

## **Trend analysis of crimes committed against persons in Ughelli Metropolis, Delta State, Nigeria**

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### **Abstract**

*Crime is an unacceptable practice that destabilizes any society. The activities of criminals have resulted in many people being killed and injured over time across the world including Nigeria. In Ughelli, Delta State, Nigeria, the incidences of crime have reached an alarming and a dangerous stage and this has become timely to find an appropriate solution to the problem. The objective of this study is to examine the trends of crimes committed against people in the metropolis of Ughelli from 2016 to 2020 with a view to determining the crime trend from the same period for enhanced security. Primary and secondary data were collected for the study and were analyzed with the aid of SPSS. The obtained shapefiles were used in ArcGIS version 10.8 for the attainment of the set objective for the study. A total of 20 different crime types were identified from the study, while 192 crime cases were recorded in the study area between 2016 and 2020. The results obtained from the study were presented in tabular and graphical form. The study shows that there is a substantial correlation between crime occurrence and days of the weeks, times and even seasons across space. The study further revealed crimes like rape, assault, murder, impersonation and kidnapping among others as some of the common crimes committed against persons in the study area. Above all, the study recommends among others that the federal government of Nigeria should locate more police stations in metropolitan areas across the country in general and in Ughelli in particular for enhanced security.*

**Keywords:** Crime, trend, police, Ughelli, Nigeria.

### **1. Introduction**

Crime has continued to act as a perpetual risk to man's existence on earth, making nations to be ungovernable, creating fear and instability to governments, and making life unbearable, unpleasant, brutish, and short-lived (Olakorede *et al*, 2017; Okpuvwie and Toko, 2020). Crimes such as homicide, cybercrime, armed robbery, kidnapping, and banditry have been on the rise in countries like USA, Mexico, United Kingdom, Russia, South Africa, and Nigeria, among others. This rise in crime could be attributed to several factors among which is the inability of the security agencies to effectively

tackle crime and this has hampered the progress and development of various countries around the world (Osawe, 2015).

Crime has hampered the advancement of human security today (Ukoji and Okolie-Osemene, 2016). Balogun *et al.* (2014) observed that the timely report of up-to-date information on criminal activities to security agencies will improve the effectiveness of the police. The Nigerian Criminal Code Act of 1990 defined crime as "an act or omission that subjects the person who does the act or makes the omission to punishment." According to Mehran *et al.* (2019), a crime is an act that appears to deviate from and violate a state's current legislation. A crime must have offenders, victims, and properties located at a certain point in time, according to Ejemeyovwi (2015). A motivated perpetrator, an appropriate target, and the lack of someone or something like CCTV that can function as a capable guardian are all required for any crime to occur. Hence the need for both the government and the people to always put measures in place to reduce crimes in order to guarantee a sustainable, progressive and a better society (Okpuvwie *et al.*, 2021). The objective of this study is to examine the trends of crimes committed against people in the metropolis of Ughelli from 2016 to 2020 with a view to determining the crime trend from the same period for enhanced security.

## 2. Study Area

Ughelli metropolis is the focus of the research. Ughelli is located in Ughelli North Local Government Area of Delta State, Nigeria. Ughelli acts as the administrative headquarters for Ughelli North Local Government Area. The Urhobo ethnic group is indigenous to the city, but it is mixed with Igbos, Hausas, Ijaws, Efiks, Yorubas, Binis, and other ethnic group from around the country. According to the 2006 Nigerian National Population Commission Census, the population of Ughelli North LGA is 321,028 people, with an area of 818 km<sup>2</sup>, while the population of Ughelli metropolis is 79,993. The city's population has grown dramatically since 2006 and reached according to the projection made 203,163 in 2021. Other neighbourhoods that made up the metropolis include Oteri, Afisiere, Iwhrekpokpor, Iwhreovie, Ekredjebor, Ekiugbo, Iwhreko and Uduere. The metropolis is located between latitudes 5° 28'N and 5° 31'N of the equator, and longitude 5° 58'E and 6° 03'E of the Greenwich meridian. Ughelli is a low-lying area between 0 and 100 meters above sea level with organic soils as the predominant kind of soil. The most prominent tree species in Ughelli metropolis are mahogany, rubber, iroko, and raffia palms, which dominate the swamp forest's flora (Aweto, 2002). Figure 1 shows the study area.

