A Monthly Analysis of Road Traffic Accident in Selected Local Government Areas of Lagos State, Nigeria

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Abstract: This study examined monthly analysis of road traffic accidents in selected Local Government Areas of Lagos State, Nigeria and to suggest preventive and corrective safety measures towards reducing road traffic accidents in the study area. Using accident records from the Nigerian Police Force and Federal Road Safety Commission for the thirty two (32) years period from 1970 – 2001, this study seeks to reveal the traffic situation and accident pattern on monthly basis in 9 Local Government Areas of Lagos State, Nigeria. Further observation revealed that the most accident prone Local Government Areas (LGAs) are Lagos Island, Lagos Mainland, Ajeromi/Ifelodun, Ikeja, Oshodi/Isolo, Apapa, Eti-Osa, Kosote and Ojo. Thus, these are the LGAs that deserve urgent traffic accident mitigation attention e.g. intensified policing by the road safety corps. Again, for various reasons, it was also observed that most of the accidents in Nigeria occur in the months of June, July, September, October, November and December. June, July and September are the peak rainy months and more road accidents occur in rainy months because wet road conditions affect many drivers' ability to see and be seen. Based on the findings, recommendations were proffered on how to reduce the phenomenon of road traffic accidents in Lagos State, Nigeria.

Keywords: Analysis; road; traffic accident; monthly; selected LGAs; Lagos State

1. Introduction

As in other developing countries, road traffic accidents in Nigeria are one of the most serious problems in need of pragmatic solution. Yet this problem has been difficult to address probably because of the country's level of development. Nigeria is said to have the highest road traffic accident rates in Africa and the second in the world (Akpogomeh, 1998; Obinna, 2007, P. 35, and Atubi 2012e). According to one study, the proportion of deaths from road traffic accidents in Nigeria increased from 38.2 percent to 60.2 percent in the ten years from 1991 to 2001 (Obinna, 2007).

Thus, Nigeria's annual 8,000 to 10,000 accident deaths between 1980 and 2003 were a major personal and traffic safety problem as well as a terrible waste of human resources for the country. In terms of the personal safety problem, Nigeria and indeed Lagos State is a high risk region with an average of 32 traffic deaths per 1,000 people (Filani et al, 2007; Atubi, 2012c). This is very high compared with the United States' 1.6 traffic deaths per 1,000 populations and with the United Kingdom's 1.4 deaths per 1,000 people (Trinca et al, 1988). In terms of traffic safety, there are on average 23 accidents per 1,000 vehicles in Nigeria (i.e. 230 per 10,000 vehicles) far in excess of the accident rates in the USA (2.7 accidents per 10,000 vehicles) and the UK (3.2 accidents per 10,000 vehicles).

According to data from the Nigerian Federal Road Safety Commission, the country has the highest rate of death from motor accidents in Africa; leading 43 other nations in the number of deaths per 10,000 vehicles crashes (FRSC, 2006, Obinna, 2007, P. 35). Nigeria is followed by Ethiopia, Malawi and Ghana with 219,183 and 178 deaths per 10,000 vehicles respectively (Daramola, 2004).

The number of reported cases of fatal road traffic accidents in Nigeria has shown an increasing trend from 12,212 cases of accidents in 1995 to 13,913 in 1996 and 15,418 in 2004, indicating an increase of 13.9% in fatal road accidents from 1995 to 1996 (Central Bank of Nigeria, 1997). Fatal road accident figures across the federation of Nigeria rose sharply in 1992 resulting in 22,992 deaths (CBN, 1994). According to the Annual abstract of statistics (2008), between 2003 and 2007, a total of 225,891 accident cases were reported by the Nigeria Police Force, out of which 29,490 were fatal, 39,065 were services cases, 23,380 were minor cases.

Traffic crashes also impact on the economy of developing countries at an estimated cost of 1.2% of a country's GNP per annum, as a result of morbidity, mortality and property – related costs (Fourracre and Jacobs, 1976; Jacobs and Sayer, 1983; WHO, 1989, Jadan, 1989a and 1990; Downing et al, 1991). Causes of motor vehicle crashes are

multifactorial and involve the interaction of a number of pre-crash factors that include people, vehicles and the road environment (Haddon, 1980; AMA, 1983; Stanfield et al, 1992; Robertson, 1992).

Human error is estimated to account for between 64 and 95% of all causes of traffic crashes in developing countries (Atubi, 2009b). A high prevalence of old vehicles that often carry many more people than they are designed to carry, lack of safety belts and helmet use, poor road design and maintenance and the traffic mix on roads are other factors that contribute to the high rate of fatalities in less developed countries.

In Nigeria, road traffic accident situation over the last three decades has been particularly disturbing. In 1976, there were 53,897 road traffic accidents resulting in 7,717 deaths. Although in 1981, the magnitude reduced to 5,114 accidents, but the fatality increased to 10,236 which means that there was an average of 96 accidents and situation in subsequent years has not been any better. The number of people killed in road accidents between 1990 and 2005 rose from 28,253 and the fatality rate remains consistently high (Atubi, 2009c).

International comparison indicates that the chance of a vehicle killing someone in Nigeria is 47 times higher than in Britain. The proportion of fatalities to injuries reported is also very high. For example, while Czech Republic has only one death in 197 accidents, France one death in 175, South Africa, one death in 47 accidents, Nigeria has one death in 2.65 accidents (Atubi, 2010b).

Road traffic accidents' statistics in Nigeria reveal a serious and growing problem with absolute fatality rate and casualty figure rising rapidly. In majority of developing countries, accident occurrence and related deaths are relative to either population or number of vehicles. Ironically, in Nigeria, studies have indicate that better facilities in terms of good quality and standardized roads have been accompanied by increasing number of accidents (Onakomaiya, 1988; Gbadamosi, 2002; Atubi and Onokala, 2009). This is totally contrary to the trends in countries were even the level of sophisticated road network and volume of vehicular traffic are much higher (Atubi, 2010a).

