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THE INFLUENCE OF URBAN LAND-USE ON CRIMINALITIES AND SAFETY IN NIGERIAN PUBLIC PLACES: THE CASE OF ABUJA MUNICIPAL AREA COUNCIL (AMAC), ABUJA, NIGERIA

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ABSTRACT

Crime is a global social cum spatial urban challenge in both developed and developing countries and this pose threats to socio-economic development, psychological discomfort, exacerbate intra and inter-city mobility, pose threats to spatial interactions and urban security, affect urban land-use, and city sustainability. There are limited studies among urban scholars, regional planners, transport analysts and other professionals in urban studies in analysing locations, spatial distribution and influence of the prevailing urban land-use on the prevalence of criminal activities, especially in public places. This paper is conceived to bridge this gap with a view to develop appropriate security measures and intelligence data gathering for addressing the menace of crime in public places using Abuja Municipal Area Council, Abuja as the case-study. 400 set of questionnaire were administered through stratified sampling technique amongst the respondents that stay in public places such as market, hotels, financial institutions, road intersections, transport corridors at the central business districts (CBDs) and other public places in the study area. The results were presented in tables and charts. The study reveals that the prevailing urban land-use for crime prevalence were commercial areas, transport land use such as road intersections, bus-stops, and round-about and peri-urban areas among others. The major categories of crime experienced in public places are theft (26.7%), assault and battery (22.10%) and armed robbery (19.21%). The study further shows that the factors responsible for crime in public places are associated with inadequate security measures (29.2%), high volume of passengers (20%), poverty, unemployment and inadequate utilization of CCTV for surveillance (15.3%). The major effects of crime in public places are fear (30.5%), public unrest (20.5%); and measures for the combating crime in public places is adoption of effective police patrol vehicle in public places for crime prevention (31.3%) among others. The study recommends among others deployment of law enforcement agencies along peri-urban areas, public places, bus stops and other areas vulnerable to criminal activities and avoid overcrowding of public places to curb the prevalence rate of crime in public places in the study area.

Key words: Crime, Urban Planning, Transport Routes, Safety, Urban Land-use, and Public Places

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Introduction

Crime is a global social and spatial urban problem across public places in both advanced-economy countries and developing countries, however, it is more predominant, uncontrolled and slow pace of sustainable and effective robust crime management in developing countries. According to World Bank (2015), there has been uncontrolled increasing rate of crime in public places such as major bus-stops, transport routes, along major cities and other public places, especially in Africa, Asia and other developing countries. United Nations reported that homicides were estimated at 468,000 and more than a third (36%) was estimated to have occurred in Africa, 31% in the Americas, 27% in Asia, 5% in Europe and 1% in the tropical Pacific region. As posit by Ceccato and Paz (2017) crime in relation to mass transit refers to the physical safety of passengers and staff, as well as financial losses, physical and emotional well-being of commuters especially those using mass transit. The study also identified globally, women have higher chance to be sexually abused in public transit than men (Ceccato and Paz, 2017).

Crime is characterized by unlawful or illegal possession of objects or facilities against the wish of the owner using various means such as coercion of forceful seizure. Crime is a social menace, however, it has both spatial and temporal dimension which has not been given enough attention by physical planners, transport managers and urban geographers. This may be responsible for the failures to provide effective solutions for the control of crime in public places. The understanding of the knowledge of the influence of the prevailing urban land-use and spatial and non-spatial factors influencing the prevalence of crime in public places would promote planning development, urban governance, transport security and sustainable metropolitan management.

Globally, crime has become a social problem across towns and cities, public transit and other public places. According to World Bank (2015) report increased in incidence of crime in public transit especially in developing countries of Asia and Africa (World Bank, 2015). Studies have shown that uncontrolled increasing in frequency, dimension and advancement in crime in recent times and this has become a global challenge across the world and Nigerian cities (Adebayo, 2013; Ewetan and Urhie, 2014 and Asiyanbola and Ayelowo, 2019).

As revealed by Gomez (2000) and World Bank (2002), South Africa has experienced personal violence in relation to sexual harassment in public transit. Past studies have shown that passenger fear and concerns about safety influence their travel decisions. In addressing the gender-sensitive in mass transit, Gekoski *et al.*, (2015) posits that numerous developed countries such as the UK, Japan, and countries of the European Union have put in place robust public transport safety measures for providing security to their citizenry. In contrast, Nigeria has witnessed poor safety measures in mass transit and passengers.