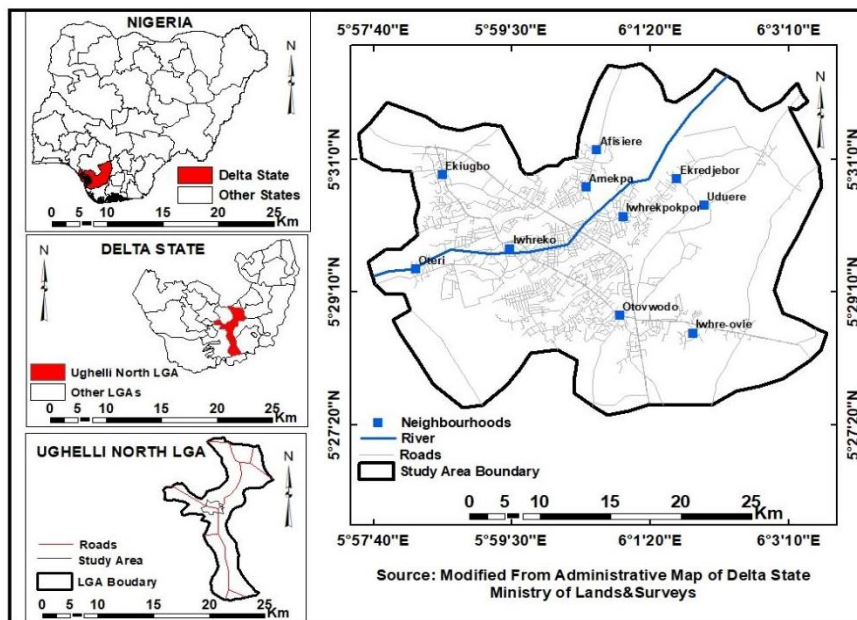


Figure 1: Study Area (Ughelli Metropolis)

### 3. Materials and Methods

**3.1 Materials** Primary and secondary data were used for the study. The primary data involves field work, use of questionnaire and oral interviews. It also involves the use of the handheld GPS to obtain coordinate points of crime locations, police stations and other points of interest. Literatures, journals, published and unpublished research works, crime incidence records from the internet, court, and the Nigeria Police Force, as well as shapefiles and google earth maps/ open street maps of the study area, were some of the secondary data used for the study.

**3.2 Methodology** The purposive sampling technique was used for the study with 400 questionnaire distributed across the 5 zones of the study area. Out of the 400 questionnaire distributed, 394 administered were retrieved accounting for 98.5 per cent of the total retrieved questionnaire. The 400 questionnaires chosen on the basis of the projected population show a certain representativeness. Crime records were collected from both the police and the court. The collected data were analyzed with the aid of Statistical Package for the Social Science and MS Excel.

The research was conducted in the study area's five wards comprising of a total of ten neighbourhoods. The Taro Yamane (1967) sample size technique was used to obtain this number of respondents, with a margin error of 5% and a confidence level of 95% in order to have a true representation of the population of the study area. In addition, the study's questionnaire was designed using the 5-point Likert scale sampling method. The Taro Yamane's formula is shown as:

$$n = \frac{N}{1 + N(e)^2}$$

Where :

n = Sample size required

N = Number of people in the population

e = Allowable error (%) i.e. margin of error (0.05)

### Identification Techniques of Hotspots and Coldspots of Crime

The research was carried out in the study area's five existing political wards of Uduere (ward 1), Afisiere (ward 2), Otovwodo (ward 3), Oteri (ward 4) and Ekiugbo (ward 5). These five wards have other smaller neighbourhoods that were zoned together for the purpose of the study. In all, a total of 5 zones were considered for the study. According to their population size, each of the zones was given a set of questionnaire as follows: Otovwodo/Iwhreovie (95), Ekiugbo (80), Afisere/Amekpa (85), Oteri/Iwhreko (65) and Uduere/Ekredjebor/Iwhrekpokpor (75). Residents' socioeconomic and demographic characteristics, as well as their perceptions of the kinds of crimes committed against people and the frequency of occurrence of criminal activities in the study area were collected among other relevant information.

The methodological flowchart for the study is shown at figure 2.

