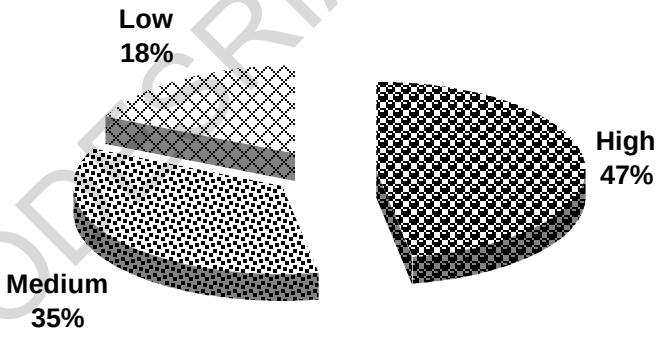
(A) Spatial Variation in the Occurrence of Total Crime Cases.

The analysis of the total number of crime cases reported between 1995 and 2003 showed that 47.2 percent cases occurred in the high density residential areas followed by 34.7 percent in the medium density and 18.1 percent in the low density residential area (see figure 4.3). The observed spatial variation in the occurrence of different crime

category in Ogbomoso is confirmed to be significant using Chi-Square Statistics ($P<0.05$). The situation is relatively the same in the two local government areas.

This indicates that there is spatial variation in the total number of crime in Ogbomoso regardless of categories or when the cases were reported i.e. year of reporting. It further implies that the occurrence of crime decreases with decreasing density and vice versa regardless of the categories or when the cases where reported to the Police i.e. year of reporting. Thus, the null hypothesis stated earlier that there is no significant spatial variation in total crime cases reported within the period of study is rejected while the alternative hypothesis: there is significant spatial variation in total crime cases reported within the period of study is accepted at 0.05 level of significance.

Figure 4.3 :Spatial Variation In the Occurence of Crime in Ogbomoso (1995-2003)



(B) Spatial Variation in the Occurrence of Different Categories of Crime in Ogbomoso.

The analysis revealed that there is a significant spatial variation in the occurrence of different categories of crime within the three residential densities identified in Ogbomoso between 1995 and 2003 (see figure 4.3). The recorded variation is confirmed

to be significant when the data was subjected to Chi-Square analysis ($P<0.05$). Hence, the null hypothesis set is rejected while the alternative one accepted. The implication of this is that there is a significant relationship between residential densities and categories of crime. This indicates that some categories of crime dominate certain residential areas than others.

For a detail explanation, 6 crime categories has their highest score in the high density residential area compared with 3 percent crime categories which occurred relatively more in the medium density area. In addition, just 1 category occurred with equal percentage in the low and medium density areas (see table 4.5). Almost all crime categories occurred less in the low density residential area. This contradict the results of some earlier studies e.g. Afon (2001) and Agbola (1997) which concluded that all categories of crime occurred more in the high density residential areas.

Within residential area, analysis showed that crime of acquisition and aggression are the two leading crimes in the town. The two crime categories dominate the three residential areas. The occurrence of crime of aggression, crime of acquisition and crime against property with 56.9, 40.6 and 49.8 percent respectively is higher in the high density area compared with 30.3, 38.1 and 31.2 percent in the medium density area and 12.8, 21.3 and 19.1 percent in the low density area. In the same vein, crime against morality and custom, crime of public disorderliness and other crimes with 62.9, 47.7 and 47.9 percent respectively, occurred more in the high density area compared to 27.4, 36.5 and 31.4 percent in the medium and 9.7, 15.8 and 20.7 percent in the low density residential areas. This is in line with expectation since majority of the residents are of low educational qualification with low paid jobs and low income, as such high poverty level.

It is not impossible to find people involving in stealing and other unlawful means of acquiring property to satisfy all unfulfilled dreams and necessities. The analysis in section 3.4 showed that the unemployed are more in the high density area signifying that there are more idle hand which could be easily drawn into various crimes in the area. In addition, frustration borne out of unemployment and poverty can lead into jealousy and acts of wickedness against the privileged. The dense physical developments, high population density, high occupancy ratio within buildings, low literacy level as well as jobs, which allows for idleness at whim, are all possible explanations of high rate of public disorderliness and destruction of properties in the high density residential area. In the same vein, these features also allow high interpersonal contact within buildings and the whole area, thus increasing the chances of raping, indecent assault on ladies, and assault of various kinds. In addition, bigamy, abandonment of child and absconding wives and children can also be indirectly or directly attributed to high poverty level and low satisfaction with standard of living.

The greatest occurrence of white collar crime (40.5%), crime against government officers (37.8%) and crime of cultic /witchcraft practice and related offenses (62.5%) are recorded in the medium density area compared to 30.4, 32.4 and 0.0 percent respectively in the high density area and 1.7, 1.6, and 0.3 percent in the low density area. An equal proportion (35.3%) of crime against public law/regulation occurred in the low and medium density areas compared with 29.4 percent in the high density area

The dominance of white collar crime in the medium density residential area can be attributed to the fact that this category of crime is strictly linked with (or can be done in collaboration with) some socio-economic click of the society who are the major

dwellers of the medium density area of Ogbomoso. Majority of the people who engaged in white collar jobs in Ogbomoso dwells in the medium density residential areas. In addition, the significant occurrence of crime of public disorderliness in the medium density can be attributed to the presence of rouges, a common phenomenon in Nigerian motor parks, which are relatively more in this area. Another notable characteristic in these motorparks is the incessant occurrence of fights and violent disorderliness. Furthermore, the dominance of crime against government officials on duty, and crime against public law/regulation in the low and medium density residential areas is however surprising since the analysis revealed that the residents are majorly literate and should by virtue of social class be informed in the 'dos and don'ts' of the land. Thus, it is expected that the residents be law abiding but the analysis revealed probably contempt of law and low regard for government officers on duty.

In the same vein, it is surprising to note that crime against morality and customs (i.e. traditional norms and values) occurred more in the high density residential area which is mainly the traditional core area of the city. This is a place, which supposed to be the custodian of traditional norms, and where it advocates supposed to dominate. The gradual decline in traditional social values and the breakdown of family cohesiveness (possible consequences of modernization) explains the dominance of other types of crime in this area.

The disaggregation of crime of acquisition and crime against property (damage) into their components parts gives a very interesting result, which is documented below. This is presented in detail because of the intricate relationship between the features of the physical environment and the occurrence of these categories of crime on one hand cum

the residents' response to them. This will allow an explicit explanation on the feature of each residential area with its stringent influence on property crime.

Table 4.5: Spatial Variation in the Occurrence of Different Categories of Crime

S/N	Category	High (%)	Medium (%)	Low (%)	Total (%)
1	Aggression	768(56.9)	409 (30.3)	172 (12.8)	1349 (100)
2	Acquisition	944 (40.6)	886 (38.1)	496 (21.3)	2326 (100)
3	White collar	24 (30.4)	32 (40.5)	23 (29.1)	79 (100)
4	Against property (damage)	107 (49.8)	67 (31.2)	41(19.1)	215 (100)
5	Against morality and custom	195 (62.9)	85 (27.40	30 (9.7)	310 (100)
6	Against government Officers on duty	24 (32.4)	28 (37.8)	22 (29.7)	74 (100)
7	Against public law	5 (29.4)	6 (35.3)	6 (35.3)	17 (100)
8	Public disorderliness	115 (47.7)	88 (36.5)	38 (15.8)	241 (100)
9	Cultic/witchcraft practices	0 (0.0)	10 (62.5)	6 (37.5)	16 (100)
10	Others	67 (47.9)	44 (31.4)	29 (20.7)	140(100)
	Total	2249	1655	863	4767 (100)

Source : Author's Computation (2004)
Differences are significant at 0.05 level of significance

4.6 SPATIAL VARIATION IN THE OCCURRENCE OF PROPERTY CRIME IN OGBOMOSO

The analysis revealed that there is significant spatial variation in the occurrence of property crime in Ogbomoso between 1995 and 2003. The spatial variation in the occurrence of property crime in Ogbomoso is confirmed to be significant using the Chi-Square Analysis ($P<0.05$). This implies that there is a significant relationship between residential area and property crime. Crimes of breaking and stealing, burglary and stealing, and armed robbery occurred more in the medium density area with 41.2, 38.9, and 47.4 percent compared with 35.8, 33.6 and 21.1 percent in the high density areas and 23.0, 27.5 and 31.6 percent in the low density residential area respectively. The high density area has the highest toll of crimes of stealing and unlawful possession, obtaining wealth under false pretence and destruction of properties with 42.8, 48.4 and 49.8 percent compared with 36.3, 38.4, 31.2 percent in the medium density area and 20.9, 13.2 and 19.1 percent in the low density area respectively. The low density residential area has the lowest score of all these crimes (see figure 4.4).

It is not improbable that crimes of breaking and stealing, burglary and stealing and armed robbery dominate the medium density residential area. The socio-economic attributes of the residents depicts affluence, which is one of the major attraction for property crime. As discussed above 44.3 and 55.4 percent of the medium density residents have post secondary and university education respectively (see figure 3.3). 48.9 and 68.6 percent of the residents engaged in organized private sector jobs and public service respectively (see figure3.4). In the whole town, the highest percentage (48.5%) of the residents who owned car(s) dwells in the medium density residential area.

Considering the fact that property crime occurred in areas where there are properties to steal, these factors has contributed to the level of property crimes recorded. The remoteness of low density area coupled with relative affluence and suspicions of residents possession of sophisticated weapons could be part of the underline reasons for the significant occurrence of armed robbery in the area.

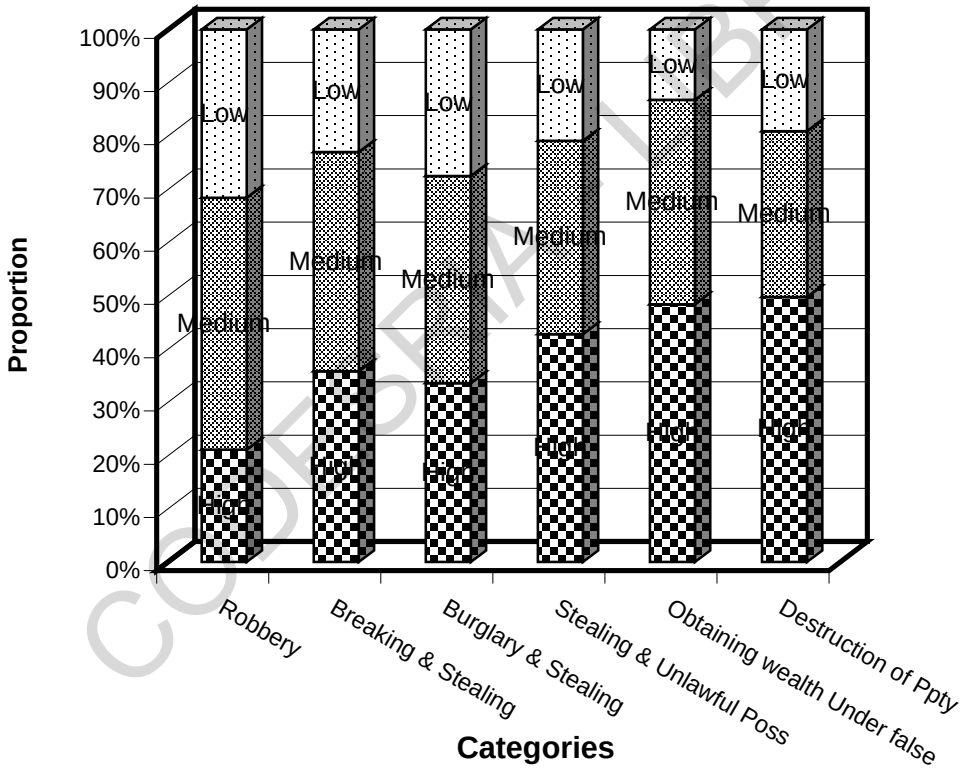
Apart from this, the occupational status of the dwellers, being majorly white collar jobs calls for movement from their residences to their offices during the day thus rendering their living environment a 'ghost zone' thereby permitting the occurrence of house breaking and stealing and the likes. Also, effective monitoring may be made difficult with the fact that data on the activities between the fence/buildings and the street of buildings in the medium density residential areas reveals 19.9 percent street trading, 1.5 percent Okada station, 1.5 percent tennis/snooker spots, 3.7 percent mechanic workshop, 0.7 percent phoning booth. Majority of the buildings have shops located in their frontal parts. These activities attract customers some of which may under the disguise of patronage of services rendered may commits illegal activities. In addition the location of Sabo, Takie and Caretaker/Ahoyaya Motorparks and some other commercial activities in the area which generate anonymous crowd coupled with the violent attributes of 'area boys' seen in these parks are all likely factors accounting for the level of crime recorded in the area. The rate of occurrence of these crimes is high in spite of the security consciousness shown by the design of the buildings found in these areas with substantial proportion of buildings having fences built of concrete overlaid with materials ranging from broken bottles to barbed wire, the use of burglar proofing and strong materials for doors and windows.