Due to unregulated and uncontrolled activities in public places, they serve as attractive zones for prevalence of crime in Nigerian cities. Public places have continuously become major hotspots of numerous crimes. In recent times, passengers have persistently experienced unprecedented upsurge in incidence of harassments, kidnapping, murder, robbery, assaults, injuries, loss of life and property. As revealed by Burrell (2007), Clifton (2009) and Odufuwa (2011) the high incidence of crime along public transit, especially in developing countries as a

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result of socio-economic deprivations such as poverty and unemployment which pose significant threats to spatial interaction, level of patronage and security.

Ajayi and Ajayi (2014) found out that Nigerian cities have been faced with the challenges of the risk of lives and properties due to incidences of crime in public places, especially along transport routes and bus-stops. The study revealed that passengers are being mugged, assaulted, robbed, and rapped at major bus stops/bus stations and other mass transit facilities in their course of journey to home and other socio-economic activities. Olojede (2019) in an attempt to understand nature of crime in public transit, categorize crime in Nigerian transport environment to pick-pocketing, stealing, robbery, assaults, grievous bodily harm and wounding, breach of public peace, drug dealings and hooliganism. The study found out that passengers of mass transit have experienced criminal activities at different time of the day and week along bus stations, staying at bus-stops and inside bus.

Harassments, murder, assaults, injuries, as well as loss of lives and properties, among other risks, are also identified by Odufuwa (2012) as being among the persistently experienced transit crimes. Asiyanbola and Ayeolowo (2019) investigated the state and severity of crime, crime prevention and control measures among residents in Olodi-Apapa Local Government Area in Lagos State. The findings revealed that theft and stealing were the most prevailing crime, especially among male adult persons. The study further showed that crime is more prevalent during dry season, Christmas and poses significant threats to life, property and insecurity.

Criminality in public transport system will remain an important challenge in Nigerian cities, because of its adverse effect on routine activities-spatial interactions and general level of cities productivity. If the present diminishing quality of public transport service, poor transport infrastructure, land use planning and design of bus stops continues unabated and unchecked; crime incidents will continue to seriously threaten the patronage and sustainability of public transport in the Nigeria (Odufuwa, 2011).

Numerous studies have been conducted in understanding factors influencing travel pattern and safety in public places. Dragu, Roman, and Roman (2013) argued that crime and fear of crime influence the quality of public transport. Delbosc and Currie (2012) and Cozens (2014) found out that there is an interplay of the prevailing land-use and its effects on crime in public transit. The study identified that there are some prevailing land-use that increase vulnerability to crime in public places in relation to economic activities areas such as hotels, retail shops, seedy inns, vacant lots/buildings, and cash converters/pawn shops. In the same vein, Newton (2008) associated the incidence of crime and land-use pattern.

According to Felson and Boba (2010) different interplay of the prevailing land-use increase incidence of crime in public transit. Loukaitou-Sideris *et al.*, (2001) revealed that there is a relationship between incidence of crime along transit stops and crime at transit stops is generally higher when the crime rate in the areas in which the bus stops are situated is high. It has been observed that public routes in relation to footpaths, parking facilities, and unsupervised transit areas; recreational settings in relation to bars and parks; public transport such as bus-stops, transport corridors and other adjoining locations; retail stores health care centres and clusters of industries among others are potential location of crime generators, crime

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attractors (Brantingham and Brantingham 2008), crime detractors (Kinney *et al.*, 2008), crime facilitators (Clarke and Eck 2005), and crime precipitators (Wortley 2008).

Another dimension identified by Otu (2017) is that the uncontrolled activities of touts at the major bus-stops known as *"Agberos"* in Nigerian transport system has brought about physical assaults and harassment of customers in their bid to compete for passengers. Ceccato and Paz (2017) found out that the interplay of high densities of passengers in relation to overcrowding in public transit creates a fertile ground for sexual harassment and other forms of abuse. It is against all these aforementioned challenging issues this present study seeks to analyze the influence of the prevailing urban land-use on crime prevalence in public places in Abuja Municipal Area Council (AMAC) with a view to develop appropriate policy measures to address the menace. Hence, a study of this nature is capable of providing important information that can be used for intelligence data gathering by law enforcement agencies, security operatives, Ministry of Planning, Federal Capital Administration and other stakeholders for strengthening the existing security architecture to prevent and control incidence of crime in public places facilities usage.