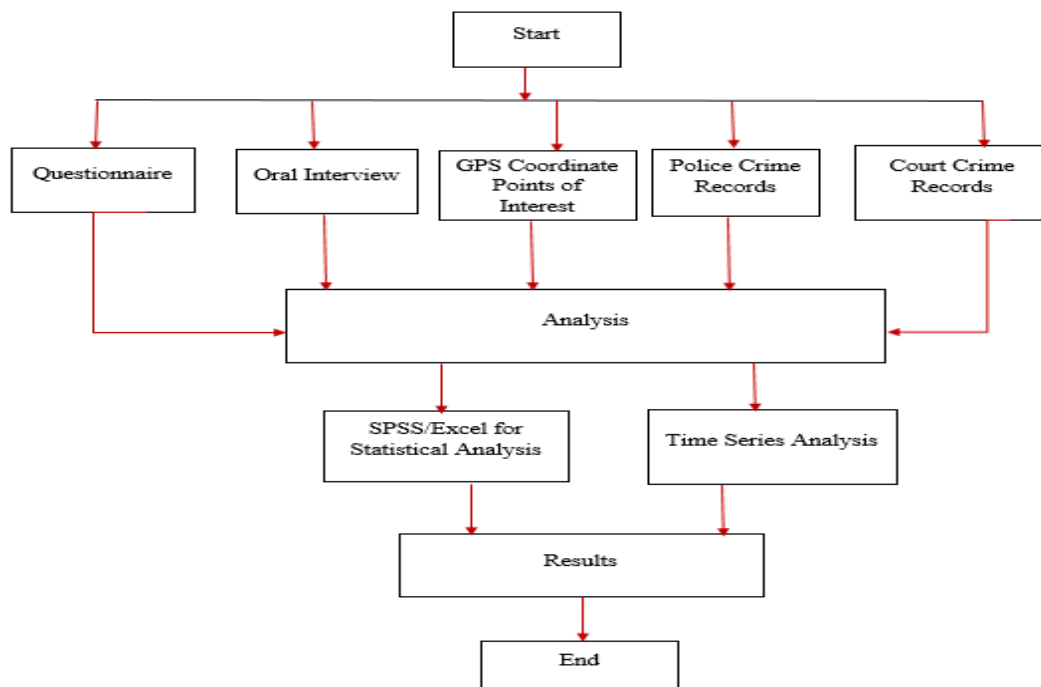


Figure 2: Methodological Flowchart

### 5. Results

The study identified 20 different crimes that are committed against persons in Ughelli metropolis from 2016 -2020. Some of these crimes include: human trafficking, murder, assault occasion harm and trial by ordeal etc. Table 1 shows the total crime cases committed across the study area.

**Table 1:** TOTAL CRIME CASES COMMITTED AGAINST PERSON IN UGHELLI METROPOLIS FROM 2016 – 2020

S/No	Types of Crime Against Persons	Total No of Cases	%
1	Rape	7	3.6
2	Murder	33	17.2
3	Assault	31	16.1
4	Human Trafficking	3	1.6
5	Grievous Harm	2	1.0
6	Threatening Violence	6	3.1
7	Indecent Assault	7	3.6
8	Impersonation	6	3.1
9	Defilement	6	3.1
10	Kidnapping/Abduction	18	9.4
11	Attempted Murder	9	4.7
12	Infanticide	2	1.0
13	Suicide	4	2.1
14	Deformation of Character	3	1.6
15	Homicide	1	0.5
16	Assault Occasion Harm	40	20.8
17	Threat to Life	8	4.2
18	Disrespect to Corpse	3	1.6
19	Wounding	2	1.0
20	Trial by Ordeal	1	0.5
<b>Total</b>		<b>192</b>	<b>100</b>

**Source:** Authors Fieldwork (2021)

Table 1 shows the total number of crime cases committed in the study area from 2016 to 2020 after administering the household questionnaires and based on information obtained from the police. A total of 192 crime cases committed against persons were recorded for the period under review. From the study, the crime of assault occasion harm recorded the most common crime committed in the study area with 40 cases accounting for 20.8%. This crime is closely followed by murder and assault that had 33 (17.2%) and 31(16.1%) cases respectively. The crimes of homicide and trial by ordeal are least committed in the study area for the period under consideration with 0.5% each. Table 2 depicts the various crimes committed against persons in Ughelli Metropolis between 2016 and 2020.

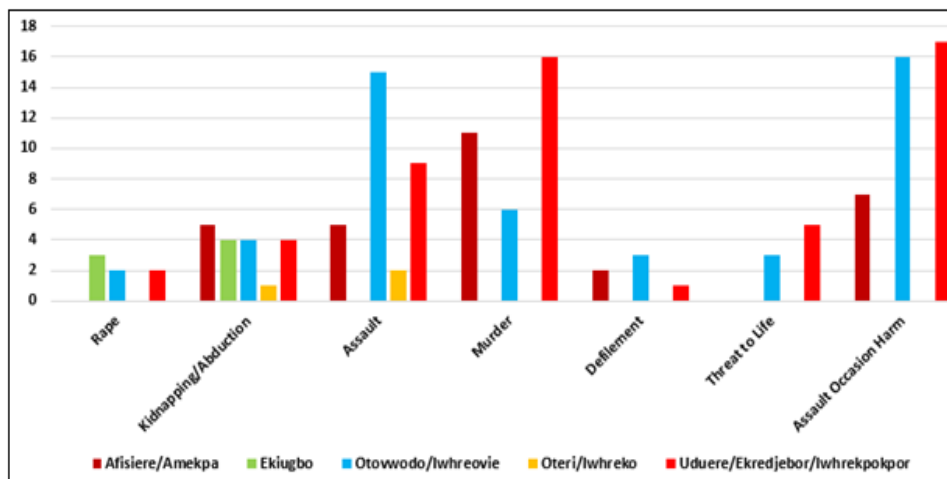
According to the findings of the study, the crime of assault causing bodily harm was the most common in the study area, accounting for 20.8 percent of all crimes. This is closely followed by murder (17.2% of the cases) and assault (16.1% of the cases). Kidnapping, which accounted for 15.6% of all crimes committed in the study area, was among the most serious. However, homicide, wounding and trial by ordeal were the least committed crimes against persons in the study area, accounting for 1.6 percent of the total crimes committed. The prevalence of cases of assault resulting in bodily harm, murder, assault, and kidnapping could be attributed to the study area's viable commercial activities as well as its urbanized outlook. A closer examination of the table reveals that the year 2018 had the highest crime rates, with 47 (24.5%). This is closely followed with the years 2017(46 cases) and 2020(45 cases) which represented 23.9 %

and 23.4% cases, respectively. The study period's lowest crime rate was in 2016, with only 11 cases accounting for 5.7 percent of all cases recorded in the study area for the period under review. Figure 3 shows some selected crimes in the study area.