Crimes of stealing and unlawful possession, obtaining wealth under false pretense and destruction of property with 42.8, 48.4 and 49.8 percent respectively, dominates the high density residential area. The socio-economic profile of the residents of this area revealed low level of education, low paid jobs, high level of unemployment and low security consciousness (as discussed in subsequent section). These and other problems such as in-house congestion as identified by Adeboyejo et al (2002); and high poverty level which could breed criminal tendencies especially such as geared towards the fulfillment of unsatisfied desire. High population concentration within buildings and in the whole area gives room for increased personal contacts, which are likely to encourage some crimes.

It is interesting to note that some property crimes such as breaking and stealing, burglary and stealing are at their lowest ebb in the low density residential areas of Ogbomoso. This is contrary to earlier findings such as Afon (2001). The factors responsible for these are unique to Ogbomoso. Greater proportion of the low density residential areas of Ogbomoso are inhabited by students which by way of life make their environment busy almost 24 hours especially when their school is in session. Student living areas generally may not be considered a suitable location where an appreciable quantity of valuable properties fit for looting could be found considering the socio-economic status of the students. In addition, the risk of carrying out any criminal activities in students' zone is high considering the militant nature of the students. This is not to undermine the fact that incidences of property looting occur in this area especially when Ladoke Akintola University of Technology is not in session. The low crime rate may also be attributed to the security consciousness built into the design of buildings with

significant percentage having burglar proof on all openings and durable materials used for their doors and windows together with fences built with durable material and well protected with broken bottles, steel and barbwire (see subsequent discussion on residents' response to crime). The spatial variation observed is confirmed to be significant with chi-square analysis performed ($P<0.05$). This implies that there is a significant relationship between residential area and the occurrence of different types of property crime.

Figure 4.4:Spatial Variation in the Occurrence of Property Crime in Ogbomoso (1995-2003)



CHAPTER FIVE

SPATIAL VARIATION IN RESIDENTS' RESPONSE TO CRIME IN OGBOMOSO

5.0 RESIDENTS' RESPONSE TO CRIME

The protective measures identified in the study area can be broadly classified into two viz: individual and collective efforts. Among individual efforts are: fixing of burglary proof, erection of wall /fence, fixing of lighting system, employment of private security men, use of alarm system, gun, axe /club / stick, security dogs and African Traditional Protective Devices (ATDPs). The collective efforts identified are further divided into two types. These are: Residents efforts and Police/ residents joint effort. Residents' collective efforts include formation of Landlord/tenants vigilante group, hiring of local security guard or Odua People Congress members at community level to safeguard residential areas and Student Anti-Cultism Squad (SACS). Resident/Police joint initiatives manifest through the activities of Police Public Relation Committee (PPRC). The information collected on each of these items is explained vis-à-vis the following elements of CPTED: security barrier, territoriality, surveillance, lighting and landscaping.

5.1 USE OF SECURITY BARRIERS IN OGBOMOSO

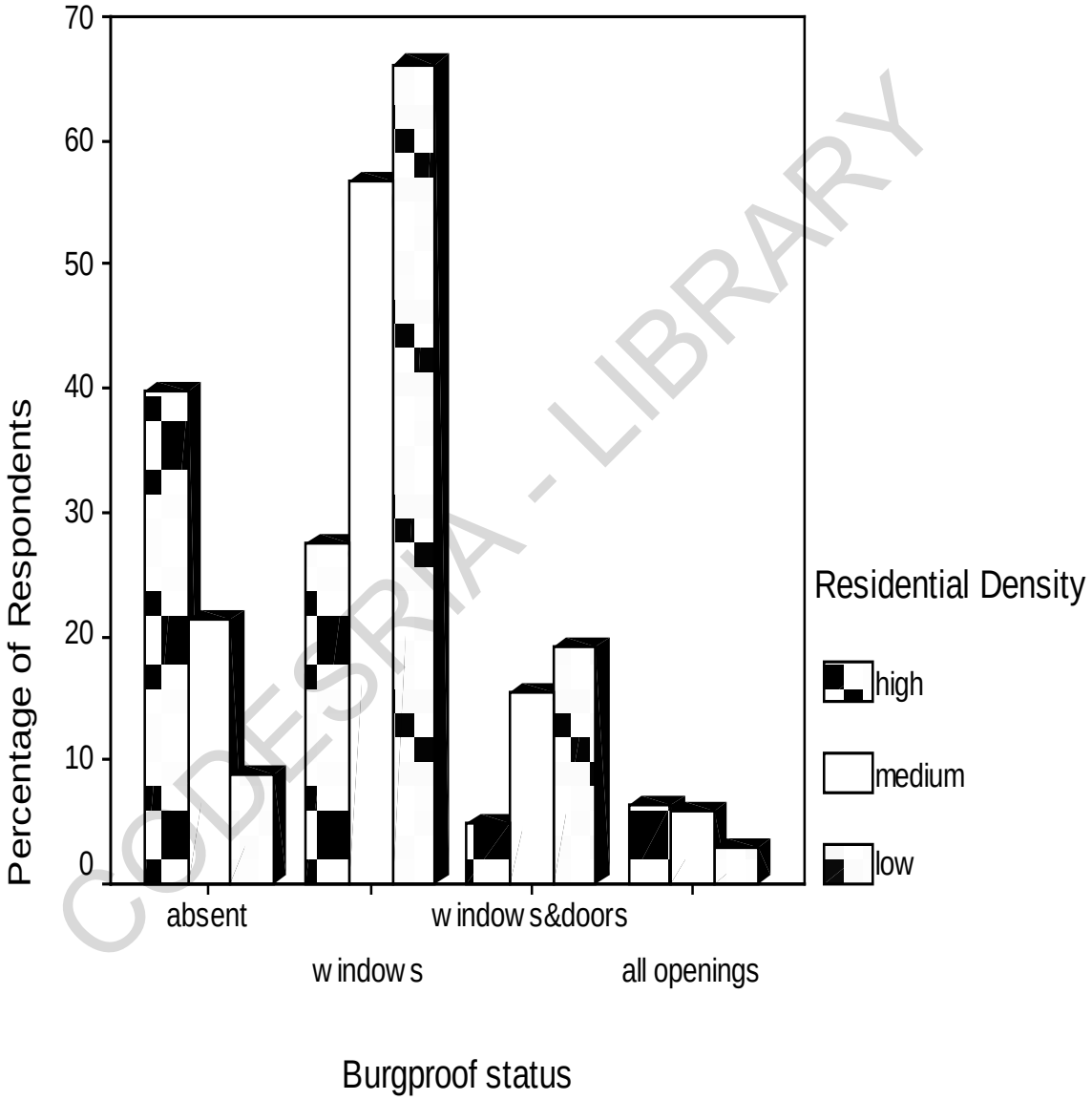
Among the security barriers studied include fence: fencing material, height, and material on the tip of fence; burglar proofing: burglar proofing material, location of burglar proofing on structures; material used for windows and doors; and the use of strong locks and security street gates.

Burglar Proof

The analysis of data collected on the use of burglar proof as security barrier in various residential densities of Ogbomoso revealed that 32.1 percent of all the buildings sampled have no

burglar proof while a substantial proportion (63.9 percent) have it at various degrees (see figure 5.1). Out of the 63.9 percent quoted, 49.3, 12.2 and 6.4 percent have it respectively fixed on windows, windows and doors and all openings into the building (including verandah).

Figure 5.1: Location of Burglary Proof on Buildings



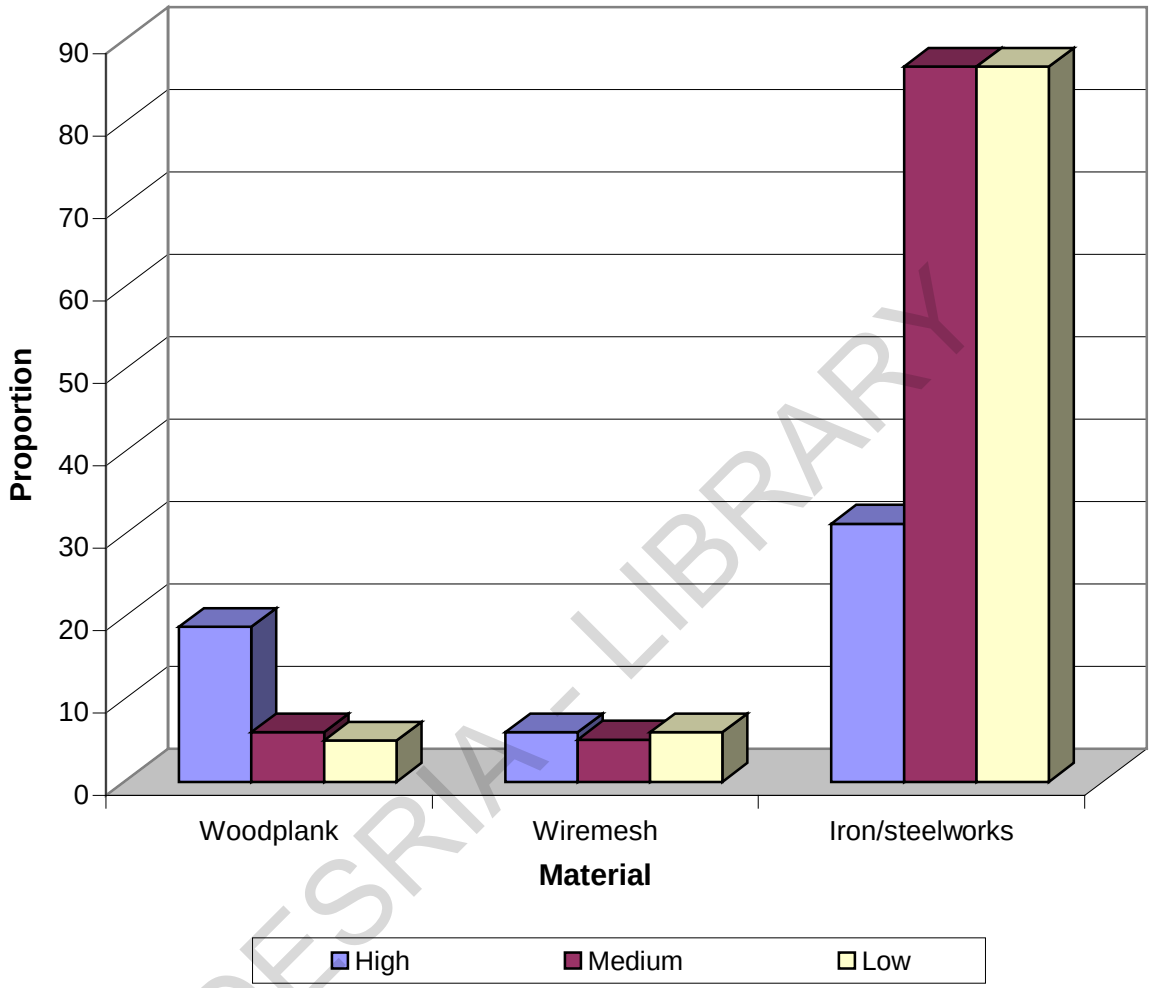
In line with expectation, a significant proportion of the building without burglary proof are found in the high density residential area (40.6%) compared with 21.9 and 9.1 percent in the medium and low density areas. Higher order security consciousness is

displayed in the low (68.2%) and medium (57.0%) density areas with a substantial proportion of buildings having burglary proof on windows compared with 35.0 percent in the high density residential area. Similarly, a significant proportion of buildings in the low (19.7%) and medium (15.6%) have burglar proof fixed on windows and doors compared with 6.3 % in the high density area. The Chi-Square analysis done showed that the observed variation is highly significant at 0.05 level of significance. This implies that there is a significant variation in the use of burglar proof between the three residential areas.