The Federal Capital Territory (FCT), Abuja falls within Latitudes $7^0$25'N and $9^0$20'N of the Equator and Longitudes $7^0$45'E and $7^0$39'E and average elevation of 360 m (1,180 ft) above the sea level. It covers an area of about 8,000 square kilometers (FCDA, 1998). By virtue of the central location of the FCT within the national context it is placed entirely in the Middle Belt region of Nigeria. It is bounded to the north by Kaduna State, and by Nassarawa State to the East and Southeast, to the Southwest by Kogi State and to the West by Niger State. The total area of the study area is approximately 1994 km^2. According to Federal Capital Development Authority (FCDA, 2017), Abuja Municipal Area Council occupy the part of Federal Capital City (FCC) that has experienced tremendous development in terms of infrastructures, facilities locations, socio-economic activities, housing among others. This increased influx of human population into the Area Council and increased uncontrolled activities in public places that serve as attractive zones for the prevalence of crime. The respondents comprised of commuters and other general members of the public that have experienced crime in public places.

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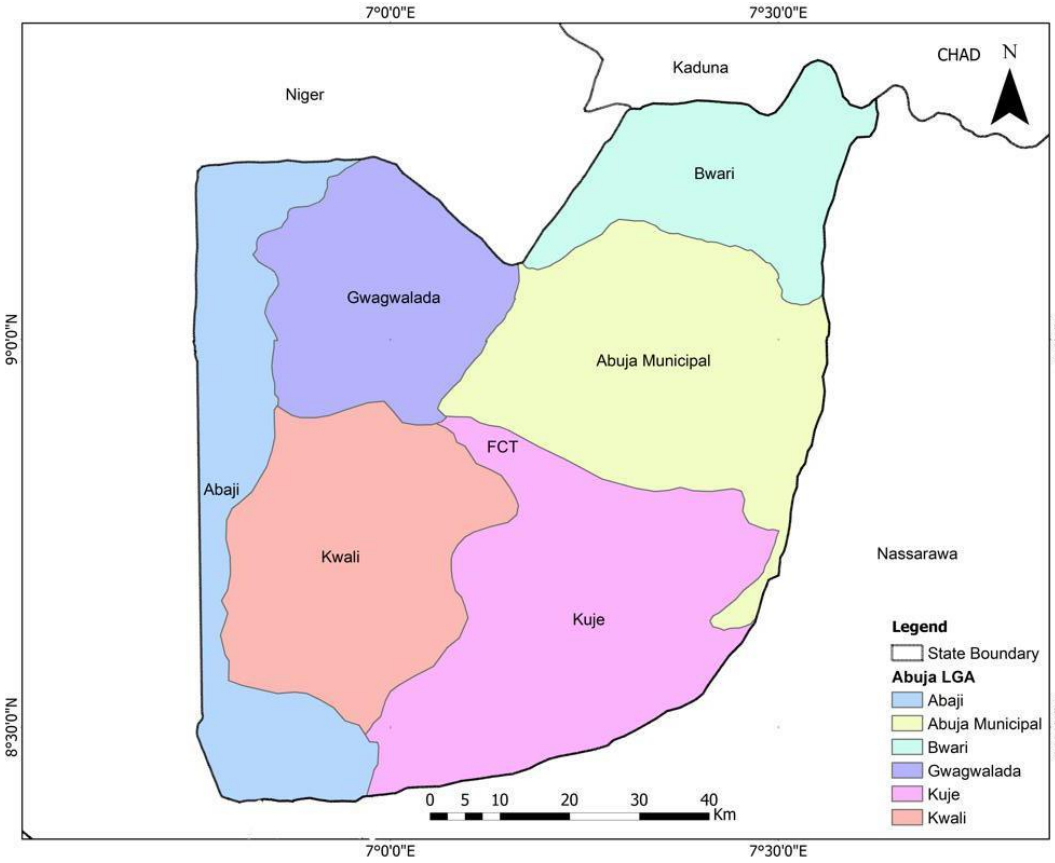

Figure 1.2: Area Councils in Federal Capital Territory
Source: Abuja Geographic Information System (AGIS), 2018

Questionnaire were designed and administered among the respondents that stay in public places such as markets, hotels, financial institutions, road intersections, transport corridors at the central business districts (CBDs) and other public places in the study area. These are the areas that constitute public places, because of their easy access in this paper. The questionnaire sought to get collect data on prevalence of crime in public places**,** categories of crime in public places, factors influencing the incidence of crime and measures to address the menace of crime in the study area. The questionnaire was administered among passengers, drivers, commuters, passers-by and other members of the general public that have experienced crime in public places in the study area. 400 set of questionnaire were administered through stratified random technique among the respondents. The results were presented in tables, charts through percentage and frequency distribution.