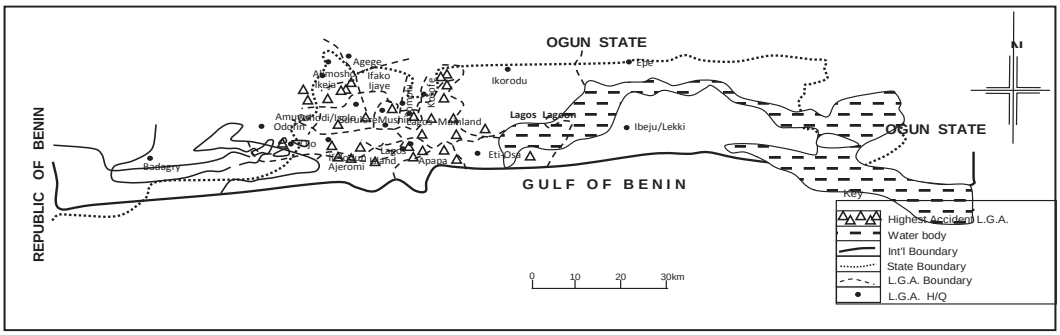
In an effort to check this alarming trend, the Nigerian Federal Government inaugurated the Federal Road Safety Commission (FRSC) in 1988. The commission's functions include among others, the regular patrol of the highways with the aim of checking reckless driving. But for this function to be performed effectively, the FRSC and the police have to be familiar with the temporal distribution of road traffic accidents in the country i.e. they must know where road traffic accidents are most frequent. For instance, in our study area of Lagos State, the most accident prone Local Government Areas (LGAs) are Lagos Island, Lagos Mainland, Ajeromi/Ifelodun, Ikeja, Oshodi/Isolo, Apapa, Efi-Osa, Kosofe and Ojo. Thus, these are the LGAs that deserve urgent traffic accident mitigation attention e.g. intensified policing by the road safety corps.

1.1 Study Area

Lagos State is a suitable case study because it hosts metropolitan Lagos, Nigeria's major traffic centre, fastest growing city, and most heavily motorized urban area in the country. Consequently, the state has one of the highest accident and casualty rates in the country (Federal Republic of Nigeria, 1997, p. 6). Moreover, the traffic situation in Lagos State is bad because of the absence of effective planning, vehicle-misuse, poor management, inadequate street parking, traffic congestion, delays and accidents among other contributory factors.

Lagos State is situated in the South Western corner of Nigeria. This elongated state spans the Guinea Atlantic coast for over 180km, from the Republic of Benin on the west to its boundary with Ogun State in the east (figure 1), while Lagos State is the smallest in Nigeria, it has over 5 percent (i.e. 9,013,534) of the country's estimated 140 million people (National Population Census, 2006). Its rate of population growth has been in excess of 9 percent per annum, or 25,000 per month or 833 per day or 34 per hours in the last decade (Lagos urban Transport Project, 2002). This population increase has been accompanied by a corresponding increase in motor vehicles and traffic accidents. However, accident rates in Lagos State are still very much on the high side compared to other states in the federation. But, fatalities and non-survival indices for the state are on the decline. This is attributable to its high level of traffic congestion (which reduces the probability of the high fatality accidents resulting from over speeding) and accessibility to good post – crash medical care in the Lagos metropolitan area.

Fig. 1: Map of Lagos State showing the accident prone local government areas



Source: Atubi, A.O. 2001 revalidated 2011)

2 Research methodology

The data used in this study were derived from secondary source. The secondary data includes records of road traffic accidents, total number of deaths, total number of injuries, fatal, serious and minor cases of road traffic accidents in Lagos state for a period of 32 years (i.e. 1970-2001). Also, information on monthly variation of road traffic accidents were collected from Lagos State Police command, Ikeja, and the Federal Road Safety Commission (FRSC), Lagos. The data on monthly variations of accident cases were presented in tables and analysed with the aid of time series and averaging models.

3 Discussion of results/findings

Tables 1 to 9 and figures 2 to 19 shows the monthly variation of road traffic accidents in nine (9) selected Local Government Areas of Lagos State. The month of July recorded the highest number of accidents. This month alone accounted for about 27 percent of all the road traffic accidents recorded in the selected Local Government Areas of Lagos State. Next were February, 23 percent, April, 22 percent and December, 22 percent as well. These four months alone thus account for 94 percent of all the accidents in Lagos State over the thirty two year period. This no doubt suggests that these months are very critical to road safety in the area (See Tables 1 to 9).

Table 1: Monthly Variation in the Road Traffic Accidents in Lagos Island Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	364	296	235	895	59
2	February	477	444	276	1197	60
3	March	411	306	187	904	55
4	April	377	347	244	968	61
5	May	267	324	239	830	68
6	June	396	295	214	905	56
7	July	582	533	275	1390	58
8	August	257	280	182	719	64
9	September	327	222	223	772	58
10	October	410	318	222	950	57
11	November	406	312	256	974	58
12	December	399	304	259	962	59
	Total	4673	3981	2812	11466	6793
	%	40.8%	34.7%	24.5%	100%	
	Average	389	332	234	956	

Source: Computed from police records, (2004)
Note: A CASUALTY road accident is one in which death or injuries were recorded (Transport Canada, 1990)

Table 2. Monthly Variation in the Road Traffic Accidents in Ajeromi/Ifelodun Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	963	294	213	1470	34
2	February	445	383	231	1059	58
3	March	443	286	188	917	52
4	April	375	221	213	809	54
5	May	379	228	194	801	53
6	June	393	283	189	865	55
7	July	591	475	278	1344	56
8	August	245	200	181	626	61
9	September	236	223	207	666	65
10	October	314	278	201	793	60
11	November	294	292	228	814	64
12	December	421	210	245	876	52
	Total	5099	3373	2568	11040	5941
	%	46.2%	30.6%	23.3%	100%	
	Average	425	281	214	920	

Source: Computed from police records, (2004)

Table 3: Monthly Variation in the Road Traffic Accidents in Ikeja Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	407	291	326	1024	56
2	February	440	384	263	1087	60
3	March	401	322	202	925	57
4	April	353	353	222	928	62
5	May	366	340	210	916	60
6	June	502	332	195	1029	51
7	July	552	560	303	1415	61
8	August	312	294	209	815	62
9	September	361	252	216	829	56
10	October	399	202	232	833	52
11	November	431	311	234	976	56
12	December	441	347	269	1057	58
	Total	4965	3988	2881	11834	
	%	42.3%	34.0%	23.7%	100.0%	
	Average	414	332	233		