**Table 2** LIST OF IDENTIFIED CRIMES COMMITTED AGAINST PERSONS IN UGHELLI METROPOLIS FROM 2016-2020 AND THEIR FREQUENCY

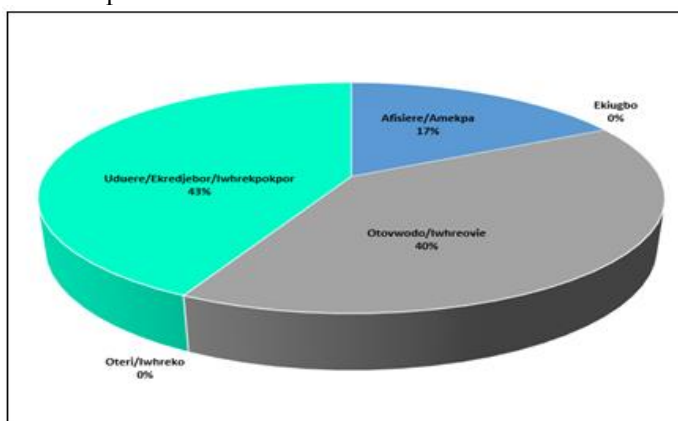
S/No	Crimes Committed Against Persons	2016		2017		2018		2019		2020	
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
1.	Rape	-	-	1	2.2	5	10.6	-	-	1	2.2
2.	Murder	2	18.2	9	19.6	8	17	7	16.2	7	15.5
3.	Assault	2	18.2	6	13	8	17	8	18.6	7	15.5
4.	Human Trafficking	-	-	2	4.3	-	-	1	2.3	-	-
5.	Grievous Harm	-	-	-	-	1	2.1	-	-	1	2.2
6.	Threatening Violence	1	9.1	2	4.3	2	4.3	-	-	1	2.2
7.	Indecent Assault	-	-	3	6.5	1	2.1	-	-	3	6.7
8.	Impersonation	-	-	-	-	0	-	2	4.7	4	8.9
9.	Defilement	1	9.1	-	-	2	4.3	3	6.9	-	-
10.	Kidnapping/Abduction	3	27.2	3	6.5	3	6.4	4	9.3	5	11.1
11.	Attempted Murder	-	-	-	-	2	4.3	3	6.9	4	8.9
12.	Infanticide	-	-	1	2.2	1	2.1	-	-	-	-
13.	Suicide	-	-	-	-	-	-	3	6.9	1	2.2
14.	Deformation of Character	-	-	-	-	-	-	2	4.7	1	2.2
15.	Homicide	-	-	1	2.2	-	-	-	-	-	-
16.	Assault Occasion Harm	1	9.1	13	28.3	13	27.7	5	11.6	8	17.8
17.	Threat to Life	-	-	1	2.2	1	2.1	4	9.5	2	4.4
18.	Disrespect to Corpse	1	9.1	2	4.3	-	-	-	-	-	-
19.	Wounding	-	-	2	4.3	-	-	-	-	-	-
20.	Trial by Ordeal	-	-	-	-	-	-	1	2.3	-	-
<b>Total</b>		<b>11</b>	<b>100</b>	<b>46</b>	<b>100</b>	<b>47</b>	<b>100</b>	<b>43</b>	<b>100</b>	<b>45</b>	<b>100</b>

**Source:** Authors Fieldwork (2021) from Police Station.



**Figure 3:** Spatial Distribution of some selected crimes against person across the Study Area from 2016- 2020, Authors Fieldwork (2021)

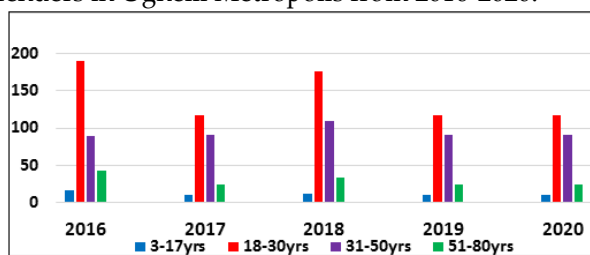
The results of the study showed the crime of assault occasioning harm and assault as the most commonly committed crimes against person from 2016-2020 with assault occasioning harm mostly committed in Uduere/Ekredjebor/Iwhrekpokpor of the metropolis. This area is closely followed by Otovwodo/Iwhreovie axis. The crimes of defilement and rape were significantly low across the study area for the period under consideration. Apart from Oteri/Iwhreko area of the metropolis where the crime of kidnapping/abduction is generally low, areas like Afisiere/Amekpa, Otovwodo/Iwhreovie and Uduere/Ekredjebor/Iwhrekpokpor had significant numbers of Kidnapping/Abduction cases in Ughelli Metropolis during the period under consideration. Figure 4 shows the spatial distribution of the crime of assault occasioned harm in Ughelli metropolis between 2016 and 2020.