Discussion of Findings

Occurrence of Crime in Public Places

The distribution of respondents by crime in public places is displayed in Table 1. The study reveals that more than 60% of the respondents claimed they have not experienced crime in public places and are the most represented, while the remaining 33.95% claimed they have experienced crime in public places. This indicates that majority of the respondents have not experienced crime in public places. This indicates that there is relatively safety in public places. The study is in line with Adebola, Samuel, Feyisola and Eno (2014) revealed that more than 70 per cent has not

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been victim or witness the various incidents either in BRT bus or BRT bus stops and 28% have been attacked in either BRT buses or BRT bus stops of which 41% of the attacks are occasional, and 59% rarely happened.

Table 1: Distribution of Respondents by Occurrence of Crime

Occurrence of Crime	Frequency	Percentage
No	251	66.05
Yes	129	33.95
Total	380	100.0

Source: Author's Field Survey, 2022

Distribution of Respondents by Location of Crime Occurrence

The location of crime occurrence is presented in Figure 1. The study reveals that more than 70% claimed crime occurred along peri-urban areas and public transit and are jointly the most represented, followed by 13.94% claimed they have not experienced crime, 9.47% claimed that crime occurred crime in bus-stops and 6.31% claimed that crime occurred crime along road intersections. This indicates that majority of the respondents claimed that crime occurred occurrence of crime are at peri-urban areas and along public transit. An evidence that the prevalence of crime is an interplay of the prevailing land use and the major economic activities influence the incidences of crime in the study area.

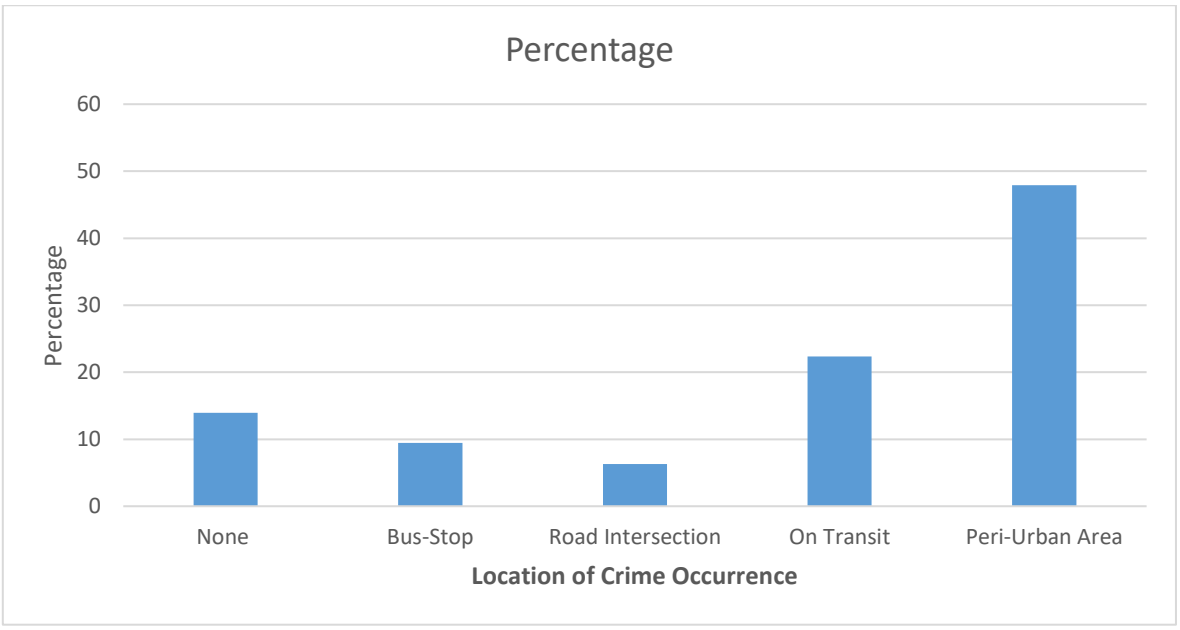

Figure 1: Occurrence of Crime
Source: Author's Field Survey, 2022

In the same vein, the major concentration for the prevalence of criminal activities are peri-urban areas, public transit and bus stops. These are the major locations that serve as attractive zones for the incidence of crime in the study area. The study of Wojuade and Badiora (2017) argued that bus station due to its proximity to several