Source: Computed from police records, (2004)

Table 4: Monthly Variation in the Road Traffic Accidents in Lagos Mainland Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	383	317	134	834	54
2	February	463	334	149	946	51
3	March	399	357	126	882	55
4	April	415	359	128	902	54
5	May	390	347	126	863	55
6	June	411	346	127	884	54

7	July	609	476	194	1279	52
8	August	337	283	104	724	50
9	September	287	299	140	726	60
10	October	306	316	135	757	60
11	November	349	328	135	812	57
12	December	420	380	154	954	56
	Total	4769	4142	1652	10563	5744
	%	45.0%	40.0%	15.0%	100.0%	
	Average	397	341	138		

Source: Computed from police records, (2004)

Table 5: Monthly Variation in the Road Traffic Accidents in Apapa Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	218	189	62	469	54
2	February	274	209	75	558	51
3	March	22	211	58	291	54
4	April	221	228	57	506	56
5	May	227	208	57	492	54
6	June	215	183	62	460	53
7	July	325	301	92	718	55
8	August	149	129	49	327	54
9	September	157	145	59	361	57
10	October	226	209	67	502	55
11	November	205	181	64	450	54
12	December	218	207	74	499	56
	Total	2657	2400	776	5833	3176
	%	45.6%	41.1%	13.3%	100%	
	Average	221	200	65		

Source: Computed from police records, (2004)

Table 6: Monthly Variation in the Road Traffic Accidents in Oshodi/Isolo Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	193	175	78	446	57
2	February	241	223	93	557	57
3	March	177	207	72	456	61
4	April	192	162	70	424	55
5	May	200	196	68	464	57
6	June	185	195	79	459	60
7	July	292	314	99	705	59
8	August	171	178	66	415	59
9	September	130	140	77	347	63
10	October	183	179	79	441	59
11	November	172	158	71	401	57
12	December	192	195	88	475	60
	Total	2328	2322	940	5590	3262
	%	41.6%	41.5%	170.0%	100%	
	Average	194	194	78		

Source: Computed from police records, (2004)

Table 7: Monthly Variation in the Road Traffic Accidents in Ojo Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	147	166	72	385	62
2	February	240	212	95	547	56
3	March	196	234	67	497	61
4	April	199	195	78	472	58
5	May	177	178	64	419	58
6	June	164	180	78	422	61
7	July	277	302	94	673	59
8	August	128	146	63	337	62
9	September	120	133	72	325	63
10	October	191	134	76	401	52
11	November	144	182	70	396	64
12	December	171	193	81	445	62
	Total	2154	2255	910	5319	3165
	%	40.5%	42.4%	17.1%	100%	
	Average	180	188	76		

Source: Computed from police records, (2004)

Table 8: Monthly Variation in the Road Traffic Accidents in Eti-Osa Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	161	143	78	382	58
2	February	225	195	92	512	56
3	March	207	197	75	479	57
4	April	191	204	66	461	59
5	May	184	202	66	452	59
6	June	180	194	74	448	60
7	July	294	275	93	662	56
8	August	139	115	57	311	55
9	September	127	132	70	329	61
10	October	189	212	73	474	60
11	November	165	109	66	340	51
12	December	194	160	81	435	55
	Total	2256	2138	891	5285	3029
	%	42.7%	40.5%	16.8%	100%	
	Average	188	178	74		

Source: Computed from police records, (2004)

Table 9: Monthly Variation in the Road Traffic Accidents in Kosofe Local Government Area from 1970 to 2001

S/N	Month	Minor Cases	Serious cases	Fatal cases	Total	% Casualty
1	January	192	177	87	456	58
2	February	227	223	94	544	58
3	March	214	200	85	499	57
4	April	219	206	73	498	56
5	May	192	188	75	455	58
6	June	200	197	72	469	57
7	July	301	282	101	684	56

8	August	162	152	69	383	58
9	September	158	110	80	348	55
10	October	179	129	81	389	54
11	November	185	135	76	396	53
12	December	196	155	91	442	56
	Total	2425	2154	984	5563	3138
	%	43.6%	38.7%	17.7%	100%	
	Average	202	82	82		

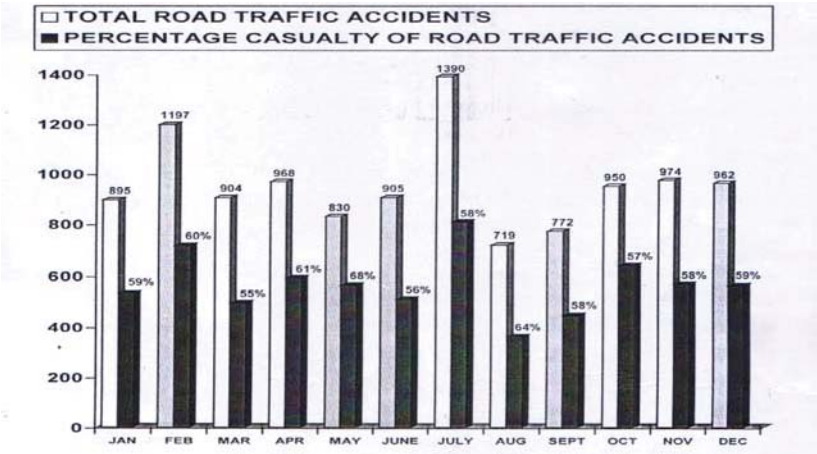
Source: Computed from police records, (2004)

It is pertinent to note that these months are rainy months. The study area experiences about 9 months of rainfall in a year, starting effectively from March and lasting through to November sometimes with a short relative dryness in August. It has been observed by Shell Petroleum Development Company (SPDC) (1998) that there is some relationship between wet climatic conditions and road traffic accidents.