**Figure 4:** Spatial Distribution of assault occasioned harm across the Study Area from 2016 - 2020  
Authors Fieldwork (2021)

The findings revealed that Uduere/Ekredjebor/Iwhrekpokpor of the metropolis is highly associated with this crime which accounted for 43% of the total cases. This area was closely followed by Otovwodo/Iwhreovie axis with 40% of the total recorded cases, with Afisiere/Amekpa recording 17% of the cases, while Oteri/Iwhreko, and

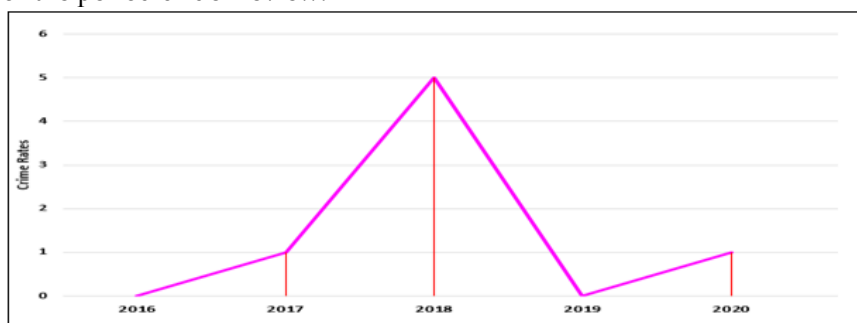
Ekiugbo had no case of this crime for the period under review. Figure 5 shows the age distribution of offenders in Ughelli Metropolis from 2016-2020.



**Figure 5:** Age distribution of offenders in Ughelli Metropolis from 2016-2020  
Authors Fieldwork (2021)

From the study, most of the offenders fall within the age bracket of (18-30 years) old. This age limit is where the bulk of the youths are, accounting for about 86% of the total population of offenders. One of the reasons that accounted for the involvement of more youths in crime in the metropolis according to investigation was that the youths are more in terms of the population of the metropolis. They are energetic, desperate and more active. The study also revealed the dominance of males in the commission of crimes in the metropolis, as about 86% of the total crimes committed against persons were mostly perpetrated by the male folks unlike their female counterparts which accounted for 14% of the total offenders. It is clear that the focus of the study is specifically on crimes committed against persons which indeed have direct contact with the victims that involves violence crimes such as kidnapping, murder, assault etc. This is why the male folks are dominant in the commission of these crimes in the metropolis.

Figure 6 shows the annual distribution of rape cases across the study area between 2016 and 2020. The graph shows that the case of rape was rampant in the year 2018, closely followed by 2017 and 2020. There was no recorded case of rape for 2016 and 2019 for the period under review.

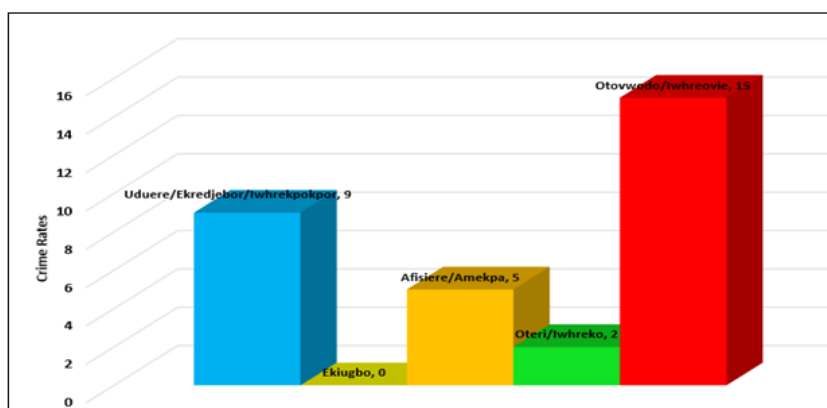


**Figure 6:** Annual distribution of rape cases across Ughelli Metropolis from 2016 – 2020  
Authors Fieldwork (2021)

Figure 7 shows the spatial distribution of the crime of assault across the study area. Otovwodo/Iwhreovie from the findings, had 15 cases which accounted for 48.4% of the total recorded cases while Uduere/Ekredjebor/Iwhrekpokpor had a total of 9 cases accounting for 29 % with Afisiere/Amekpa having 5 cases that accounted for 16.1% of the total registered cases. Oteri/Iwhreko area of the metropolis had 2 cases accounting for 6.76.5% with zero case registered in Ekiugbo for the period under review. It is clear