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land uses likely to generate, attract, and facilitate crime. The study further argued that the activities along bus stops pose significant threats to safety along bus stops. Ajayi and Ajayi (2014) posit that there is a higher risk to lives and properties along transport routes such as bus stops. The study further argued that commuters and passengers in public transit are vulnerable to being mugged, assaulted, robbed, and raped among others. There is a consistent and strong relationship between criminal activities and the prevailing land-use along bus stops, transport routes and other public places (Fadare and Oduwaye, 2009; Odufuwa, 2011 and Ajayi and Ajayi, 2014). These are attractive zones that serve as fertile ground for criminal activities.

Prevalence Rate of Crime in Public Places

The prevalence of crime in public places is presented in Figure 2. The study reveals that more than 60% of the respondents have experienced theft, assault and battery and armed robbery respectively and were the most represented, followed by less than 20% experienced rape and assaults and were the least represented. The prevalence of theft, assault and battery and armed robbery in the study area can be associated with different activities across the prevailing land-use such as residential areas, transport routes and urbanized areas like Abuja Municipal Area Council, Abuja.

This finding is in consistent with the previous finding that there is prevalence of crime along bus-stops, road intersections and peri-urban areas that are characterized by transport routes, commercial activities and residential areas. This support the prevalence of theft, armed robbery and assault and other petty crimes. In contrast, less than 20% of the respondents experienced kidnapping and rape/assault and were the least represented. The low prevalence of kidnapping and rape in an urbanized areas like Abuja are attributed due to high human population, increasing urbanization, influx of high economic activities and security architecture put in place at the city-centre. This would reduce the prevalence of kidnapping and rape among others.

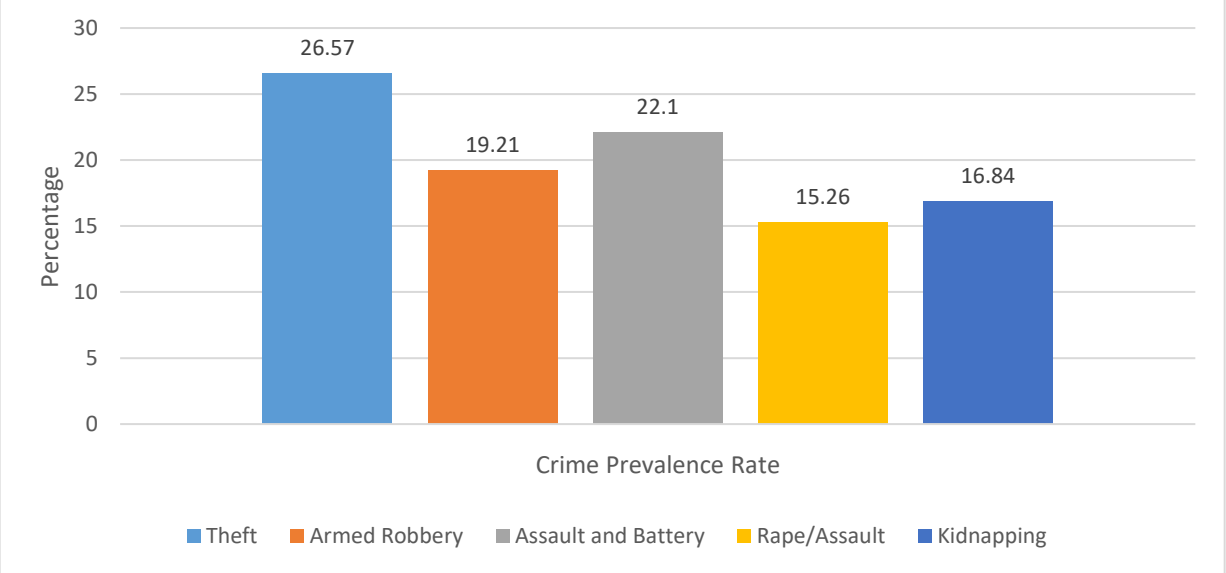

Figure 2: The Prevalence of Crime in Public Places
Source: Author's Field Survey, 2022