Road traffic accidents are not totally inevitable and so will not generate much cause for concern if injuries and/ or loss of life are not involved. Consequently, the average monthly variation so far examined may not be enough for a conclusion on the most unsafe months. In other words, the total number of accidents recorded is an indicator of how unsafe a month or place is could be misleading. For instance, a month with few road traffic accident cases could have had all the accidents resulting in death (fatal) or serious bodily harm (serious accidents). While a month with a large number of road accidents cases may have had almost all of them as minor cases (i.e. neither death nor bodily harm was recorded). It is thus imperative that the casualty index will be a better indicator of the level of risk a motorist or passenger is exposed to in a place or time period.

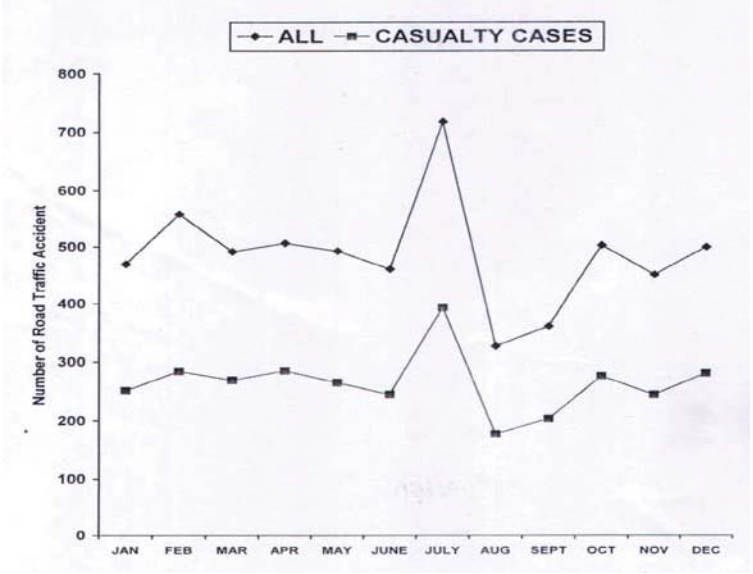
The first observation from figure 2 is that all months of the year recorded at least a 50 percent casualty rate. In other words, any accident in any of the months had a 50 percent chance or more of resulting in bodily harm/loss of life or lives. These percentages give indications of one's chances of being involved in a fatal/serious accident. Consequently, the chances of being involved in a fatal or serious accident was 68 percent in the month of May, 64 percent in August, 61 percent in April, 60 percent in February, 59 percent in December and January, and 58 percent in July, September, and November. These are very high chances, it should be noted that in both cases (total and casualty cases) the trend peaked in the month of July (Fig. 3). Consequently the month emerges as the most unsafe. It is also observed that although the 'ember' months (September, October, November and December) recorded relatively low figures when total road traffic accidents are concerned, these months rated very high when casualty cases are concerned and thus rate among the most unsafe months (See Figs. 2 and 3).

Fig. 2. Monthly Variation of total and casualty road traffic accidents in Lagos Island Local Government Area from 1970-2001



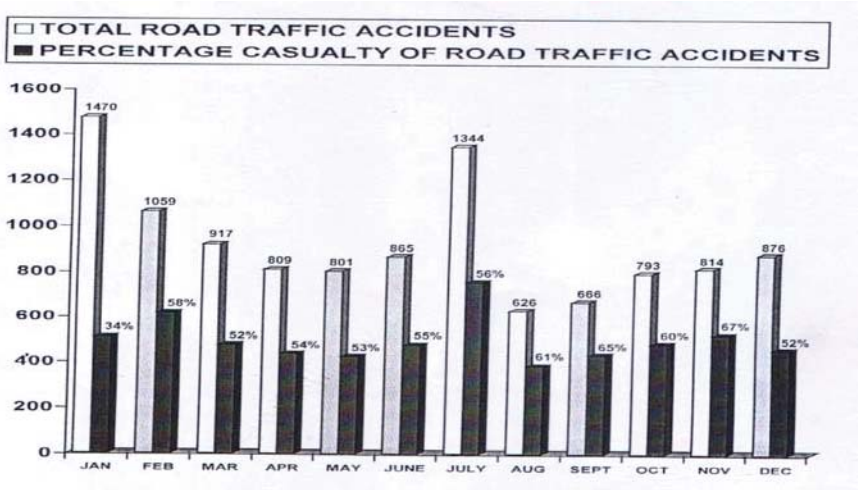
Source: Data Collected

Fig. 3: Monthly Trend of road traffic accidents in Lagos Island Local Government Area from 1970-2001



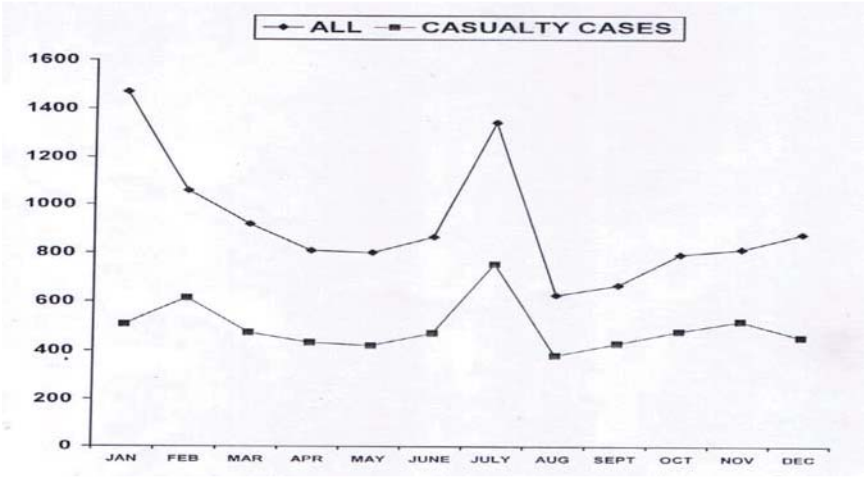
The high casualty rate for December in particular and the 'ember' months in general could be explained by the increased movement of persons which characterises this period of festivities. All over the world this period is known as the Christmas and New Year season. In this part of the world, this season usually witnesses increased vehicular movement within and between cities. Moreover, motorists are likely to be more tensed and alcohol impaired drivers are very likely to be among the traffic. The chances of being involved in a fatal or serious accident was 65 percent in the month of September, 64 percent in November, 61 percent in August and 58 percent in February for Ajeromi/Ifelodun Local Government Area. It was also observed that all months of the year (except January) recorded at least a 50 percent casualty rate. It should also be noted that in both cases (total and casualty cases) the trends peaked in the month of July (Figs. 4 and 5). Consequently, the month emerges as the most unsafe.