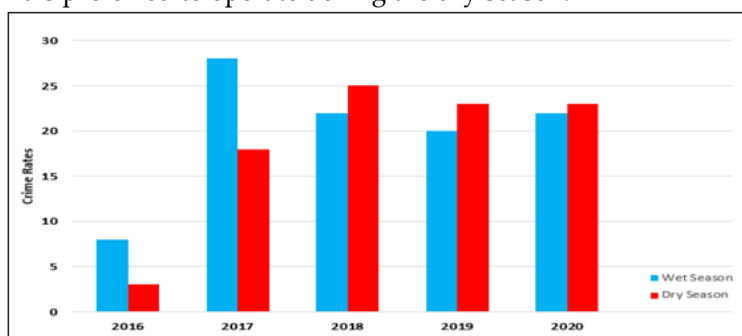


from the study that the Otovwodo/Iwhreovie axis of the metropolis is highly associated with cases of assaults. This may be due to the high density of population of the area with increased commercial activities and hotels around the area.



**Figure 7:** Spatial Distribution of assault cases across Ughelli Metropolis from 2016 – 2020  
Authors Fieldwork (2021)

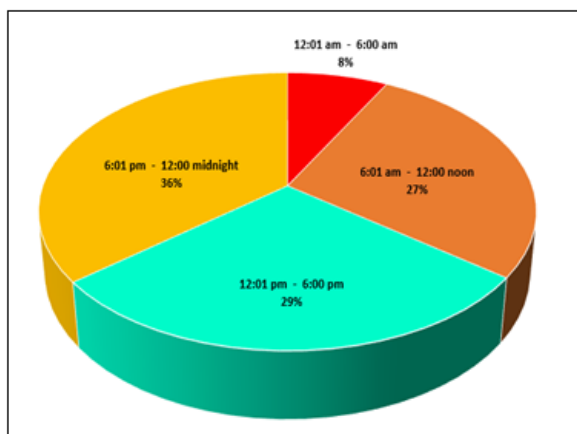
Figure 8 shows the seasonal occurrence of crimes committed against persons in Ughelli metropolis from 2016 to 2020. The study revealed the seasonal fluctuation of crimes between wet and dry season on annual basis. For instance, while crimes are mostly committed during the wet season between 2016 and 2017, the reverse was the case in 2018, 2019 and 2020 where dry season is the preferred season for criminals to operate in the metropolis. However, when these two seasons are compared on annual basis, criminals preferred to operate during the dry season.



**Figure 8:** Seasonality of the occurrence of crimes committed against person in Ughelli Metropolis from 2016 -2020, Authors Fieldwork (2021)

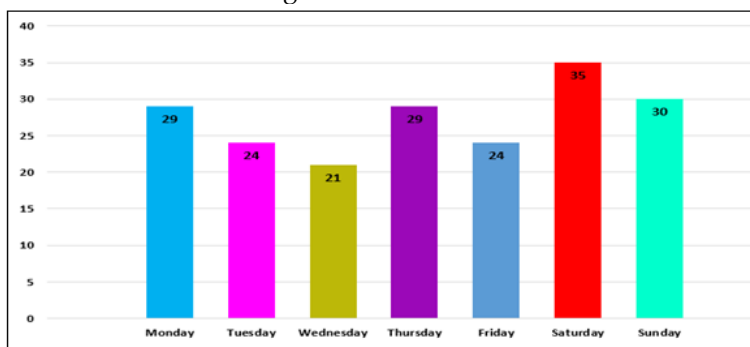
Figure 9 shows the time of occurrence of crimes committed against person in Ughelli metropolis from 2016-2020. The findings revealed that crime is mostly perpetrated in the metropolis between 6:01pm -12:00 midnight which accounted for 36 % of the total time. This period is preferable by criminals because they like to operate under the cover of darkness, and there is also an increased number of social interactions among the people who preferred to go for outing with friends and love ones at this period. Next to this time is between 12:01pm -6:00pm which accounts for 29%. The time between 6:01am-12:00noon accounted for 27% of the total time that criminal activities are recorded across the study area. Criminal cases are not so much

common during the period of 12:01am-6:00 am which accounted for 8%, because at this time, most people must have retired to their various homes where much security measures are put in place to protect their families, compounds and the general neighborhoods. At this time, there is a decreased in the level of social interaction among the people at this time.