Not only is the fixing of burglar proof high in the low and medium density areas, the quality of material used also depicts high level security consciousness. The greatest proportion of buildings with iron/ steel burglar proofing material are found in the low (86.7%) and medium density areas compared with 31.3 percent in the high density area (see figure 5.2). This is in line with expectation considering the fact that more modern day buildings reputable for high security consciousness are found in low and medium density areas. The use of woodplank dominates the high density residential area with 18.8 percent compared with 6.0 and 5.0 percent in the medium and low density residential areas respectively. The use of wire mesh also dominates the high and low density residential areas in the same proportion compared with 5.1 percent in the medium density area. Considering the town as a whole, iron / steel is the commonly used burglar proofing material (58.6%) compared with 11.5 percent wood planks and 7.2 percent wire mesh. Woodplank and wire mesh are considered weaker burglar proofing material than iron/steel. How fortified a building is, may partly depends on the degree of security consciousness of the residents based on actual experience of crime or its fear. ‘Little

wonder' then that buildings are more fortified with burglar proofing materials in the medium density area since the occurrence of crime of house breaking and or house burglary and stealing are more in this area. The variation noted is confirmed to be significant at 0.05 level of significance with the Chi-Square analysis done. This indicates that burglarproof material differs significantly among the three residential areas. There is thus a significant relationship between burglarproof material and residential densities. The relationship was established to be negative with the Spearman Rank Correlation Coefficient of -0.165, which further indicates that the strength/quality of burglarproof material improves with decreasing residential density and vice versa.

Figure 5.2 : Materials used for Burglar Proofing



Door and Window Materials

The commonly used material for door making is woodplank (84.8%) followed by iron / steel (6.8%) and flush door (6.0%) then glass panes (2.4%). A very significant proportion (97.0%) of buildings with woodplank doors are found in the high density residential areas compared with 82.2 and 59.7 percent in the medium and low density residential area. The use of iron /steel dominates the low density areas with 10.4 percent followed by 9.6 and 3.0 percent in the medium and high density areas respectively. In

line with the expectation, the use of flush door prevails more in the low density residential (25.4%) than in the medium density area (3.7%). No building out of all the selected buildings in the high density residential areas uses flush door and glass panes. It is however found that glass panes are used in significant proportion (4.5%) in the low density area compared with 4.4 percent in the medium density area (see table 5.1). The recorded variation is confirmed to be significant with Chi-Square analysis done ($P<0.05$). This implies that material used for door making in various residential densities differs significantly.

Table 5.1: Materials used for Doors

Materials	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Woodplank	97.0	82.2	59.7	84.8
Iron/steel works	3.0	9.6	10.4	6.8
Flush door	0.0	3.7	25.4	6.0
Glass panes	0.0	4.4	4.5	2.4
Total	100	100	100	100

Source: Author's Field Survey (2004)
Differences are significant at 0.05 level of significance

The analysis of data collected on materials used for windows in Ogbomoso revealed that woodplank is the commonly (67.0%) used material compared with 22.6, 5.3 and 5.0 percent of louver blades, glass panes and iron /steel works respectively (see figure 5.2). A significant proportion of buildings with wooden windows are found in the high density area (90.7%) compared with 54.5 and 32.8 percent in the medium and low density areas respectively. Louver blades and glass panes are used in appreciable

proportion in the low density area with 45.3 and 17.2 percent followed by 33.3 and 6.1 percent in the medium density residential area respectively. None of the buildings sampled in the high density areas uses glass panes as windows though a handful proportion (4.9%) uses louver blades. A considerable proportion of buildings (6.1%) with iron/ steel windows are found in the medium density area, compared to 4.7 percent in the low density area and 4.3 percent in the high density area. This is not surprising with the high level of property crime recorded in the area. In a nutshell in the high density area the use of woodplank (90.7%) is more in comparison to other materials such as louver blades (4.9%), iron/steel (4.3%) and glass panes (0.0%). In the medium density area, materials used for windows in their order of decreasing intensity are: woodplank (54.5%), louver blades (33.3%), iron/steel (6.1 %) and glass panes (6.1%). Lastly, in the low density area the dominant material is louver blades with 45.3 percent, followed by woodplank (32.8%), glass panes (17.2%) and iron/steel (4.7%). The variation noted is confirmed to be significant at 0.05 level of significance with the Chi-Square analysis done. This indicates that material used for windows differs significantly among the three residential areas. There is thus a significant relationship between 'window material' and residential densities.

Table 5.2: Materials used for Windows

Materials	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Woodplank	90.7	54.5	32.8	67.0
Iron/steel	4.3	6.1	4.7	5.0
Louver blades	4.9	33.3	45.3	22.6
Glass panes	0.0	6.1	17.2	5.3
Total	100	100	100	100

Source : Author's Field Survey (2004)
Differences are significant at 0.05 level of significance

The material used for burglar proof, window and doors while depicting affluence also revealed the level of security consciousness of the inhabitants. Wood plank is the lowest quality material and a less effective security barrier while iron /steel works are consider stronger materials for windows and doors. They are however defeated based on lack of transparency (i.e. 'no see through') except in few cases where glass panes are inserted into a leaf of a steel door thus providing the transparency needed (see plate 5.1). Louver blades, glass panes, and flush doors are high level security barriers though not as strong (i.e. more fragile) as iron /steel material yet transparent enough to allow intruders to be seen from inside (see plate 5.2). They are more effective when screened as such the inhabitant can easily locate the intruder without intruder seeing the inhabitants. The use of iron /steel work as burglar proof material debar easy entry into property, increase time of criminal operation and the risk of criminals being caught, thus act as a more effective security barrier.

The more effective and high quality security barriers are found in the low and medium density areas while the less effective ones are more in the high density residential. Residents' experience or fear of crime dictates their responses, which also influence their future experience of crime. Residents of the medium and low density area could not have acted lesser than this considering the fact that the disaggregation of property crime into its constituent types showed that crime of house breaking and stealing and or burglary and stealing dominates their living environment (see figure 4.4).

Besides individual initiatives at fixing security barriers in various houses, thereare communal efforts evident in the use of certain street features such as street gates and bumps (a form of physical barrier) and warning signs (a form of symbolic barrier).

Street Features within Residential Area.

Among the features identified along the streets are street gates (35.1 %), bumps (33.0%), and warning signs (28.9%). Streets with both gate and bump accounted for 3.1 percent of the buildings sampled. A significant proportion of buildings with street gates (40.8%) and warning signs (34.7%) are found in the medium density area (see table 5. 3). Warning signs observed include 'Beware of Dogs', 'Nobody is allowed to pass through this area starting from 11.0 clock' e.t.c. Streets with both gate and bump are found in the medium density area only with a proportion of 6.1 percent. It is surprising that majority of the streets (51.9%) with bumps are found in the high density area compared with 18.4 and 42.9 percent in the high and low density areas. This is owing to the fact that the core residential area of Ogbomoso is to some extent accessible, though the street were imposed on development thus not of adequate sizes. Bumps made on streets are means of controlling the passage of vehicles in order to minimize reckless driving.

Table 5.3: Street Features within Residential Area.

Features	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Street Gates	22.2	40.8	38.1	35.1
Bumps	51.9	18.4	42.9	33.0
Warning signs	25.9	34.7	19.0	28.9
Gates/bumps	0.0	6.1	0.0	3.1
Total	100	100	100	100

Source: Authors' Field Survey (2004)

Plate 5.1: Steel door with a 'see through' glass in the low density residential area.

Plate 5.2: A glass- paned window in a residential building.

Fencing

A substantial number (67.6 %) of the buildings sampled has no fence in the three residential areas. The greatest majority (95.0%) of buildings without fencing are found in the high density residential areas compared with 46.7 and 32.4 percent in the medium and low density areas. The commonly employed fencing material is concrete (29.7%) followed by hedges with equal proportion of 1.2 percent. The remaining proportion is accounted for by bamboo /wood (0.2%). 60.8 percent of fenced buildings in the low density area have concrete fence compared with 49.8 percent in low density area and 4.5 percent in the high density area. A significant proportion of buildings fenced with 'barbed wire' are found in the medium density area (2.7%) and low density area (2.2%)

compared with 0.0% in the high density area. The only building with bamboo /wooden fencing was found in the low density area. Hedges are significantly used as fencing material in the low density area (2.7%) compared with 1.5 % in the medium density area and 0.5% in high density area (see table 5.4). The use of hedges as security barrier is not adequate in this age when criminals are more daring in their operations. Materials employed for fencing in the three residential areas differ significantly.

Table 5.4: Materials used for Fence

Materials	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Hedges	8.3	3.0	4.3	4.0
Bamboo/wood	0.0	0.0	2.2	0.8
Barbed wire	16.7	34.3	52.2	39.2
Concrete wall	50.0	61.2	41.3	52.8
Others	25.0	1.5	0.0	3.2
Total	100	100	100	100

Source: Authors' Field Survey (2004)
Differences are significant at 0.05 level of significance

Not only is the level of security consciousness of residents revealed by the material used for fencing it is also shown by the height of fence and the materials on the tip of the fence. In the building industry, the commonly recommended height of fence for residential building is between 2.00 and 3.00 metres. This specification, while supporting maximum security does not undermine the aesthetic value of buildings. Fences taller than this always tend to overshadow /submerge the visual beauty of buildings. This often

times suggests that there are likely valuable materials, (targets of property crimes) which needed to be protected in such buildings. 47.7 percent of the buildings sampled in the study area have fences with estimated heights of 2.01 to 3.00 metres, followed by 26.5, 20.5 and 5.3 percents with heights 1.01 to 2.00 metres, greater than 3.00 metres and less than 1.00 metres. Further analysis revealed that equal proportion (50.0%) of buildings with fences between 2.01 and 3.00 metres are found in the high and medium density areas compared with 40.0 in the low density areas (see table 5.5). Building fence of 3 meters and above are found significantly in the low (28.0 %) and medium (18.1%) density areas only. 40.0 percent of buildings with fence of height 1.01 metres and 2 metres are found in the high density area compared with 26.4 and 24.0 percent in the medium and low density areas. Summarily buildings with taller fence/wall are found substantially in the low density area followed by the medium and high density areas. The variation observed is not statistically significant using Chi-Square analysis (P>0.05).

Table 5.5: Height of Fence

Height (metres)	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
≤ 1.00	12.5	5.0	4.7	5.4
1.01-2.00	25.0	11.7	41.9	24.3
2.01-3.00	62.5	60.0	44.2	54.1
≥ 3.00	0.0	23.3	9.3	16.2
Total	100	100	100	100

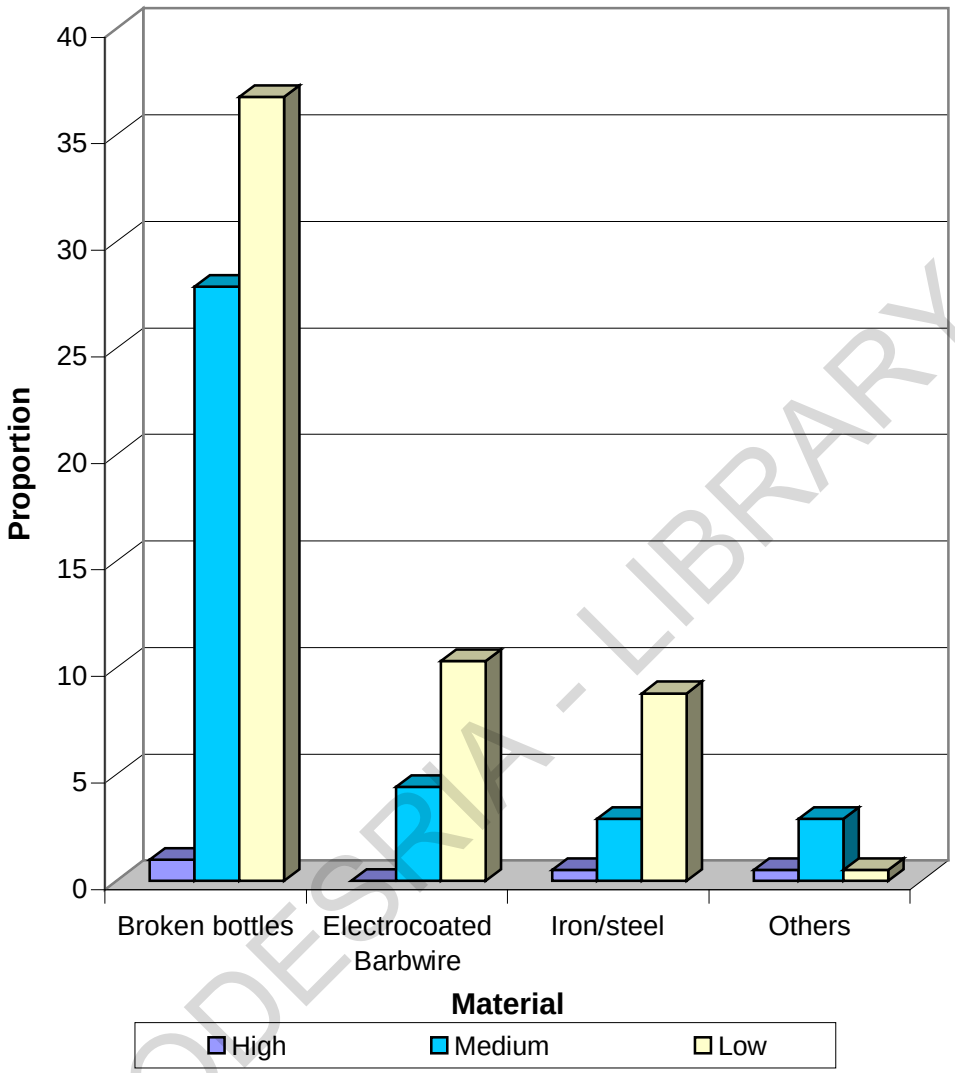
Source: Authors' Field Survey (2004)