Fig. 4. Monthly Variation of total and casualty road traffic accidents in Ajeromi/Ifelodun Local Government Area from 1970-2001



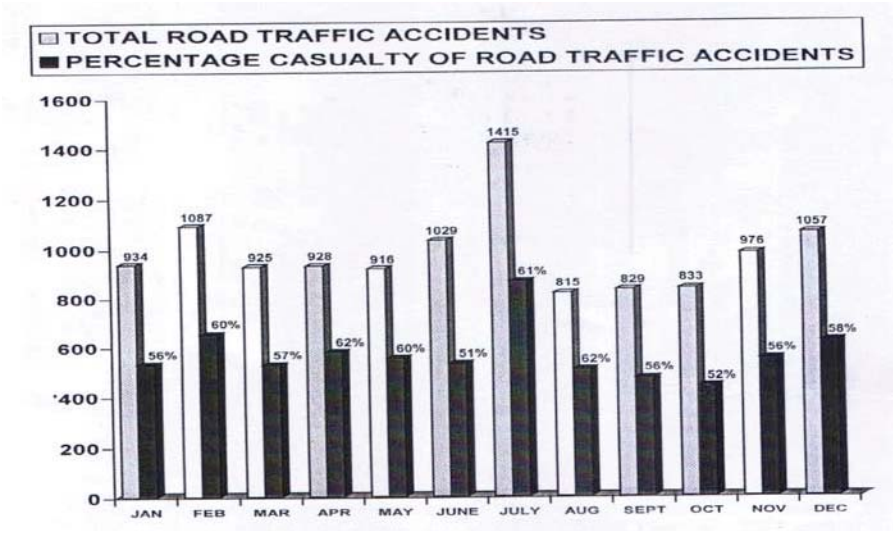
Source: Data Collected

Fig. 5. Monthly Trend of road traffic accidents in Ajeromi/Ifelodun Local Government Area from 1970-2001



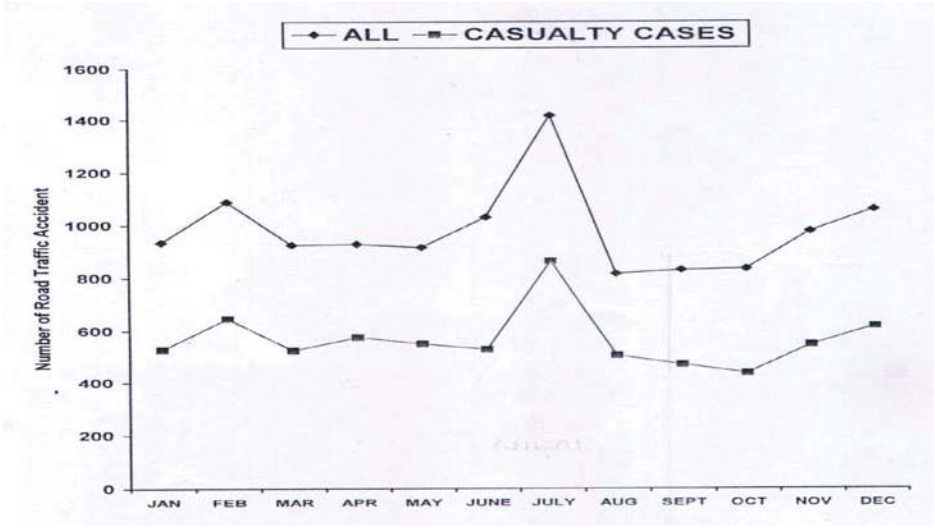
The third observation from figures 6 and 7 is that all months of the year recorded at least a 50 percent casualty rate. In other words, any accident in any of the months had a 50 percent chance or more of resulting in bodily harm/loss of life or lives. Consequently, the chances of being involved in a fatal or serious accident was 62 percent in the months of April and August, 61 percent in the month of July, 60 percent in the months of February and May for Ikeja Local Government Area.

Fig. 6. Monthly Variation of total and casualty road traffic accidents in Ikeja Local Government Area from 1970-2001



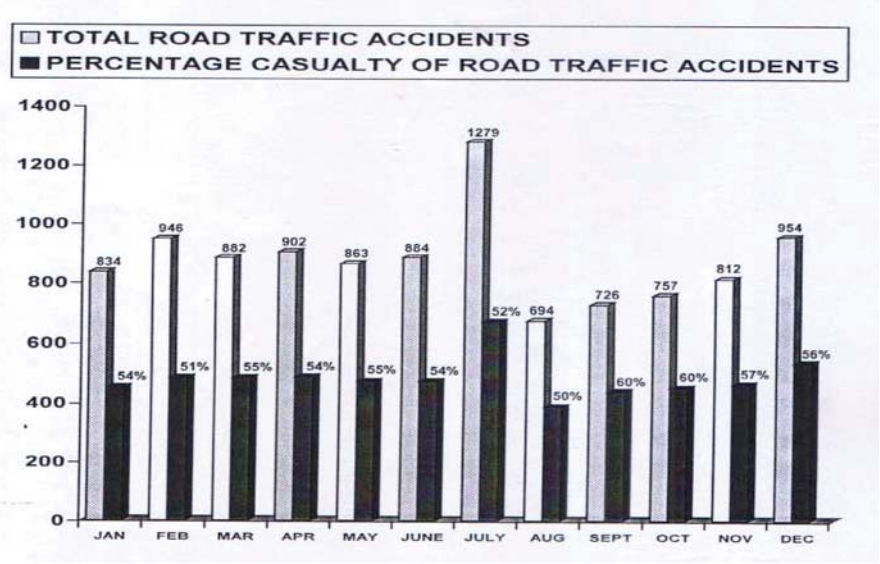
Source: Data Collected

Fig. 7: Monthly Trend of road traffic accidents in Ikeja Local Government Area from 1970-2001