**Figure 9:** Time of the day crime is mostly perpetrated in Ughelli Metropolis  
Authors Fieldwork (2021)

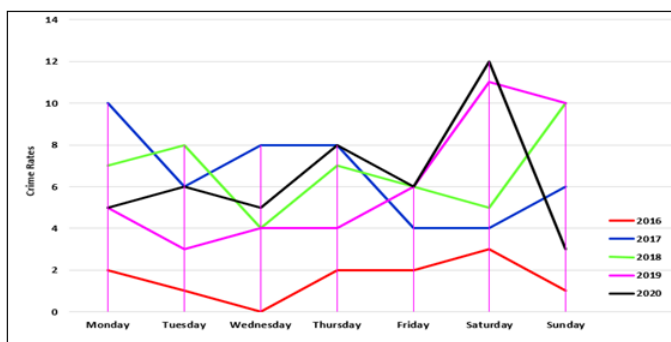
Figure 10 shows crime versus weekdays. Crimes against person in Ughelli metropolis between 2016 and 2020 are committed all throughout the weekdays as seen from the chart. Tuesday, Wednesday and Friday recorded 24 (12.5%) cases, 21 (10.9%) cases and 24 (12.5%) cases respectively. Monday and Thursday each has 29 cases which accounted for 15.1% respectively. Sunday had 30 cases which accounted for 15.6% of the total cases recorded for the period under review. The study revealed Saturday as the preferred day of the week for increased criminal activities in the metropolis wit 35 cases accounting for 18.2%. It is imperative to also note that as the week continues to wine down beginning from Friday, criminal activities will gradually increase as most people tend to interact more during the weekends.



**Figure 10:** Crime versus weekdays in Ughelli Metropolis from 2016 – 2020  
Authors Fieldwork (2021)

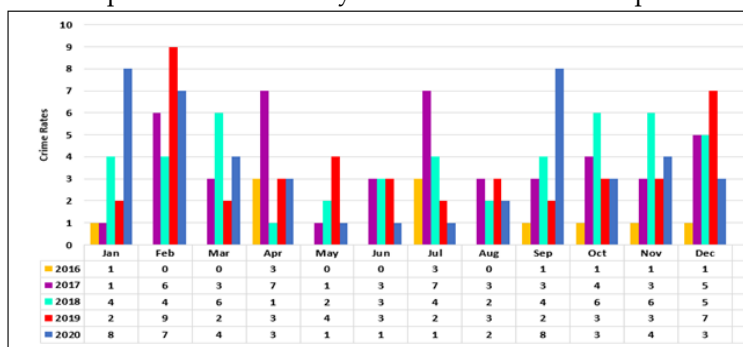
Figure 11 shows the annual comparison of crimes versus week days. The graph shows the various days of the week where crimes are mostly committed in the study area from 2016- 2020. From the graph, crime is mostly committed in 2016 on Saturday,

unlike in 2017, where crimes are commonly committed on Monday, Wednesday and Thursday. In 2018 criminal activities are at peak in the metropolis on Tuesday and Sunday, while in 2019, Saturday and Sunday witnessed increased crime rate in the metropolis. The year 2020 witnessed Saturday as the preferred day of the week that criminal activities are mostly carried out in Ughelli metropolis. For the period under review, it is generally clear that, Friday, Saturday and Sunday are the most convenient days of the week for criminal elements to perpetrate their crimes in the metropolis.



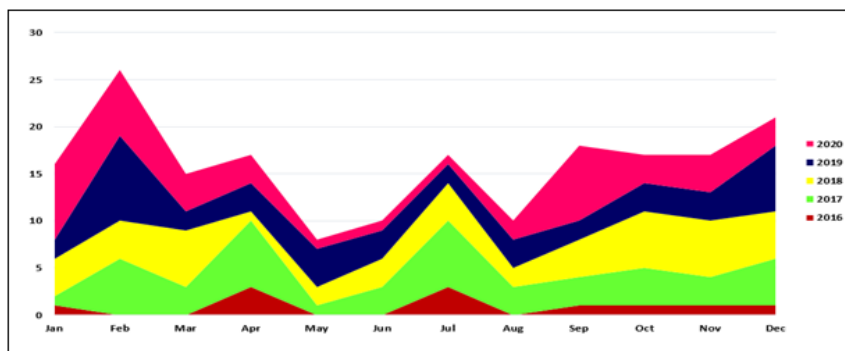
**Figure 11:** Annual comparison of crime versus days of the week in Ughelli Metropolis from 2016 – 2020 Authors Fieldwork (2021)

Figure 12 shows the monthly crime rates from 2016-2020. Most crimes occurred during the month of February from the chart, and this accounted for approximately 85 percent. The months of January and September equally topped the months where crimes are mostly perpetrated in the metropolis for the period under consideration. Figure 14 further explains these monthly crime data in the metropolis.



**Figure 12:** Monthly crime rate committed against person in Ughelli Metropolis from 2016 -2020 Authors Fieldwork (2021)

Figure 13 depicts the monthly comparison of crimes committed against person in Ughelli metropolis from 2016-2020. The charts revealed that the months of April and July had the highest number of crimes committed against person in 2016, while in 2017, the months of April and July also recorded the highest crime rates. In 2018, the months of March, October and November had the highest crime records, unlike 2019 where crime rate was high in February, May and December. Also, the months of January and September recorded high crime rates in 2020 for the period under review. The findings from this study therefore revealed that the commission of crimes in the study area varies from months to months.