Differences are significant at 0.05 level of significance

Substantial proportion of the buildings with broken bottle at the tip of the fence are found in the low (36.8%) and the medium density areas (27.9%) compared with 1.0 percent in the high density residential area. The use of electrified spiral wire on the tip of fences dominates the low density area (10.3%) followed by 4.4 percent in the medium density area (see plates 5.3 and 5.4). None of the building sampled in the high density area has electrified spiral wire on its fence. The use of iron is more in the low (8.8%) and medium density areas (2.9%) compared with 0.5 percent in the high density area (see figure 5.3).Conclusively material on the tip of fences differ significantly among the three residential areas.

There is a little variation in the distribution of respondents who engaged in the use of special window/door locks in the three residential areas. While the proportion of respondents who uses it are 31.8, 27.9 and 21.6 percent respectively in the high, medium and low density areas, the corresponding percentages for those who are not using it are 68.2, 72.1 and 78.4 percent. The Chi-square analysis performed ($P>0.05$) indicates that the difference observed above is not significant at 0.05 level of significance. The implication of this is that the use of strong locks does not vary significantly among the three residential densities. The use of street gates has been explained in section 3.26.

Figure 5.3 : Materials on the Tip of Fence



The use of fence, burglar proof, strong locks doors and windows as physical barrier helps in monitoring and or restricting physical access or movement. They are also efficient element of demarcating various zones of defense. Entrance into certain parts of the building are restricted or effected only with the use of these materials, as such areas where these are lacking substantially may be very difficult to monitor in terms of security. This explains why all types of crime occurred more in the high density areas.

The use of security barrier is at its lowest ebb in this area. In addition separations of living space into zones of defense are not adequately done. Public and semi public zones are not well separated from each other. Entrance into verandah and even internal corridor are not maximally restricted. Infact, the external corridor (i.e. ede ode) of some compounds serves dual purposes as corridor for residents and as free passage for passerby

Criminals are least likely to act when there is a high risk of their activities been witnessed. From the data presented on the disaggregation of property crime into its component parts, crime of burglary and stealing and breaking and stealing are seen to pervade the medium density despite high level security consciousness displayed in the design of building with high quality burglar proof material, window and doors and even strong and tall fences with sophisticated materials on its tips. Why?

The use of fence especially concrete walls as a security barrier could be a blessing at the same time a woe. The use of high concrete fence has the tendency of screening criminal from the passerby as such criminal activities could be carried out successfully within fenced / walled buildings without passerby or neighbours noticing (see plates 5.3 and 5.4). The fact that majority of the residents in the medium and low density areas are public servants who spend appreciable number of hours away from their residences or residential areas placed these areas on a high risk of criminal attack. Contrarily, high density residential areas are places where anonymity could not be easily framed to perform criminal activities considering the occupation of some of the residents which are located around their place of abode. Effective guardians are thus always in or around the area. In addition, Yoruba communal sense of living compress a whole area into a single

family where residents know and relate with neighbours intimately as such it is very easy to identify strangers.

Plate 5.3: A Tall Fence with electrocuted barb wire at the tip.

Plate 5.4: A tall, well-built fence without 'see through' in a Low Density Residential Area.

5.2 THE DEGREE OF TERRITTORIALITY IN OGBOMOSO

Sense of territoriality is a function of ones' sense of pride of ownership (not necessarily a legal one) which results from architecture that allows easy identification of certain area as ones' exclusive domain. The ability to defend one's domain is integrally linked with sense of territoriality and the desire to do so. It seems territoriality is an abstract term. However, since this study is more concerned with physical elements and

less on residents' perception or feelings, which may not be adequately measured with physical element, issues such as residents' occupancy status, marital status and the physical barriers discussed before will be used in explaining the degree of territoriality displayed in each residential area. The sense of territoriality and desire to defend ones domain is likely to be displayed by landlords borne out of pride of ownership exercised over their properties. In addition, sense of territoriality expected of married or widowed tenants will be more than that of single person due to the natural sense or desire to safe guard ones ward as well as protecting their interest. This is why degree of territoriality in the low and medium density areas where significant proportion of single person tenants lives is likely to be lower than in high density areas while significant proportion of the married and widowed residents lives (see chapter 3). Similarly, sense of territoriality is likely to be more in the high density residential areas with 44.2 percent proportion of the landlords living there compared with 31.9 percent in the medium and 16.2 percent in the low.

The design of buildings has its place in promoting sense of territoriality. Designs, which encourage privacy such as flat, bungalow and duplex building designs as well as a well fenced property with clearly defined zones of defense promote residents' feeling of territoriality and desire to protect their domain than the compound and roomy type where demarcation of living spaces into zones of defense is not effective (see plate 5.5) Thus, sense of territoriality is supposed to be high in the medium and low density areas. However, the case probably deviates a bit from this in the low density residential area of Ogbomoso due to the fact that these places are to a large extent dominated by LAUTECH students who are mainly single. It is observed that single person tend to exercise a

carefree attitude/behaviour over their living environment. They display less emotional attachment to their houses. Houses or bed spaces are not really seeing as a home but of a sleeping and eating-place where their luggage could be kept. The occupancy tenure, which is more often than not a temporal or rather a 'seasonal one', based on annual agreement between them and their landlords or caretaker, also breed the feeling of temporality. This could invariably affect their sense of belonging: a major ingredient of territoriality. The number of residents in a building also affects dwellers ability to demarcate some particular spaces as their exclusive domain since more spaces tend to be shared among occupants. This situation is true of high density residential area where there is high floor ratio.

Territoriality is also achieved or enhanced either by the use of buffers or walls around buildings. Inhabitants of dwellings with fence are likely to exercise greater sense of territoriality than houses without fences. Thus, it is expected that level of territoriality be high in the medium and low density areas than the high density area.

Plate 5.5: A fenced residential building with clearly defined zones of defense

5.3 SURVEILLANCE STRUCTURE IN OGBOMOSO

This connotes ability of the legitimate occupants of an area to exercise a high degree of visual control over the entire area. This could be on individual or collective level. Surveillance could be informal/natural or formal/artificial.

Features of the landscape such as trees, shrubs, flowerbeds, window and door materials and fencing are major elements of informal surveillance examined by the study. The use of glazed and expensive windows and doors, which allow 'see through' by the occupants of a building, are more in the medium and low density residential area than the high density areas as discussed earlier in section 5.2. Windows made of wood planks and

iron/steel panels are least effective as surveillance materials because they do not allow the occupants to 'see through' so as to monitor would be intruders (see plates 5.6). The fencing of landed properties in the study area is by varying types. As observed during the study, majority of the houses with fence in the medium and low density areas have the frontal part designed with iron rods or perforated blocks placed on concrete walls thus allowing the front of the buildings to be seen (see plate 5.5). Some buildings are however fenced to the 'brim' without 'see through' design at the front (see plate 5.4 and 5.6). There are handfuls of buildings with hedges as their fencing material. This offers a complete opportunity to observe all activities around the building thus preventing criminals from being concealed. Hedges are however not strong enough to debar entry of criminals. It is observed that, telephone or electric poles aligning streets are to a large extent not too close to fence, to act as climbing paths to the upper levels of building. This is not to deny the existence of some. This is observed in the medium and low density residential areas. The problem of concealment due to the use of fences is not of significance in the high density area where some buildings have no fencing at all.

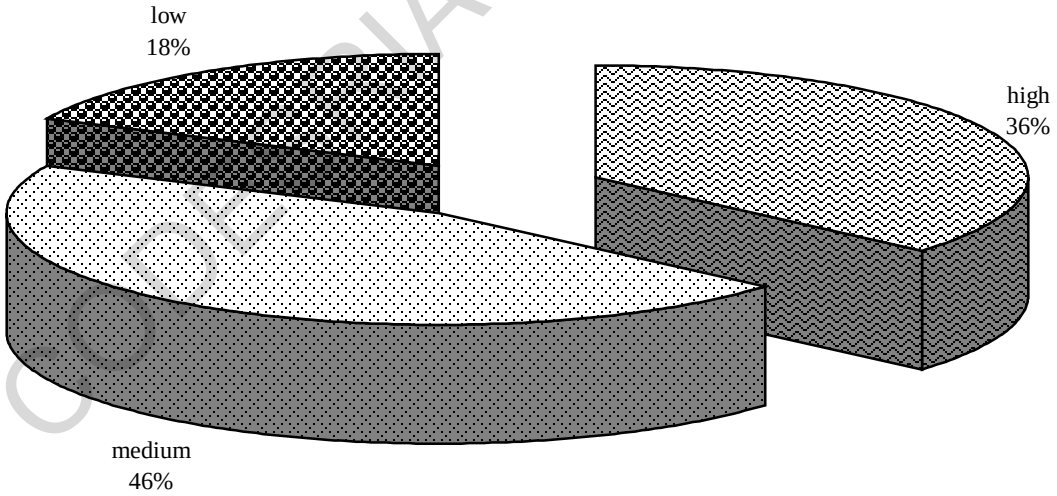
Plate 5.6: A residential building with a flowerpot that can serve as hideout for Intruders.

Elements of formal or artificial surveillance studied include the use of fixed human guard (private guard), local security guard, organized security patrols (vigilante groups) and the use of security dogs. The use of security dog is discussed under scare tactics. The use of private security is at its lowest ebb in all residential areas with just 2.7 percent signifying its usage among all the buildings sampled. Out of this, a significant proportion of buildings (45.5%) with private security guards maning individual buildings dominates the medium density area compared with 18.2 percent in the low and 36.4 percent in the high density area (see figure 5.4). This is not unexpected with the occupational status and the level of income of the residents. The use of private security

guard in the low density area is low because LAUTECH students who represent the major residents by way of living provides the needed surveillance for their area, especially when the school is in session. The situation is however pathetic when these students are on holidays. Tales of house burglary always pervade the air since the area is rendered a 'ghost zone' at these periods, thus allowing maximum looting especially in buildings occupied by students alone and where there is no private security guard.

Further analysis using Chi-Square statistics confirmed that the variation observed is significant (P< 0.05).Thus, the use of private security differs significantly among the three residential densities.