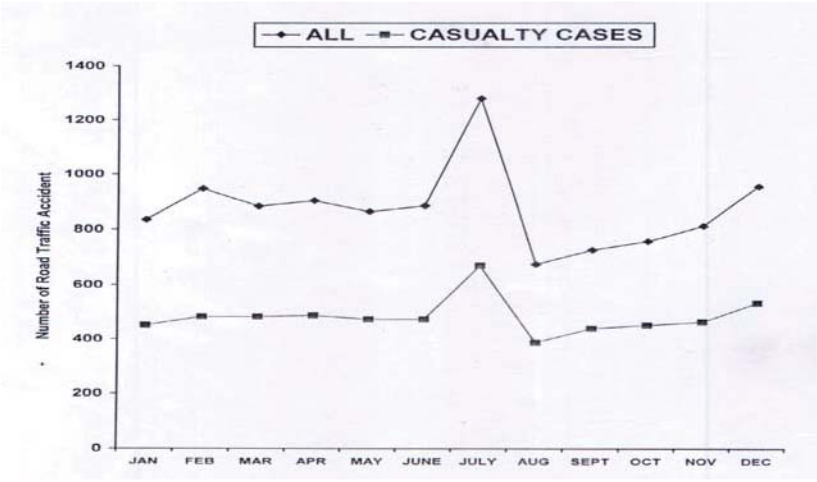
The forth observation from figures 8 and 9 is that all months of the year recorded at least a 50 percent casualty rate. In other words, any accident in any of the months had a 50 percent chance or more of resulting in bodily harm/loss of life or lives. Consequently, the chances of being involved in a fatal or serious accident was 60 percent in the months of September and October, 57 percent in the month of November, 56 percent in the month of December and 55 percent in the months of March and May for Lagos Mainland Local Government Area.

Fig. 8. Monthly Variation of total and casualty road traffic accidents in Lagos Mainland Local Government Area from 1970-2001



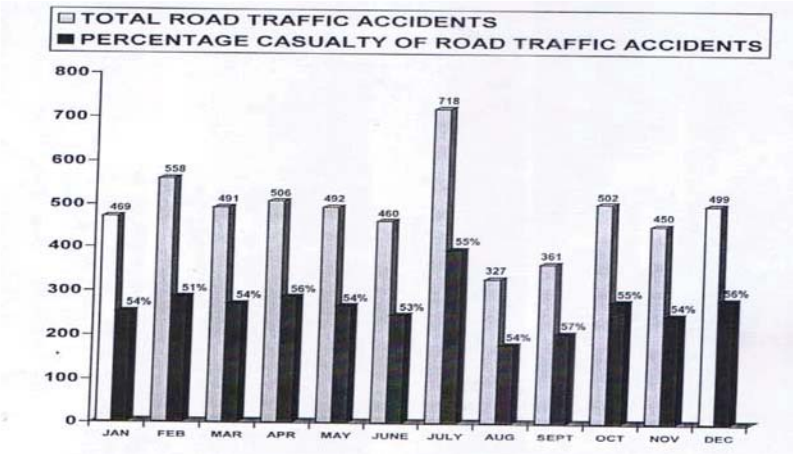
Source: Data Collected

Fig. 9: Monthly Trend of road traffic accidents in Lagos Mainland Local Government Area from 1970-2001



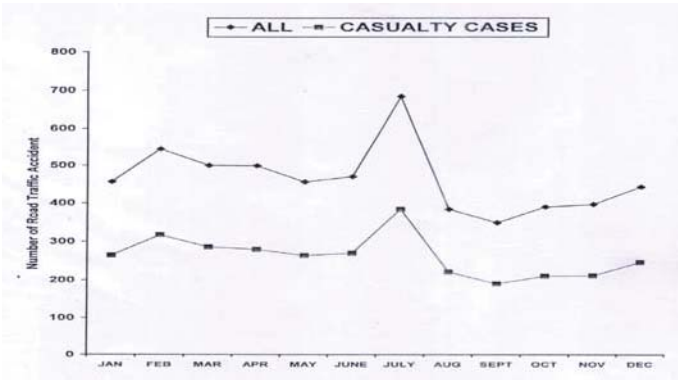
While the chances of being involved in a fatal or serious accident was 57 percent in the month of September, 56 percent in the month of April and December, 55 percent in the months of July and October for Apapa Local Government Area. It is observed that in both cases (total and casualty cases) the trends peaked in the month of July (figures 10 and 11). Consequently, the month emerges as the most unsafe. It is also observed that although the months of (September, October, November and December) recorded relatively low figures when total road traffic accidents are concerned, these months rated very high when casualty cases are concerned and thus rate among the most unsafe months.

Fig. 10: Monthly Variation of total and casualty road traffic accidents in Apapa Local Government Area from 1970-2001



Source: Data Collected

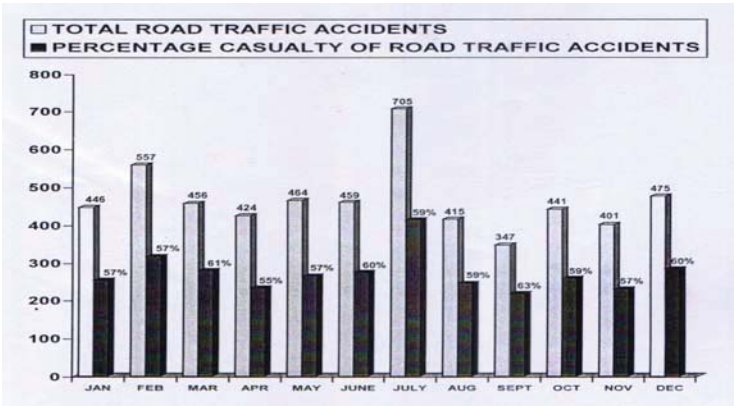
Fig. 11: Monthly Trend of road traffic accidents in Apapa Local Government Area from 1970-2001



Another observation from figures 12 and 13 is that all months of the year recorded at least a 50 percent casualty rate. Consequently, the chances of being involved in a fatal or serious accident was 63 percent in the month of September, 61 percent in the month of March, 60 percent in the months of June and December, 59 percent in the months of July, August and October for Oshodi/Isolo Local Government Area. It is also observed that in both cases (total and casualty cases) the trends peaked in the months of July (figures 12 and 13). Consequently, the month emerges as the most unsafe. It is also observed that for Oshodi/Isolo Local Government Area, although the months of (March, August, September and October) recorded relatively low figures when tot5al road traffic accidents are concerned, these months rated very high when casualty cases are concerned and thus rate among the most unsafe months.