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In Nigerian cities as a result of inadequate and robust security architecture, community-based policing system and uncontrolled activities in public places, especially at the informal level, public places have continuously become major hotspots of numerous crimes. In recent times, there is an unprecedented upsurge in incidence of harassments, kidnapping, murder, robbery, assaults, injuries, loss of life and property in public places. Wojuade and Badiora (2017) revealed prevalence of pick-pocketing, stealing, robbery, assaults, grievous bodily harm and wounding, breach of public peace, drug dealings and hooliganism in public places.

Influence of Land-Use on Prevalence Rate of Crime in Public Places

The distribution of respondents by the influence of the prevailing land-use on the prevalence rate of crime in public places is presented in Figure 3. The study shows that more than 60% of crime occurred across commercial centres and mixed land-use such as residential, commercial and transport land-use respectively and were jointly the most represented. In contrast, less than 10% claimed that crime occurred along residential areas and institutional land-use among others. The low prevalence of crime along institutional land-use are associated with the level of security architecture put in place and status of the patronage of the institutional land-use, such as educational centres, government administrative headquarters., office of ministries, departments and agencies (MDAs). This indicates the prevailing land-use of transport routes and commercial centres influence the prevalence of crime in the study area. Commercial activities increase the influx of commuters, motorists, passers-by and the general public through their journey to works and place of residences. This increases the travel pattern and the influx of people in public place along different transport routes such as bus-stops, road intersections and other public places for different economic activities and increase their vulnerabilities to criminal activities.

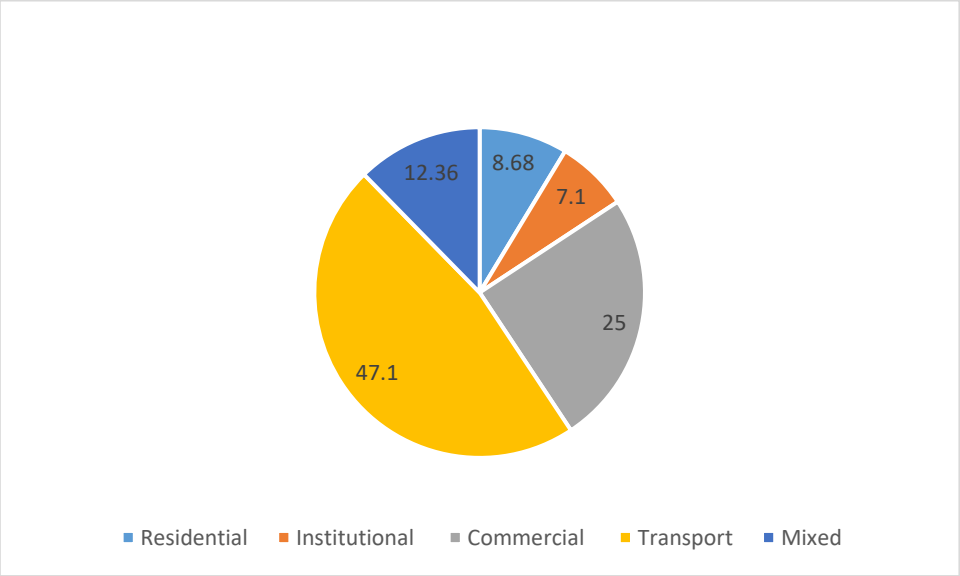

Figure 3: Prevailing Land-Use and Crime Prevalence
Source: Author's Field Survey, 2022

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According to Felson and Boba (2010), different types of land use generate large amounts of crime. The riskiest land uses according are public routes (especially footpaths, parking facilities, and unsupervised transit areas), recreational settings (especially bars and parks), public transport (especially stations and their vicinities), retail stores (especially for shoplifting), educational settings (especially at their edges), offices (especially when entered for theft), human support services (especially hospitals with 24-hour activities), and industrial locations.