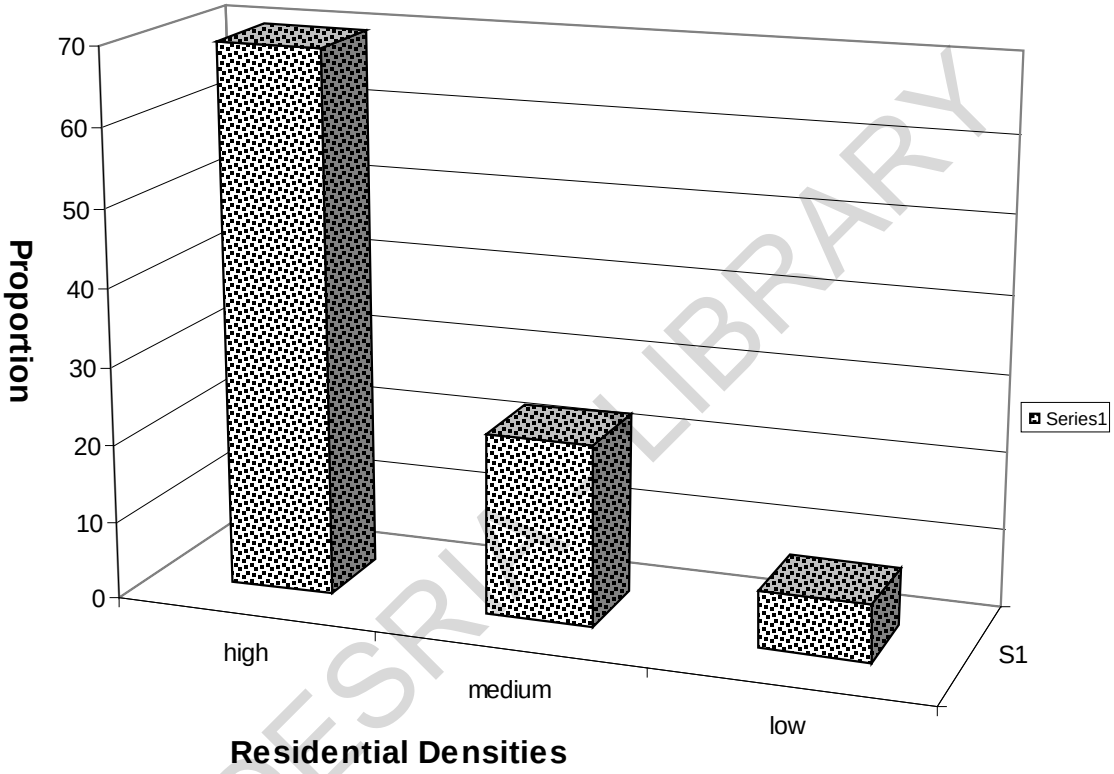
Figure 5.4: Percentage Use of Private Security Guard in Residences



Similarly the same statistics confirmed that the use of local security personnel in the three residential densities differs significantly (P< 0.05). Local security guard commonly referred to as 'ode adugbo' i.e. community security guard are used

significantly (69.6%) in the high density residential area compared with 23.3 and 7.2 percent in the medium and low density areas respectively (see figure 5.5).

Figure 5.5a : Percentage Use of Local Security Guard Within Residential Densities



The use of vigilante group as surveillance agent cut across the three residential areas. It is however more advanced in the high and medium density areas while some areas in the low density zone have vigilante group others use a variant of this group. For instance SACS: Student Anti- Cultism Squad constituted by Ladoke Akintola University of Technology (LAUTECH) Student's Union Government. This body was constituted to monitor student activities and ensure safety of lives and properties especially in low density residential area inhabited by students of Ladoke Akintola University of

Technology. SACS not only ensured that university students are not molested or harmed by secret cult members and criminals but that no student is involved in criminal activities.

The vigilante group mount security framework around the community, organized joint patrol in the night as well as employ community security guard for their areas. Members of Odua Peoples Congress are employed in some low density residential areas e.g. Rounda / Blind Center to man the community and protect lives and properties in the night. Another surveillance structure in the town is that which involves a participatory approach between the police and the residents. A committee named Police Public Relation Committees (PPRC) was set-up in each local government area to effect a good relationship between the police and resident of Ogbomoso as well as to engage the people in effective policing of their environment. The Committee was constituted to include police, community and various trade union representatives together with some hand picked few elites in the town. Their monthly forum addresses issue of security as well as supply of information to the police on criminal hideouts activities in the town. Through this committee, the police confessed to have been able to monitor the activities of criminals in the town effectively. The efforts of this committee at ensuring peace and tranquility is recognized by the residents as they added that the decision or resolution of the committee get conveyed to the community during community meetings organized in the medium and high density residential areas and are further shared in different compounds for maximum circulation of information. The clear commitment shown by the residents of Ogbomoso is highly rewarded by relative peace being enjoyed in the town now.

5.4 LIGHTING

Good lighting along the street and around the building does not only discourage criminal activities it also enhances natural surveillance opportunities, reduces the fear of crime and creates confidence in users of a guarded space. A significant proportion of buildings (77.0%) have bulbs fixed around them, followed by 15.5, 5.0 and 2.5 percent with fluorescents, floodlight and search light respectively (see table5.6).

Table 5.6: Use of Security light

Types	Residential Densities			Total (%)
	High (%)	Medium (%)	Low (%)	
Bulbs	38.0	40.8	21.2	100
Fluorescent bulbs	18.9	45.9	35.1	100
Floodlight	0.00	33.3	66.7	100
Searchlight	50.0	16.7	33.3	100
Total	35.5	40.6	25.9	100

Source: Author's Field Survey (2004).

Differences are significant at 0.05 level of significance

Further analysis revealed that the use of bulbs and fluorescent bulbs as security light dominates the medium density area with 40.8 and 45.9 percent respectively compared with 38.0 and 18.7 percent in the high and 21.2 and 35.1 percent in the low density areas. In line with expectation high quality security light such as flood and search light are used in significant proportion in the low density area with 66.7 and 50.0 percent respectively compared with 33.3 and 33.3 percent in the medium density area and 0.0 and

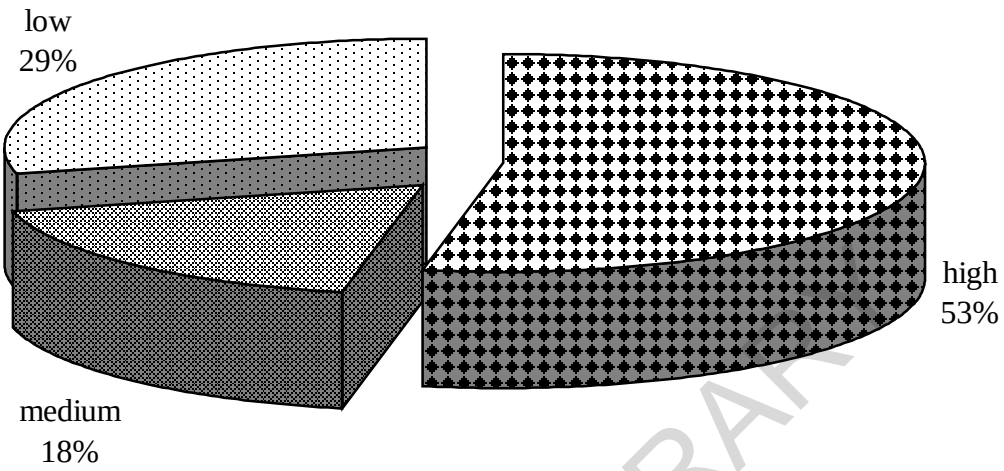
16.7 percent in the high density residential area. The significance of this analysis is better seen when the number of building with security light in the whole study area as well as in individual residential areas is considered. Two hundred out of four hundred and eight buildings sampled have one form of security light or the other. Further analysis revealed that 33.5 percent, 40.6 percent and 25.9% has security light of one type or the other in the high, medium and low density areas respectively.

Apart from the lighting system in individual properties the level of illumination of the total environment is of significance to this study. In view of this the existence and functionality of street light are considered.

Functional Street Light

A significant proportion of the streets (17.5 %) with functional light are found in the low density area compared with 12.2 and 5.1 percent in the high and medium density residential areas respectively. The analysis further revealed that there is acute shortage of streetlight in the town with only 0.6 percent having streetlight compared with 89.4 percent without street light (see figure 3.6). This implies that greater portion of the town is in darkness in the nighttime thus creating avenue for devilish works i.e. crimes. The situation will be worse in the medium density area with the lowest number of street light.

Figure 5.5b :Percentage Functional Street light within Residential Area



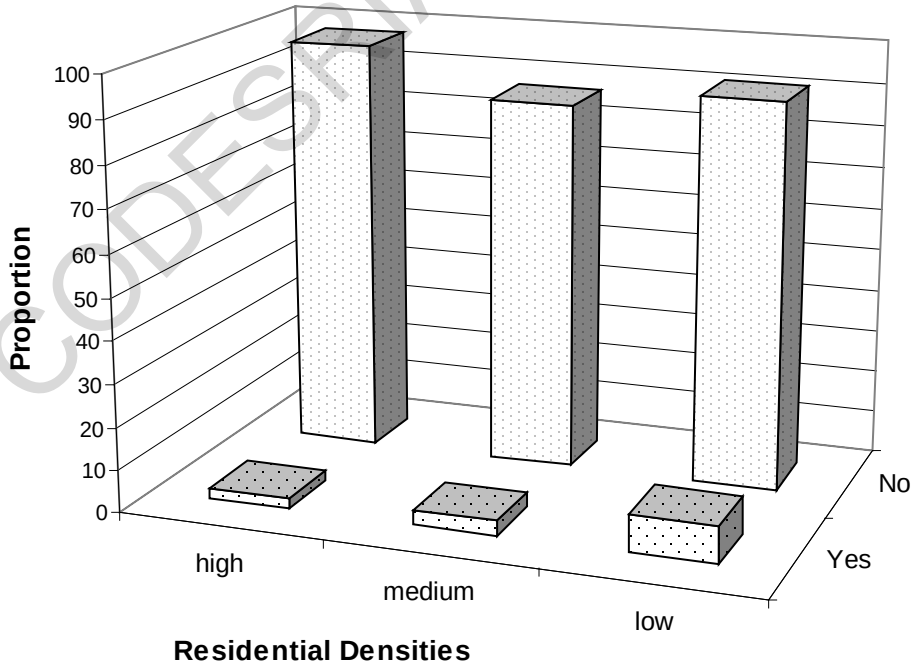
5.5 LANDSCAPING

Landscaping elements when effectively combined with other elements of CPTED could be of tremendous help in ensuring the security of a guarded space. Features of landscaping commonly observed in the study area ranges between planting of trees, use of flowers as hedges to full landscaping of living surrounding with variety of plants. In the high density residential area, landscaping elements are grossly lacking with just few trees planted for shade or religious purpose e.g. shade during annual masquerade display. Some trees are also of historic importance e.g. Igi Araba at Masifa. Conscious security consideration seems not to underlie the planting of these trees. Elements of conscious landscaping are found in the low density residential area. Flowers are seldomly used as hedges around buildings in the town. Significant use of landscaping elements: flower and trees are for beautification than for security purpose. This is deduced from the fact that majority of the well landscape properties are fortified with fences / wall.

5.6 SCARE TACTICS

Classified under this group are alarm system, gong used by local community night guards. Only 7.1 percent of the residents surveyed engaged in the use of security dogs. This indicates a very low level of use. While the proportion of residents who are involved in the use of security dogs is 2.5, 3.5 and 8.8 percent respectively in the high, medium and low density areas, the corresponding percentages for those who are not using it are 97.5, 86.8 and 91.2 percent (see figure 5.6). This indicates that the use of security dogs is highest in the medium and low density areas. The significant use of dogs as protective measured in the medium and low density areas may be attributed to high occurrence of crimes such as burglary and house breaking in the two areas compared with other residential densities.

Figure 5.6 Percentage Use of Security Dogs Within Residences



An insignificant proportion of the respondent (1.0%) indicates their involvement in the use of alarm system as a protective measure (see table 5.7). These respondents are all found in the medium density residential area. The use of gong and whistle by local community security guard are identified with every community or area being guarded by local security men. It is observed that curfew period in many parts of the town starts by 11pm or 12 midnight. The first bang of the gong warns the residents that the curfew period is about to or has started. Subsequent bangs only indicate that the curfew is in progress. It also signifies the continue presence of the security men on duty in the area, while the last bang around 5.00 am signify the end of the curfew. The blowing of whistle and the banging of the gong is a means of announcing the presence of night guard men. Messages released by the whistle depend on what the guard man intended to pass across. While the curfew is in progress, whistles are blown perhaps to summon help from neighbouring guard men in case of criminal attack. It is also blown when criminals are suspected to be around so as to alert the community. The area where residents are likely to hear more of security whistling and banging of gong is the high density residential area due to the predominant use (69.6%) of local security men in this area. This is followed by the medium density area with 23.2 percent and lastly by the low density area with 7.4% percent (see figure 5.5). This indicates a decrease in the level of usage with decreasing density of development.