The next observation from figures 14 and 15 is that all months of the year recorded at least a 50 percent casualty rate. In other words, any accident in any of the months had a 50 percent change or more of resulting in bodily harm/loss of life or lives. Consequently, the chances of being involved in a fatal or serious accident was 64 percent in the month of November, 63 percent in the month of September, 62 percent in the months of January, August and December, 61 percent in the months of March and June for Ojo Local Government Area. While the chances of being involved in a fatal or serious accident was 61 percent in September, 60 percent in the months of June and October, 59 percent in the months of April and May for Eti-Osa Local Government Area. It is observed that in both cases (total and casualty cases) the trends peaked in the month of July (total and casualty cases) the trends peaked in the month of July (figures 16 and 17). Consequently, the month emerges as the most unsafe. It is also observed that for Ojo Local Government Area, although the months of (January, August, September and November) recorded relatively low figures when total road traffic accidents are concerned, these months rated very high when casualty cases are concerned and thus rate among the most unsafe months.

Fig. 12. Monthly Variation of total and casualty road traffic accidents in Oshodi/Isolo Local Government Area from 1970-2001



Source: Data Collected

Fig. 13: Monthly Trend of road traffic accidents in Oshodi/Isolo Local Government Area from 1970-2001

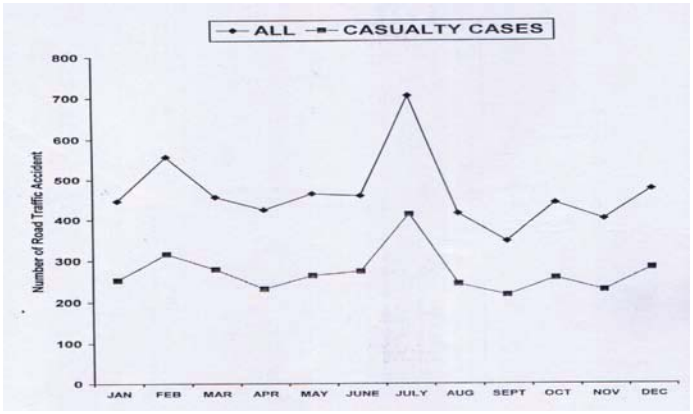
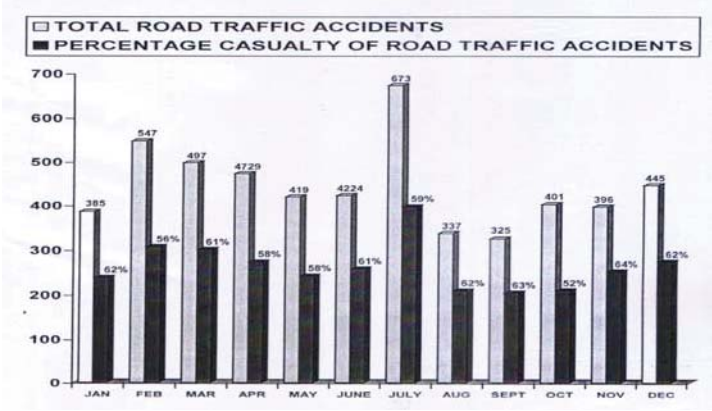


Fig. 14: Monthly Variation of total and casualty road traffic accidents in Ojo Local Government Area from 1970-2001



Source: Data Collected

Fig. 15: Monthly Trend of road traffic accidents in Ojo Local Government Area from 1970-2001

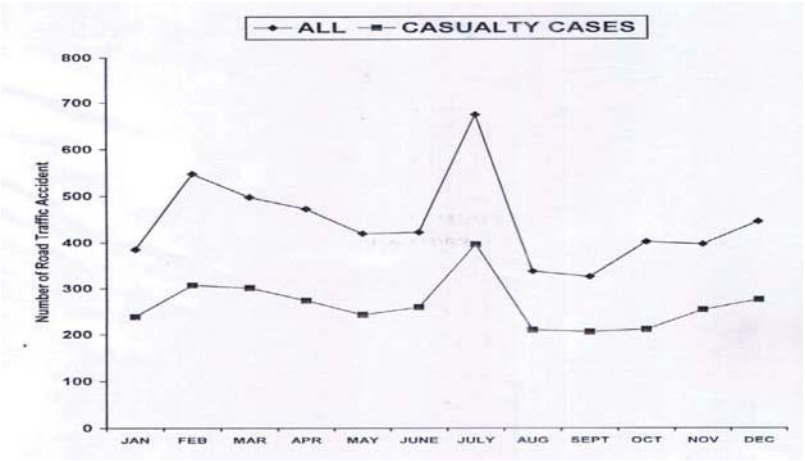
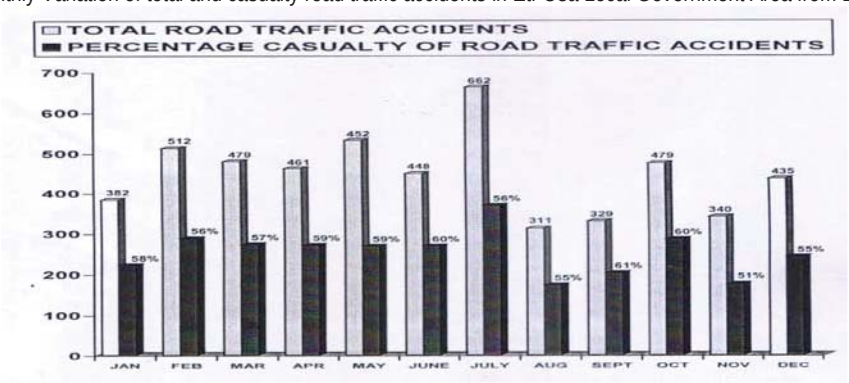
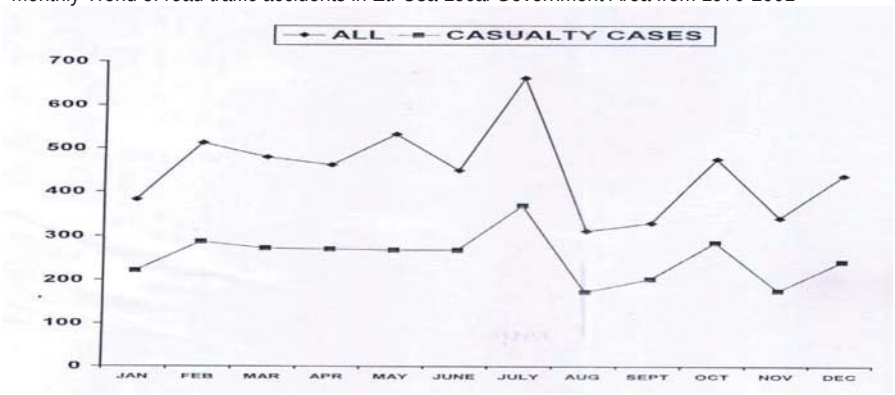