Cozens (2014) found out that there is an interplay of the prevailing land-use and its effects on crime in public transit. The study identified that there are some prevailing land-use that increase vulnerability to crime in mass transit in relation to hotels, retail shops, seedy inns, vacant lots/buildings, and cash converters/pawn shops. In the same vein, Newton (2008) associated the incidence of crime and bus-stops. Loukaitou-Sideris *et al.* (2001) revealed that there is a relationship between incidence of crime along transit stops and crime at transit stops is generally higher at bus stops. Brantingham and Brantingham (2008) observed that public routes in relation to footpaths, parking facilities, and unsupervised transit areas; recreational settings in relation to bars and parks; public transport such as bus-stops, transport corridors and other adjoining locations; retail stores, health care centres and clusters of industries among others are potential location of crime generators, and crime attractors. Batley et al. (2012) found out that high prevalence of crime along bus stops.

The Rate of Criminal Activities

The rate of criminal activities is shown in Table 2. The study shows that more than 50% claimed low and very low rate of criminal activities in the study area and were the most represented, followed by more than 30% claimed very high and moderate rate of criminal activities respectively and less than 5% claimed high rate of criminal activities in the study area. This indicates that there is low and very low rate of criminal activities in the study area. The finding is in support of the previous finding that shows that majority of the respondents have not experienced crime in public places and they felt safe in public places. This is associated with the level of security architecture put in place on crime prevention in the study area. Abuja Municipal Area Council, Abuja is characterized with different institutional facilities, high-income residential areas and presence of government, especially at the Federal level, and the investment in strengthening security apparatus and human safety has a ripple effects on low rate of criminal activities and crime prevention

Table 2: Rate of Criminal Activities in Public Places

Prevalence of Crime in Public Transit	Frequency	Percentage
Very High	46	12.1
High	17	4.5
Moderate	93	24.5
Low	182	47.9
Very Low	42	11.1
Total	380	100.0

Source: Author's Field Survey, 2022

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Causes of Crime in Public Places

The major causes of crime in public places is shown in Table 3. More than 75% of the respondents claimed that inadequate security measures, uncontrolled influx of people in public places, poverty and unemployment, and inadequate utilization of CCTV for surveillance as the major factors responsible for crime in public places. Other causes of criminal activities in the study area are inadequate urban planning, unregulated activities in public places, long distance from bus-stops and long distance from security checkpoints.

Inability of the planning authorities and security operatives to control influx of people in public places, especially at the informal level; increasing rate of unemployment, especially among those that migrate to Abuja with the intention to be gainfully employed, many of them may resort to criminal activities to meet up with expensive lifestyle at the city-centre among others create a breeding ground for criminal activities. The study agrees with Olojede (2019) revealed that the major factors responsible for crime in public transits are poor policing/under-policing was seen as the strongest cause of transit crime in Osogbo. Other factors are economic hardship/recession/poverty, poor street system/urban planning and the absence of closed-circuit television (CCTV). According to Ekblom (2011), Weisburd, Groff and Yang (2012) and Armitage and Joyce (2017) found out that surveillance in relation to ability to observe what is happening through the use of closed circuit television (CCTV) and security guards influence crime and the perceptions of safety.

Table 3: Causes of Crime in Public Places

Causes of Crime Prevalence in Public Places	Frequency	Percent
Uncontrolled influx of people in public places	76	20.0
Inadequate Security Measures	111	29.2
Poverty and Unemployment	58	15.3
Inadequate urban planning	34	8.9
Inadequate Utilization of CCTV for surveillance	58	15.3
Long Distance from Bus-stops	13	3.4
Long Distance from security checkpoints	10	2.6
Unregulated activities in public places	20	5.3
Total	**380**	**100.0**

Source: Author's Field Survey, 2022

Level of Security Architecture in Abuja Municipal Area Council

The level of security architecture in the study area is shown in Table 4. The study reveals that 50.78% of the respondents claimed high level of security architecture in the study area and were the most represented. This may be associated with presence of numerous security operatives that are strategically located especially within the city-centre to maintain law and order. More than 45% claimed moderate and low level of security architecture in the study area. This is associated with the recent Kuje prison break and pockets of other criminal activities constitute security threats in the study area

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Table 4: Level of Security Architecture in Abuja Municipal Area Council (AMAC)

Level of security in AMAC	Frequency	Percentage
High	193	50.78
Moderate	118	31.05
Low	69	18.15
Total	380	100.0

Source: Author's Field Survey, 2022

The Effects of Crime in Public Places

The effects of crime in public places is presented Table 5. The study reveals that 51% of the respondents claimed fear and public unrest and are jointly the most represented, followed by 17.6% claimed loss of valuable items, 13.4% claimed delayed time, 9.7% claimed traffic congestion and 8.2% claimed psychological trauma and are the least represented. This indicates that majority of the respondents claimed that crime in public places bring about fear of being attacked and public unrest in the study area. According to Yates and Ceccato (2020), fear is more prominent among specific groups of women, who have poor social contacts in their neighborhoods.