Table 5.7: Use of Alarm System within Residences

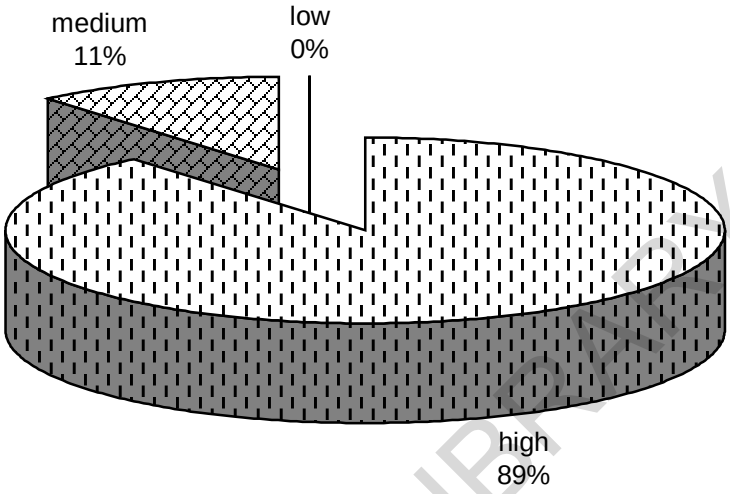
Options	Residential Densities			Total (%)
	High (%)	Medium (%)	Low (%)	
Yes	0.0	2.9	0.0	1.00
No	100	97.1	100	99.0
Total	100	100	100	100

Source: Authors' Field Survey (2004)

5.7 AFRICAN TRADITIONAL PROTECTIVE DEVICES (ATPDs)

It is paramount to state that only 6.6% of the total number of respondents surveyed declares their use of charm as protective measure. Out of this, the use of charm dominates the high density residential area (88.9%) compared with 11.1% residents who employ the use of charm as security measure in the medium density area (see figure 5.7). No respondent indicate his/her involvement in the use of charm in the low density residential area. The small response rate is perhaps due to the general reluctance people exercise in disclosing anything that relates to their safety especially those related to traditional protective measures. However, while some people are reluctant in answering the question posed to them in this regard some respondents will make a boast of their possession of 'juju' power so as to present themselves as formidable.

Figure 5.7 : Percentage Use of African Traditional Protective Devices (ATP\Ds)



5.8 OTHER SECURITY MEASURES

Other protective measures identified during the study include the use of axe / club / stick and gun. Respondent were reluctant to declare their possession of gun. Only 1.7 percent or 7 people indicate the use of gun as protective measure. Out of this figure, 57.1, 2.9 and 6.7 percent resides in the high, low and medium density area respectively (see figure 5.8). The relative dominance of this measure in the high density area may be due to the dual use of local gun as local hunting implement as well as a security instrument. Axe / club / stick are only used in equal proportion of 50 percent (or 3 respondents) in the high and medium density areas with no respondent indicating its use in the low density area (see table 5.8).

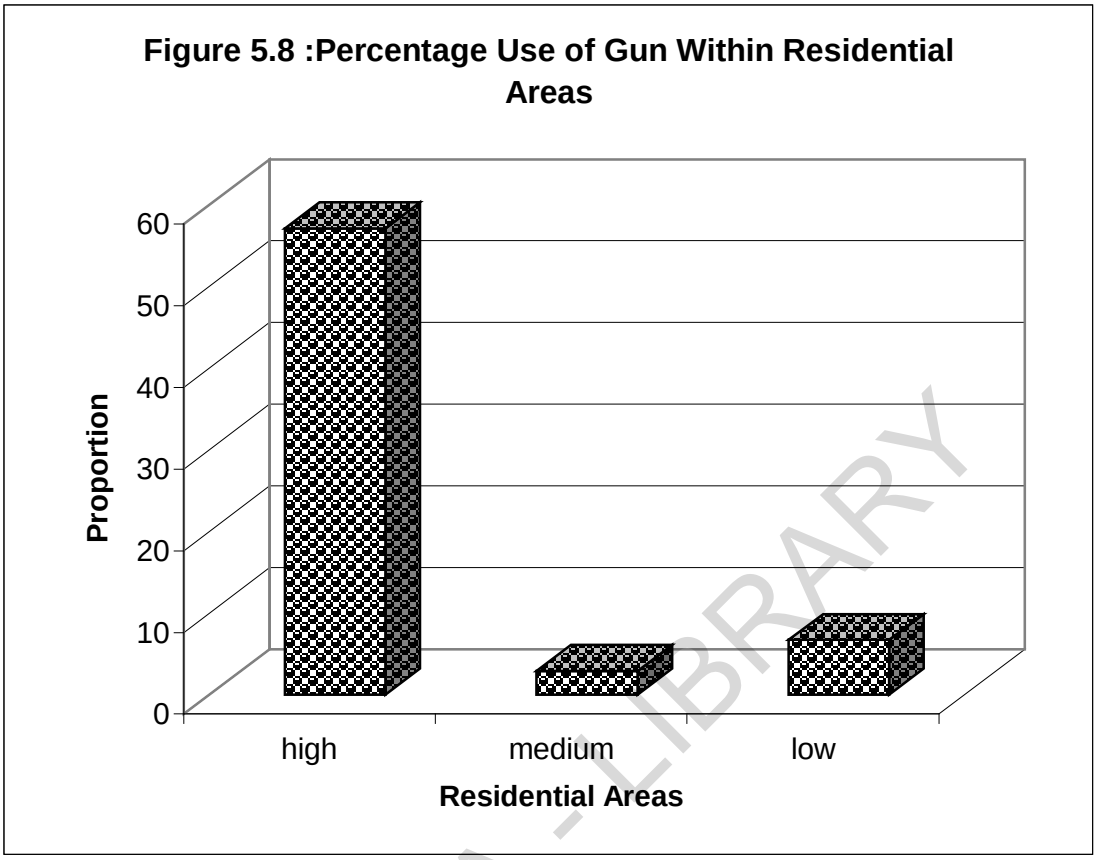


Table 5.8: Percentage Use Axe/Club/Stick Within Residential Densities

Options	Residential Areas			Total (%)
	High (%)	Medium (%)	Low (%)	
Yes	50.0	50.0	50.0	100
No	49.9	33.2	17.0	100
Total	49.9	33.4	16.4	100

Source : Authors' Field Survey (2004)

In contrast to what has been revealed by some earlier studies in regards to residents' response to crime in Nigeria major urban centres such as Lagos and Abuja, (Agbola, 1997 and Agbola, 2002) residents' response to crime in Ogbomoso cannot be regarded as sophisticated. The use of highly sophisticated security measure such as close circuit television was not reported during the investigation. The level of sophistication identified with the security measure studied

shows the extent, intensity and diversification of criminal activities in the town. This supports an earlier discovery in the study indicating a reduction in the rate of crime in Ogbomoso. Notwithstanding the level of residents' effort at combating crime, it is good to examine how secure people feel in the town.

Table 5.9: Summary of Chi-Square Analysis on Residents' Response to Crime

S/N		Computed X	Degrees of freedom (df)	P value	Comment
1	Location of burglar proof	56.654	6	0.000*	Significant
2	Burglar proof material	90.174	8	0.000*	Significant
3	door	75.048	6	0.000*	Significant
4	Material used for window	97.694	6	0.000*	Significant
5	Material used for fence	28.370	8	0.000*	Significant
6	Height of fence	4.742	6	0.577**	Not significant
7	Material on the tip of fence	120.242	8	0.000*	Significant
8	Use of private security guard	0.901	2	0.637**	Not significant
9	Use of local security guard	13.213	2	0.001*	Significant
10	Use of Alarm system	8.050	2	0.018*	Significant
11	ATPDs	17.144	2	0.000*	Significant
12	Use of gun	1.455	2	0.483**	Not significant
13	Use of axe/club/stick	1.519	2	0.468**	Not significant
14	Use of security dog	14.737	2	0.001*	Significant
15	Use of OPC	24.498	2	0.000*	Significant
16	Landlord/tenants Vigilante	50454	2	0.065**	Not significant

Source: Author's Field Survey (2004).

Note:*significant at 0.05 level of significance

** not significant at 0.05 level of significance

Table 5.9 presents outcome of Chi- square analysis used in confirming the significance (or otherwise) of all the variations noted in residents' response to crime in Ogbomoso. It is concluded that there is significant spatial variation in the location of burglar proof; material used burglar proof, doors, windows and fence, material on the tip of fence; use of local security personnel, alarm system, ATPDs, security dogs and OPC ($P< 0.05$). Thus, the null hypothesis stated earlier is rejected while the alternative one accepted. On the other hand, the analysis revealed that the height of fence; use of private security guard, gun, axe/club/stick and vigilante does not differ significantly from one residential densities to the other. In this regard the stated null hypothesis is accepted and the alternative rejected.

5.9 RESIDENTS' PERCEPTION OF SAFETY IN OGBOMOSO

Unlike some major urban centre where residents feel grossly unsafe despite all efforts at combating crime at individual or community level (Agbola 1997), greater proportion of residents in Ogbomoso feel at least safe enough to declare it while a minority few, feel unsafe. 46.9 percent of residents surveyed in Ogbomoso feel safe followed by 41.7 percent who feel confidently safe, 5.4 percent however feel no change despite all efforts at controlling crime while 3.7 and 2.2 percent feel unsafe and very unsafe respectively (see table 5.10). The differentiation of this figures into residential areas showed that the greatest majority of those who feel very much safe (55.7%) and very unsafe (2.5%) resides in the high density area. This seems like an irony. Well, this is not impossible since perception of safety is subjective. While some residents feel

highly unsecured perhaps due to their experience of and fear of crime, others feel very safe.

Majority of those who feel fairly safe (58.8%) and unsafe (7.4%) resides in the low density area compared with 53.3 and 5.9 percent in the medium and 38.6 and 1.0 percent in the high density area respectively. It is not unexpected that residents of the medium density area feel this way, considering the rate at which residents are exposed to criminal activities, due to the features of their physical environment which encourage criminality such as the location of the Sabo, Takie and Caretaker / Ahoyaya Carparks, filling stations and commercial activities all of which serves as a conducive breeding space for rouges and the occurrence of criminal acts. In addition, the remoteness of some low density residential area from other parts of the town coupled with scanty or incomplete development with bushy uncompleted buildings and undeveloped plots are part of the environmental factors which could heighten fear. The significant frequency of occurrence of house breaking and or burglary, armed robbery and crime of aggression cannot be dissociated from the causes of residents feelings of insecurity in the low density area.

The greatest proportion (8.1 %) of those who feel no change resides in the medium density area compared with 7.4 percent in the low and 3.0 percent in the high density area respectively.