**Figure 13:** Monthly comparison of crimes against person in Ughelli Metropolis from 2016 2020 Authors Fieldwork (2021)

### 6. Discussion

This study focused more on the types of crimes committed against persons and their characteristics in Ughelli metropolis in Nigeria. A total of 20 different types of crimes targeted against persons were identified from the study with 192 crime cases recorded between 2016 and 2020. Some of the identified crimes include assault occasion harm, rape, murder, defilement, kidnapping, homicide, assault, impersonation, threatening violence, threat to life, trial by ordeal and suicide among others. The crime of assault occasion harms dominants the study area, accounting for 20.8% of all crimes committed. This is closely followed by murder which accounted for 17.2% of the cases, assault (16.1%) and kidnapping accounting for 15.6% of all crimes committed. The works of Balogun *et al.* (2014) on crime in Benin City, Edo State, Nigeria; Bala *et al.* (2015) in Katsina State, Nigeria, Jeke *et al.* (2021) on crime and economic development in South Africa, and Adisa *et al.* (2021) in their work on violent victimization in Lagos metropolis, Nigeria, all identified similar types of crimes against persons that are revealed in this study. Also, by specifically targeting on the types of crime committed against persons in the study area, is no doubt an improvement on the work of Gulumbe *et al.* (2012), who also cited the identified types of crimes and concluded that the crimes are generally identical in all parts of Nigeria. Their study mostly focused on crimes like robbery, auto theft, house/store breakings, theft/stealing, grievous hurt, wounding, murder, rape, and assault among others.

Crimes against persons in Ughelli metropolis are committed all throughout the weekdays according to the study. Tuesday, Wednesday and Friday recorded 24 (12.5%) cases, 21 (10.9%) cases and 24 (12.5%) cases respectively. Monday and Thursday each has 29 cases which accounted for 15.1% respectively. Sunday had 30 cases accounting for 15.6% of the total cases recorded for the period under review. The study revealed Saturday as the preferred day of the week for increased criminal activities in the metropolis with 35 cases, accounting for 18.2%. It is imperative to also note that as the week continues to come to an end beginning from Friday, criminal activities also pick up, as most people tend to interact more during the weekends.

Several authors have shown similar analyzes in relation to the days of the week where crimes are regularly perpetrated. According to Baird *et al.* (2019), the offences were more likely to occur at the weekend, mostly on a Saturday. Weekend homicides were associated with male perpetrators under the age of 25, with excessive alcohol

consumption. Homicides increased markedly on New Year's Day, and public holidays. Glasner and Leitner (2017) confirmed the existence of near-repeat patterns by weekday and especially the time of day. The same observation was made by Bernasco *et al.* (2017) wherein they revealed that cases of robberies were much more recorded on Fridays and less on Sundays in their study area.

The study also examined the relationship between crime and seasonality. The findings of the study showed the preferences criminals had over wet and dry season in the commission of crime in the study area. The study revealed the seasonal fluctuation of crimes between wet and dry seasons on annual basis. However, when these two seasons are compared on annual basis, criminals preferred to operate during the dry season. A study conducted by Butke and Sheridan (2010) on an analysis of the relationship between weather and aggressive crime in Cleveland, Ohio, USA, equally corroborated the findings of this study. Their findings showed that summer has the highest rate of aggressive crimes when compared with winter that has the lowest crime rates. Spatial patterns of aggressive crime according to them are greatly affected by hotter weather. The finding of the study is consistent with the work of Potgieter *et al.* (2022) on the association between weather and crime in township setting in South Africa. Their result showed that hot days is associated with increase in violent crimes rising up to 32%. While on a very cold days there was increase in property crimes rising up to 50%. Other findings from the study indicate that crime is time-bound. It is mainly perpetrated in the metropolis of Ughelli between 6:01 pm-12:00 midnight which accounts for 36% of the total time. This period is preferable by criminals because they like to operate under the cover of darkness.

## 7. Conclusion

Crime has always been considered a setback for human freedom and a clog in the wheel of progress and development in all countries around the world. This article which has examined the trends of crime committed against persons in Ughelli metropolis, Nigeria has equally revealed the various crime characteristic and trend. The study revealed that criminals preferred to operate during weekends in the study area. This is because there is an increased volume of social interactions and activities among the residents during this period. Crime discourages investment and destabilizes society. The study indicates that there is a relationship between crime and weather as most violent crimes are committed during the hot/dry season. The study therefore recommends that the federal government of Nigeria should locate more police stations in this metropolis in order to improve the security and socio-economic viability of the residents of the metropolis.

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**Conflict of Interests:** The authors hereby declared that there was no conflict of interest as it relates to the conduct; outcome of this research work and its publication.

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