Fig. 16. Monthly Variation of total and casualty road traffic accidents in Eti-Osa Local Government Area from 1970-2001



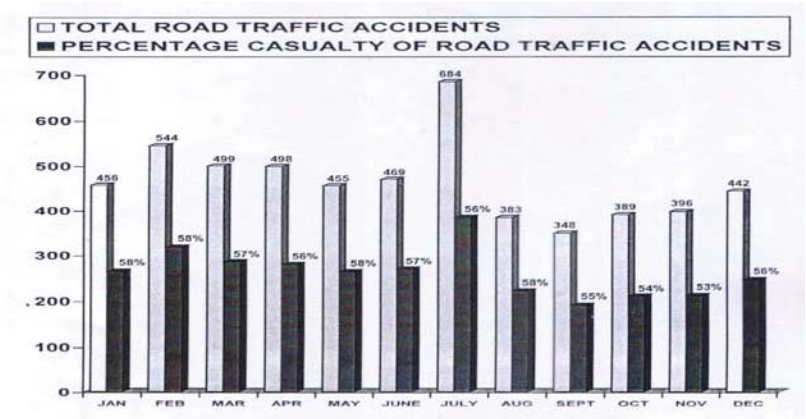
Source: Data Collected

Fig. 17. Monthly Trend of road traffic accidents in Eti-Osa Local Government Area from 1970-2001



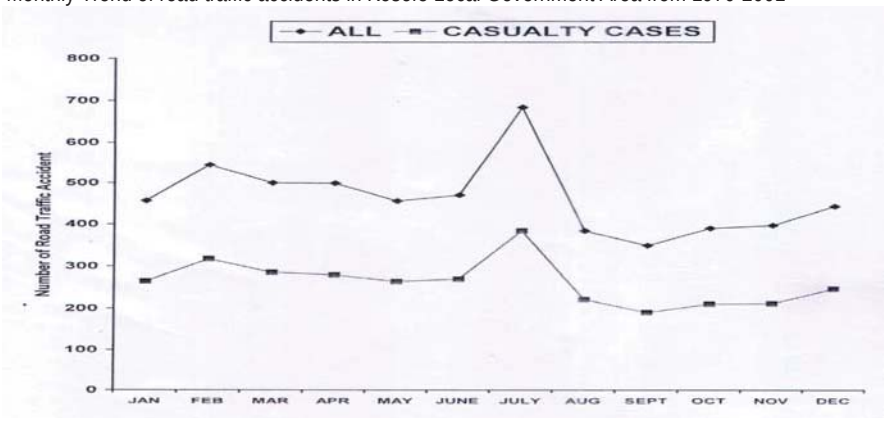
The final observation from figures 18 and 19 is that, the chances of being involved in a fatal or serious accident was 58 percent in the months of January, February, May and August, 57 percent in the months of March and June for Kosofe Local Government Area.

Fig. 18. Monthly Variation of total and casualty road traffic accidents in Kosofe Local Government Area from 1970-2001



Source: Data Collected

Fig. 19: Monthly Trend of road traffic accidents in Kosofe Local Government Area from 1970-2001



4. Recommendations Specific to Lagos State

To deal with the accident prone areas of Lagos State (i.e. Lagos Island, Lagos Island, Lagos Mainland, Ajeromi/Ifelodun, Ikeja, Oshodi/Isolo, Apapa, Eti-Osa, Kosote and Ojo) the authorities should:
Improve traffic patrol especially in accident prone seasons times
Provide recommendations for: effective transport planning, human – misuse, poor management, inadequate street parking, traffic congestion, delays and accidents.
Strong political commitment to ensure on a long term basis, appropriate monitoring of the road accident situation on which pertinent decisions can be made.
Proper design of road networks as well as the planning of the general public transport system.

5 Recommendations for Nigeria

Proper traffic patrol at the times of very high accident occurrence will go along way towards reducing traffic accidents and the associated injures and fatalities in Nigeria.
Consistent road safety efforts should be intensified during the months of June, July, September, October, November and December as well as Fridays, Saturdays and Sundays. These are periods when the highest number of road accidents cases involving death and injuries are recorded.
Ensure that drivers are constantly trained to ensure that they operate vehicles safety at all times.
Learn from other countries with better traffic management systems e.g., the U.S. and Great Britain.
Ensure adequate funding for the Federal Road Safety Corps.

6 Conclusions

Generally, Nigerians have been found to exhibit nonchalant attitudes to traffic regulations. As such traffic offence has become a regular behavioural tendency among various classes of road users. Thus, an obvious policy question is how to increase the level of compliance of road user's compliance with traffic regulations so as to reduce the level of traffic offences. There is need to create avenues through which road users' behaviour can be improved upon in other to conform with existing road safety norms.

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