Table 5.10: Residents' Perception of Safety in Ogbomoso

Feelings	Residential Densities			Total (%)
	High (%)	Medium (%)	Low (%)	
Very much safe	55.0	30.4	25.0	41.7
Fairly safe	38.6	53.3	58.8	46.9
Feel no change	3.0	8.1	7.4	5.4
Unsafe	1.0	5.9	7.4	3.7
Very unsafe	2.5	2.2	1.5	2.2
Total	100	100	100	100

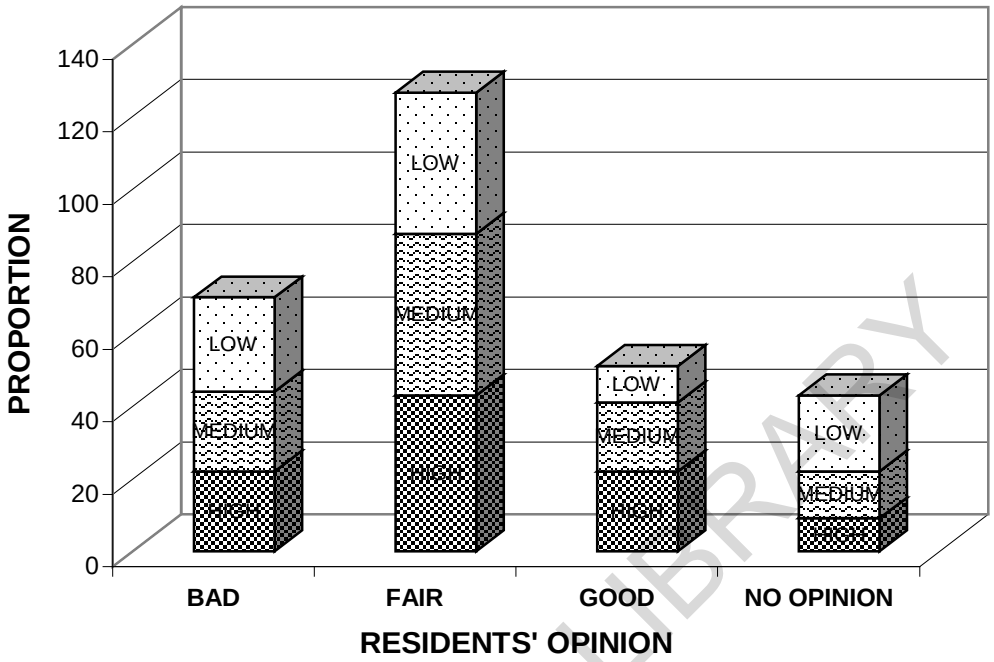
Source : Authors' Field Survey (2004)

5.10 RESIDENTS' EVALUATION OF POLICE EFFECTIVENESS

Considering police's national image as well as residents' waning lack of confidence, it is surprising that Ogbomoso residents' perception is different. A greater proportion of Ogbomoso dwellers consider the police as performing fairly well (41.2%) and well enough i.e. good (19.2%), while only 26 percent rate their efforts as bad (see figure 5.9). This shows that majority of the residents are fairly satisfied with the performances of the Police. It may perhaps indicate their recognition of police efforts at combating crime in the city. In spite of this, residents points out area due for improvement if Police effectiveness will be adequately enhanced. Suggestions were offered in lieu of this.

The Federal Government was advised to effectively monitor the activities of the police, provide better training and orientation programme, improve their take home package, recruit new officers as well equipped them with sophisticated weapon, which can conveniently compete with, and subdue the weapon used by criminals. The intelligent units are also to be equipped and trained adequately to combat the increasing diversification in criminal activities and strategies. The police themselves were advised to be more dedicated and committed to their duty, show more interest in the security of residents they were employed to protect, be more disciplined and content with their wages as such reduce bribery and corruption which is destroying their image and reducing citizen's confidence in them. The level as well as the quality of cooperation within the organization and between the public and Police was also suggested to be improved. Other suggestions include rapid response to residents' call, improve patrol schedule, disclosure of their distress phone number to the public, creation of more police post and improved means of getting current information on security related events in the town.

Figure 5.9: Residents' Rating of Police Effectiveness



5.11 RESIDENTS' PREFERED SECURITY GROUP

In spite of residents' favourable rating of police effectiveness, the greatest majority prefer the landlord/tenants vigilante group to be in charge of security matters in their areas. Among the reasons provided in support of this choice, include the fact that the vigilante groups are constituted by the property owners and tenants of each area which afforded them the opportunity of knowing the problem of the people enough to provide the needed response. Other desirable features include their ability to recognize stranger easily, closeness to residents, availability and prompt response to distress call. They are also seen as reasonable in judgment as well as approachable.

The next preferred group is the Police. The choice of this group was attributed to the confidence repose in their weapon, training and legal status, being the organization

charged with security of lives and properties in the nation. The next preferred group is the Odua Peoples Congress Members. This group was preferred because of their ability to use African Protective and Offensive devices with commendable accuracy and their ability to render instant justice to criminals. The members were also seen as reliable and honest. These attributes were observed to be lacking in the organization legally charged security of lives and properties in the nation.

CHAPTER SIX

6.0 SUMMARY OF FINDINGS AND PLANNING IMPLICATION

This chapter contains the summary of major findings in the study. Also discussed is the implication of the study to planning.

6.1 SUMMARY OF FINDINGS

A summary of the major findings are highlighted below.

On Social, Economic and Environmental Attributes of Respondents

1. The analysis of the marital status of respondents revealed that the greatest majority of all categories (married, widowed and divorced groups) except the singles live in the high density residential area. The singles dominate the low and medium density residential areas.

2. Bulk of the respondents who fall within the groups: no formal, Arabic and primary education live in the high density residential area. A greater proportion of those with post secondary and university education live in the medium density residential area. A significant proportion of respondents with postgraduate education locate in the low and the medium density residential areas. Higher educational qualifications are identified with low density residential area followed by the medium density area.

3. The greatest proportion of respondents who are engaged in jobs coded as 'private sector unorganized' are found in the high density residential area. The observation is the same for farmers, retiree/pensioners, unemployed seeking employment and unemployed not seeking employment groups. The low density residential area has the least figure for all these groups. The greatest proportion of students resides in the low density residential area. Highly rewarded white collar jobs are identified with medium and low density areas

while low paid jobs are found more in the high density residential area. This is regarded as a consequence of residents' level of education.

4. A significant proportion of respondents in income group ≤ #7,000:00 are found in high density residential areas while bulk of respondent within the income groups of #7,001:00 - #15,000:00; #15,001:00 - #23,000:00; #31,000:00 - #39,000:00 and ≥ #39,000:00 resides in the medium density residential area.

5. The proportion of property owners living in the high density residential area is more than that of the medium density area while those in the low density area are almost half of the landlords living in the medium density area. The tenants' population dominates the low and the medium density areas.

6 The study revealed that 78 people (10.1%) of the respondents enumerated are in possession of vehicles, out of which 46 percent resides in the medium density area compared with 33.3 percent in the high density residential area and 20.5 percent which locates in the low density residential district.

7. The highest number of car owned is five. This was found in the high density residential area only. The bulk of the population who own one or three car(s) resides in the medium density area. The larger proportion of the respondents who owned four cars reside in the low density areas. In the whole town, residents with one car dominate all residential areas.

8. The bulk of traditional compound buildings are found in the high density residential area. The roomy type dominates all residential densities. The flat and duplex type are more in the low density area. The bungalow type is found mainly in the medium density residential area.

9. Most of the buildings (47.7%) subjected to residential/commercial uses locates in the high density area followed by 43.4% in the medium density area. The medium density area housed the greatest proportion (55.9%) of buildings subjected to residential use only.

On Incidence of Crime

10. There is temporal variation in the occurrence of crime in Ogbomoso within the period of study. There is a negative correlation between year and frequency of crime occurrence. This implies that the observed fluctuation between 1995 and 2003 tends towards a decrease. Major decreases were for instance noted in 1996 (12.2%), 1998 (6.8%) and 2002 (6.0%). The observed decrease is statistically significant at 0.05 level of significance.

11. The analysis of data collected from the Police revealed that the rate of criminal incidence in Ogbomoso between 1995 and 2003 has decreased irrespective of category.

12. The decreasing crime trend in Ogbomoso within the period of study is a feat attributed to more gainful employment for the urban youths, particularly the increase in the use of motor cycle popularly known as "Okada" as a mode of intra-city transportation.

13. There is variation in the frequency of occurrence of various crime categories in Ogbomoso within the period of study. The highest occurring crime in Ogbomoso is crime of acquisition followed by crime of aggression, crime against morality and custom, and crime of public disorderliness. These are followed by crime against property, white collar crime, crime against government officials on duty, crime of cultic/witchcraft practices and related offences, and crime against public law/regulation.

14. There is spatial variation in the occurrence of total crime cases in Ogbomoso within the period of study. The analysis of the total number of crime cases reported between 1995 and 2003 showed that 47.2 percent cases occurred in the high density residential area followed by 34.7 percent in the medium density and 18.1 percent in the low density residential area.

15. There is a significant spatial variation in the occurrence of different categories of crime within the three residential densities identified in Ogbomoso between 1995 and 2003. Six crime categories has their highest score in the high density residential area compared with three crime categories which occurred relatively more in the medium density area. Just one crime category occurred with equal frequency in the low and medium density areas. Almost all crime categories occurred less in the low density residential area.

16. High level of unemployment; dense physical development; high population density, occupancy ratio and interpersonal relationship; are identified as contributing to the level of crime occurrence in the high density residential area.

17. There is a significant spatial variation in the occurrence of property crime in Ogbomoso between 1995 and 2003. Crimes of breaking and stealing, burglary and stealing and armed robbery occurred more in the medium density residential area. The high density area has the highest toll of crimes of stealing and unlawful possession, obtaining wealth under false pretence and destruction of properties. The low density residential area has the lowest score of all these crimes.

18. The high incidence of crime of breaking and or burglary and stealing in the medium density area is attributed to residents' occupational status, high income level, car

ownership, activities between residential buildings (or their fences) and the street and the location of three CBDs (Sabo, Takie and Caretaker/Ahoyaya) in the medium density area.

On Residents' Response to Crime

19. Majority of the building without burglar proof are found in the high density residential area. Substantial proportion of buildings in the medium and low density area have burglar proof on windows.

20. There is significant variation in the type of material used for burglar proof in Ogbomoso. In the town as a whole, iron / steel is the commonly used burglar proofing material. The greatest proportion of buildings with iron/ steel burglar proofing material is found in the low and the medium density residential areas. The use of woodplank and wire mesh dominates the high density residential area.

21. A very high proportion of buildings with woodplank doors are found in the high density residential area. The use of iron /steel dominates the medium and low density areas. The use of flush door prevails more in the low density residential area than in other residential areas. No building, out of all the selected buildings in the high density residential area uses flush door and glass panes. Glass panes are used in significant proportion in the low density area.

22. A significant proportion of buildings with wooden windows is found in the high density area. Louver blades and glass panes are used in appreciable proportion in the low density residential area. None of the buildings sampled in the high density area uses glass panes as windows though a handful proportion uses louver blades.

23. The material used for burglar proof, windows and doors while depicting affluence also revealed the level of security consciousness of the inhabitants. The more effective

and high quality security barriers are found in the low and medium density residential areas while the less effective ones are more in the high density residential area. Thus, low and medium density residents could be said to be more security conscious than residents of the high density area.

24. The greatest majority (63.9%) of buildings without fence are found in the high density residential area compared with 26.8 and 9.3 percent in the medium and low density areas.

25. The material used for fencing in the three residential areas differs significantly. The commonly employed fencing material is concrete. Buildings with concrete fence dominate the low and medium density areas. The only building with bamboo /wooden fencing was found in the low density area. Hedges are insignificantly used in the medium density area.

26. 54.1 percent of the buildings sampled in the study area have fences with estimated height of 2.01 to 3.00 metres, followed by 24.3, 6.2 and 5.4 percents with height 1.01 to 2.00 metres, greater than 3.00 metres and less than 1.00 metres respectively.

27. Buildings with taller fence/wall are found substantially in the low density area followed by the medium and high density areas.

28. A substantial proportion of buildings with broken bottle at the tip of the fence are found in the low and the medium density areas while a small proportion was found in the high density residential area.

29. The degree of territoriality in the low and medium density areas where significant proportion of single person tenants lives is likely to be lower than in high density area while significant proportion of the married and widowed residents lives. Similarly, the

sense of territoriality is concluded to be high in the high density residential area where a major proportion of landlord's population are found than in other residential areas.

30. The use of private security personnel is at its lowest ebb in all residential areas with just 2.7 percent signifying its usage among all the building sampled. Out of this, a major proportion of 45.5% with private security guards manning individual buildings are found in the medium density area compared with 36.4 percent in the low and 18.2 percent in the high density areas.

31. Local security guard commonly referred to as 'ode adugbo' i.e. community security guard are used significantly in the high density residential area.

32. The use of vigilante group as surveillance agent cut across the three residential areas. It is however more advanced in the high and medium density areas while some areas in the low density zone have vigilante group, others use a variant of this group. For instance Student Anti- Cultism Squad (SACS) constituted by the Student's Union Government of Ladoke Akintola University of Technology (LAUTECH) man their major residential areas.

33. Members of Oodua Peoples Congress are employed in some low density residential areas e.g. Rounda / Blind Center to man the community and protect lives and properties in the night.

34. Another surveillance structure in the town is Police Public Relation Committees (PPRC) which was set-up in each local government area to effect a good relationship between the police and the residents of Ogbomoso as well as to engage the people in effective policing of their environment.

35. A significant proportion of buildings (77.0%) have bulbs fixed around them, followed by 15.5, 5.0 and 2.5 percent with fluorescents, floodlight and search light respectively. The use of bulbs and fluorescents as security lights dominates the medium density area. High quality security light such as flood and search light are used in significant proportion in the low density residential area.