Table 5: Effects of Crime in Public Transit

Effects of Crime in Public Transit	Frequency	Percentage
Loss of Valuable items	67	17.6
Fear	116	30.5
Delayed Time	51	13.4
Traffic Congestion	37	9.7
Public Unrest	78	20.5
Psychological Trauma	31	8.2
Total	380	100.0

Source: Author's Field Survey, 2022

Olojede (2019) investigated that crime in public transits bring about grievous bodily harm and wounding, and breach of public peace. Dragu, Roman, and Roman (2013) argued that crime and fear of crime influence the quality of public transport. Delbosc and Currie (2011) posit that the level of security in public transit influence the patronage levels when traveling and waiting at transits stop bus stations. According to Otu (2017), the uncontrolled activities of touts known as "Agberos" at the major bus-stops in Nigerian transport system has brought about physical assaults and harassment of customers in their bid to compete for passengers.

Crime Control Measures in Public Places

The measure for combating crime prevalence in public places is shown in Table 6. The study shows that 63.7% claimed use of surveillance camera and police patrol vehicles at some strategic points and were jointly the most represented, while 15% claimed control of activities in public places and 15.5% claimed others such as land-use zoning,

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development control and effective land use monitoring to control the influx of people in public places and 5.8% claimed decongestion in public transit and were the least represented.

Table 6: Crime Control Measures in Public Places

Crime Control Measures in Public Places	Frequency	Percentage
Police Patrol Vehicles	119	31.3
Use of surveillance camera in public places	123	32.4
Moderate number of passengers in public transit	22	5.8
Avoid use of undesignated bus stops and routes	57	15.0
Others	59	15.5
Total	380	100.0

Source: Author's Field Survey, 2022

This indicates that majority of the respondents claimed that there should be adoption of effective police patrol vehicles in public place for crime control, use of surveillance camera in public places for monitoring criminal activities, and claimed others as effectives measures for the control of criminal activities in the study area. Wojuade and Badiora (2017) recommends for safety and security planning of a place for effective crime prevention. Cozens (2014) posit that there should be use of good lighting, closed circuit television (CCTV) and security guards for promoting the opportunities for surveillance.

Conclusion

The paper concludes that there is prevalence of theft, assault, battery and armed robbery across transport routes, commercial centres, residential areas, and other prevailing land-use that serve as attractive zones for the influx of people in public places and increase their vulnerabilities to varied criminalities in the study area. This increases the travel pattern and the influx of people in public places in relation to different transport routes such as bus-stops, road intersections, commercial centres and other public places for different economic activities and increase their vulnerabilities to criminal activities. The low prevalence of kidnapping and rape in the study area is associated with high increasing human population density, increasing urbanization, uncontrolled travel pattern, influx of high economic activities and relatively slow pace of security architecture put in place on crime prevention in the study area.

The major drivers responsible for criminal activities in Abuja Municipal Area Council are associated with the uncontrolled activities in public places, especially at informal level, uncontrolled migrant flows into Abuja, increasing rate of unemployment and expensive lifestyle in Federal Capital Territory, the ripple effect regional security and inadequate urban planning to control influx of people in public places, especially at the informal level among others create a breeding ground for criminalities.

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Recommendations

Based on the findings, the paper recommends the following for addressing the menace of criminal activities in the study area:

i. Security checkpoints should be strategically located across crime hotspots across transport routes, commercial centres, peri-urban areas and other attractive zones for criminalities. This will reduce the rate of criminal activities in public places.

ii. There is need for effective urban planning, development control and land-use zoning to control influx of people and activities in public places.

iii. The Federal Capital Administration Authority should invest massively on the installation of CCTV for real-time monitoring of activities, especially at some crime hotspots and prompt deployment of security operatives for crime prevention.

iv. Informal activities and influx of commuters, motorists and members of the general public should be controlled in public places to reduce their vulnerabilities to criminalities.

v. Federal Capital Administration Authority should seeks to empowerment of youths on vocational skills and small-medium enterprises. This would reduce the involvement of unemployed and underemployed youths in criminalities.

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