36. Features of landscaping commonly observed in the study areas ranges between planting of trees, use of flowers as hedges to full landscaping of living surrounding with variety of plants.

37 An insignificant proportion of respondent who indicated their involvement in the use of alarm system as a protective measure was found in the medium density area.

38. Only 1.7 percent of the respondent enumerated indicates the use of gun as protective measure. Out of this, the greatest proportion resides in the high density area. The relative dominance of this measure in the high density residential area may be due to the dual use of local gun as local hunting implement as well as a security instrument.

39. Only 6.6% of the total number of respondents surveyed declares their use of charm as protective measure. Out of this, the use of charm dominates the high density residential area compared to other residential areas. No respondent indicate his/her involvement in the use of charm in the low density residential area.

40. There is a significant spatial variation in the location of burglar proof; material used burglar proof, doors, windows and fence, material on the tip of fence; use of local security personnel, alarm system, ATPDs, security dogs and OPC (all $P < 0.05$). On the other hand, the height of fence; use of private security guard, gun, axe/club/stick and vigilante does not differ significantly from one residential density to the other. Thus there

is no significant spatial variation in the use of the aforementioned security devices. In this regard the stated null hypothesis is accepted and the alternative rejected.

41. Unlike some major urban centre where residents feel grossly unsafe despite all efforts at combating crime at individual or community level (Agbola, 1997), greater proportion of residents in Ogbomoso feel at least safe enough to declare it while a minority few, feel unsafe.

42. The greatest majority of those who feel very much safe and very unsafe resides in the high density area. This seems like an irony. Well, this is not impossible since perception of safety is subjective. While some residents feel highly unsecured perhaps due to their experience of and or fear of crime, others feel very safe. Majority of those who feel fairly safe and unsafe resides in the low density residential area.

43. A greater proportion of Ogbomoso residents consider the police as performing fairly well (41.2%) and well enough i.e. good (19.2%), while only 26 percent rate their efforts as bad.

44. Inspite of residents' favourable rating of police effectiveness, the greatest majority prefer the landlord/tenants vigilante group to be charged with security matters in their areas. The next preferred group is the Police followed by the Oodua Peoples Congress Members.

45. In the opinion of the Police, the decreasing crime rate is attributed to increased Police patrol and effective monitoring of criminal activities in the city. It is also attributed to the effort of the Police Public Relation Committee (PPRC) which was set-up to effect a good relationship between the police and the resident of Ogbomoso as well as to engage the people in effective policing of their living environment.

46. Among the reasons adduced for the preference of Vigilantee group, include their prompt response to residents' distress call, ability to recognize stranger easily, closeness to residents and availability. They are also seen as reasonable in judgment as well as approachable.

6.2 PLANNING IMPLICATION AND RECOMMENDATION

The findings of this study point to the need for a critical review or readjustment of some fundamental town planning principles such as zoning which favours monousuage or landuse segregation above mixed uses (on the ground of compatibility) so as to avoid the formation of ghost zones at any period of time. The inclusion of some public uses, which will attract people into the low-density area, will help in providing the needed guidance in this area especially during the working hours of the week when the residents' must have gone to their place of work. This will help in reducing the occurrence of house breaking and or burglary. Caution must however be exercised in the choice of public uses to be included in the area consequent upon the prevalence of crime of house breaking and burglary in the medium density area of Ogbomoso, where substantial mixed uses can be found. It is therefore suggested that less dangerous public uses with little crowd-pulling tendencies such as government offices be relocated to the area. On the other hand, some of the public uses that seem "injurious" to the residential environment in the medium density area could be relocated or properly monitored. Such uses include the three car parks (Sabo, Takie and Caretaker/Ahoyaya) in the area, which tends to encourage the

concentration of anonymous crowd and the breeding of rouges and ultimately violent activities.

The implication of the study for future layout or new town design is evident. Zoning of uses should be done in such a way that less dangerous public uses are zoned into low and medium residential area to safe the environment from 'ghost zone' syndrome. While planners and urban designers are not to be less conscious of accessibility, the issue of security should also guide the designing of roads in the residential environment. Security gates and bumps provided by the landlord/tenant vigilante association for restriction and control of vehicular traffic in some residential areas is a reflection of the inefficient design of residential areas by Planners.

The study opined that the residents themselves both at individual and community level could adequately ensure safety of lives and properties. It is therefore suggested that some of the surveillance structure identified in the town be strengthened for more efficiency. Formation of Landlord /tenants association should be encouraged in all residential areas while residents should be more security conscious. The local government should rise to support this group by providing needed equipment, fund and periodic training programmes in collaboration with the polices.

In addition, there should be residential area specific intervention in security programme by the police consequent upon the differential social, economic and environmental attributes of residents cum the occurrence of crime. Day light police patrol should be increased and improved in the medium and low density areas so as to safeguard properties when the residents must have gone for work. The administration of the two local government areas should provide infrastructural facilities such as streetlight,

recreational facilities to directly enhance the liveablity of the town and indirectly reduce criminal tendencies.

Consequent upon the fact that criminal activities have reduced in Ogbomoso (as revealed by the study), it is suggested that the example of PPRC and vigilantee group in Ogbomoso be experimented in other urban centres where crime rate is on the increase. In addition, the models of Student Anti-cultism Squad should be replicated (with modifications to suit the local environment) in other Non Residential Universities to effect security of lives and properties in students' residential areas. It is further suggested that policy makers should make simple extrapolation of future pattern of criminal incidence based on the findings of the study. This will assist in fashioning of policies to pre-empt occurrence in the future.

Poverty alleviation programme germane towards the provision of jobs will assist in the living condition of the low socio- economic stratum of the town. A popular adage says idle hand is the devils' workshop, gainful employment for the unemployed will undoubtedly improved residents' standard of living

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APPENDIX 1: QUESTIONNAIRE

DEPARTEMENT OF URBAN AND REGIONAL PLANNING

LADOKE AKINTOLA UNVERSITY OF TECHNOLOGY

OGBOMOSO, PMB 4000.

Title: Spatio - Temporal Variation and Residents' Response to Crime in Ogbomoso.

Dear Sir /Ma,

This questionnaire is designed to obtain information on residents' response to crime in Ogbomoso. All information supplied will be used for research purpose only. Kindly respond to the questions as appropriate.

Thanks.

Yours Sincerely

Abodunrin, F.O.

SECTION A

Please provide a descriptive profile of yourself.

1. Ward / Local government area
2. Sex (a) male (b) female
3. Age----------
4. Marital status (a) single (b) married (c) widowed (d) divorced
5. What's your status in the house?
   (a) tenant
   (b) landlord
   (c) others (please specify)
6. For how long have you stayed here?.....
7. What do you do for a living?
   (a) Private Sector – Organized. (b) Private Sector – unorganized.
   (c) Farming (d) Public Service.
   (e) Retiree/ pensioner (f) student
   (g) unemployed seeking employment (h) unemployed not seeking employment (j) others (please specify) ----------

8. Please give an estimate of your monthly income

……..

9. What is the highest level of education you have obtained?

(a) No formal education (b) Arabic education (c) Primary education

(d) Secondary education (e) Post secondary education

(f) University education (g) Post graduate education

10. Do you own a car? (a) Yes (b) No

11. If yes, how many cars do your household own? ----------

12. What form of protective measures do you use out of the following?

(multiple responses allowed)

(a) Special windows & doors locks (b) burglary proofing materials

© high fence/ wall (d) security dogs (e) gun

(f) axe/ club/ stick (g) alarm system (h) private security guard

(i) local security guard (j) O P C (j) traditional methods

(charms) (k) vigilante group (l) others (please specify) ----------

13. Do you feel safe as a result of the above measures taken?

(a) Yes, very much safe (b) Yes, fairly safe, (c) Feel no change

(e) No, very unsafe,

14. Do you know police phone number in case of distress?

(a) Yes (b) No

15. What else can you to enhance your personal safety? ---------- ----
---

16. Is there any place(s) in Ogbomoso where you feel particularly unsafe

(a) yes (b) no

17. If yes, please list them ----------

---

18. What can you do to make Ogbomoso town safer? ----------

----------19.The

following are suggested by people as means of making Ogbomoso safer, please rate them in order of preference using these:

most preferred -----5 preferred ----------4, just preferred ----3

not preferred -------2, not at all preferred ------1.

Suggestions Rating

(a) more jobs for the unemployment - ------

(b) harsher penalties for criminal --------

(c) Improved local infrastructures to make place safer -------
e.g. better street lighting

(d) Reorient the youth with better societal norms and values --------

(e) Mobilize the community to safe guard their area --------

(f) Equip vigilante group to enhance their effectiveness -------

19a. Do you think the police are doing a very good job at controlling crime in you area?

(a) Yes (b) No

19b. How would you rate police effectiveness at controlling crime in your area?

(a) good (b)fair (c) bad (d) no opinion

20 Can you suggest ways by which the police can improve their effectiveness ----------
---
---

21 Which of these is responsible for safety/ security in your areas?

(a) Landlord / Tenant Association's Vigilante group, (b) Youth forum

(c) Odua People's Congress (OPC) (d) Others (pls. specify)

22. In regards to criminal attack, have you received any help from the organization selected in 21 above (a) Yes (b) No

23. Which of the followings do you preferred? (a) police (b) O P C

(c) Landlord / Tenant's Vigilante Group (d) Youth forum

(e) Others (pls. specify) ----------24

Explain the reasons for your choice in question 23 ----------
---

Section B (to be completed by the interviewer)

1. Residential density (a) high (b) medium (c) low

2. Type of building (a) traditional compound house (b) flat

(c) Roomy (face – to- face) (d) duplex (e) bungalow

3. Type of access (a) footpaths (b) major road (c) minor road (d) close

4. If street, which of the following is present on the street?

(a) gates (b) bumps (c) security checking – points

(d) warning signs or restrictions (e) others (specify---------- 5. Does the street have functional streetlights? (a) Yes (b) No

6. If the house has security light, specify the type.

(a) Bulbs (b) Fluorescent tubes (c) Floodlights

(d) Search lights

7. Which of these security facilities can be seen in the house ?

(a) Security dogs (b) security guard (s) (c) alarm system

(d) closed – circuit television system (e) others (pls. specify) ----------

8. Burglary proof:

(a) Absent (b) present on windows only (c) present on windows and doors

(d) present on windows only (e) present on all openings including balcony, etc

9. Materials for Burglary – proof (if present)

(a) Planks (b) wire mesh (c) iron / steel works (d) concrete mullion

(e) Others (pls. specify) ----------

10. Materials for doors / windows

Doors	windows
(a) wood plank	(a) wood planks
(b) iron / steel	(b) iron /steel
(c) flush doors	(c) louver blades
(d) glass panes	(d) glass panes

11. Fencing / wall (if present)

(i) type / material of fencing

(a) Hedges (b) bamboo/ wood (c) barbed wire

(d) Concrete walls (e) Others (pls. specify) ----------

(ii) if concrete walls,

(a) estimate the height (in metres) ----------

(iii) Materials on wall

(a) Broken bottles (b) Spiral / electrocuted (c) Others (pls. Specify)

12. W hat's the house used for?

(a) Commercial/ Residential

(b) Recreational (pubs / joint) Residential

(c) Residential only

13. Are there any other activities between the fence and the road?

(a) Yes (b) no

14. If yes, what type of activities?

(a) Street trading

(b) Okada station

(c) table tennis /snookers spot

(d) mechanical / vulcanizer workshops

APPENDIX II: CALCULATIONS

Population projection using geometric growth model.

The population size of Ogbomoso in the year 2000 and 2003 are calculated as follows;

Geometric growth model: $P_1 \times (1+ r)^n = P_2$ ……equation 1

where P_1 is the initial population

P_2 is the final population

n is the difference between years

r is the rate of growth (%)

Here, P_1 is the population for 1998 (Ajao et al, 2002) = 593,400

while P_2 is the population size of year 2000

Substituting the following into equation 1 above

P_1= 593,400

r = 4% i.e. 0.04

n = 2

then, P_2 = 641,821

For year 2003

P_1 = 641,821

r = 4% i.e. 0.04

n = 3

Using equation 1, P_2 = 721,961

Thus, projected population for year 2000 is 641,821

and 2003 is 721,961