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Rate of Mobile Phone Usage by Automobile Drivers in Ibadan Metropolis, Nigeria

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Abstract
Drivers do engage in the use of mobile phone while driving despite the legislation frowning at such act. This cross sectional mixed method study sought to find out the rate of usage of phones in the three residential density areas in Ibadan. Multi-stage sampling techniques were used for the questionnaire administration and purposive sampling technique for observation. The results of the analysis revealed more males used mobile phones while driving in the three residential density areas; total volume of traffic per day is highest in the medium density area; highest percentage of violation was recorded between 3pm-4pm; highest percentage of drivers were spotted using mobile phone on the wheel on Monday and recommendations were offered to reduce the rate of mobile phone usage by drivers.
Keywords: mobile phone, automobile drivers, residential density areas,

Introduction

The issue of drivers' safety using different mobile phone modes has been under considerable debates. Some countries (e.g., Nigeria, United State of America, Australia, and Norway) have legislation to restrict the use of a handheld mobile phone while driving. Instead of focusing on the physical tasks that driving requires (e.g., steering, gear changing), drivers have to use their hand(s) to manipulate the phone. Although the physical distraction may be less for hands-free mobiles than for handheld mobiles, both modes can cause cognitive distraction which may have negative consequences (Tornros and Bolling, 2005). Haigney et al. (2000) found that negative effects (e.g., reduced speed) were particularly apparent when participants were using a handheld phone. Under a close-circuit driving track environment, Treffner and Barrett (2004) investigated the effect of using a hands-free mobile phone on biomechanical and perceptual factors that underlay the control of driving, and found that a driver's sensitivity to prospective information about upcoming events may be significantly degraded while simultaneously using a hands-free mobile phone. In Tornros and Bolling's (2005) study, the effects of hands-free and handheld mobile phone dialing and conversation on simulated driving were investigated, and the most important conclusion of this study was that hands-free mobile phones did not have any safety advantages. For conversations, it seemed quite similar between hands-free and handheld mobile phones, and hands-free phones may even be less safe with regard to dialing.

In spite of the negative effect of using a mobile phone (including hands-free mobile phone) while driving and the corresponding legal limitation, mobile phones are prevalently used in driving context. For example, in Australia, an estimated 55% of drivers have used a mobile phone and even more than 11% of them have written text messages while driving (McEvoy et al., 2006). Although understanding about the effects of mobile phone use when driving on driving performance is very important, there have been few studies to explain why these people use mobile phone while driving. Therefore, how can we know the perception of automobile drivers on the risk involve in using mobile phone while driving as well as assessing the level of compliance on the law banning mobile phone use on the wheel in Nigeria.

The study aims to find out the rate of mobile phone usage by automobile drivers in Ibadan Metropolis, Nigeria.

In order to meet the above stated objectives, the following specific objectives were set to:

i. Determine the volume of traffic in the three residential areas;
ii. Ascertain the amount of traffic violation in the three residential areas
iii. Find out the gender pattern of violation of phone usage while driving in the three residential areas.
iv. Determine the hourly and daily pattern of phone usage among the drivers in the three residential areas.

The hypothesis statements for the purpose of this study are as follows:

Ho_1: There is no significant difference between the volume of traffic and the amount of traffic violation in the three residential density areas.

Ho_2: There is no significant difference among the three residential density areas in terms of traffic volume, traffic violation and proportion of traffic violation.

Ho_3: There is no significant difference between the weekdays in the three residential density areas in term of traffic volume, traffic violation and proportion of traffic violation.

Transportation planning is an integral part of the whole process of development planning; hence the issue of commuter's safety within the context of transportation planning cannot be overemphasized. This is necessary if only to avoid future chaotic occurrences which would result from the use of mobile cell phone while driving in our towns and cities. This study is significant because driving as a means of mobility provides the fundamental interface between land-uses and other transport modes.

Literature review

Sullman and Baas (2004) used hierarchical logistic regression to analyze a survey of 861 New Zealand drivers. The study investigated the frequency of mobile phone use on New Zealand's roads and the characteristics of drivers who use mobile phones while driving. The they found that more than half (57.3%) of the participants used a mobile phone at least occasionally while driving, with the remaining 42.7% reporting that they 'Never' used a cell phone while driving. Those who reported using a mobile phone more often while driving tended to; be male, residents in a main urban area, report a higher annual mileage, drive a later model car with a larger engine, prefer a higher driving speed, have less driving experience (in years) and to be younger. In line with previous research, there was also a significant relationship between crash involvement and use of a mobile phone whilst driving. However, when the contributions of the demographic and descriptive variables had been partialled out, using hierarchical logistic regression, the relationship between crash involvement and mobile phone use was no longer significant.

In France, Brusque and Alauzet (2008) conducted a study aim at identifying those who use mobile phones while at the wheel and determine the forms taken by this use. A representative sample of 1973 French people was interviewed by phone on their driving practices and mobile phone use in everyday life and their mobile phone use while driving. The study found that 40.2% of males reported phoning while driving, against 22.7% of females. Male population, between 25-34 years olds reported both driving and mobile phoning six times more often than the oldest group (>59 years old). For females, high mileage traveled (more than 25.000km/year). Car and phone uses in everyday life are factors for the intensive use of mobile at the wheel (Brusque and Alauzet 2008).

Furthermore, Zhou et al, (2009) in a survey investigating young driving learners' intention to use a handheld or hands-free mobile phone when driving. A sample of 164 young driving learners completed a questionnaire based on the theory of planned behavior (TPB), which measured people's intentions to use mobile phone while driving in handheld condition or hands-free condition, along with their attitudes towards the behavior, subjective norms, perceived behavioral control. The results indicated that more participants would like to use a hands-free mobile phone while driving, since participants perceived more safety if they use hands-free mobile phone in driving context, which was consistent with previous studies (e.g., White et al., 2004). In line with Brusque and Alauzet (2008) study, male respondents reported stronger intention to use a mobile phone in the driving condition than female respondents.

Recent studies suggest that laws banning cellular phone use while driving may not change use patterns, especially among young drivers with high rate of mobile phone adoption. Nelson et al. (2009) examined the reasons younger drivers choose or do not choose to talk on a phone while driving using a sample of 276 young drivers with very high ownership of cellular phones (over 99%) and a very high use of cellular phones while driving (100% reported talking on a cellular phone while driving at least some of the time). 72.5% of the participant reported text-messaging on a cellular phone while driving at least some of the time.

Study area

Ibadan city is situated approximately between Longitude $7^0$2'and $7^0$40'E and latitude $3^0$35' and $4^0$10'N of Greenwich Meridian at an altitude of 237.3metres above sea level and distance of about 145km north-east of Lagos and 659km south-west of Abuja, Ibadan was the capital of the old Western Region of Nigeria between 1950s and 1960s. Ibadan metropolis is made up of five Local Government Areas (LGAs) with landmass of 463.33 km2, representing 14.83% of the total land area of Oyo State. Ibadan city is one of the most important cities in Nigeria which used to be a war camp has grew without due consideration for effective planning, resulting in both planned and unplanned areas in the city.

Methodology

In order to examine the effects of using a mobile phone while driving in Ibadan, Nigeria, good data base that is both quantitative and qualitative is required. The primary data for this study were collected through the use of structured questionnaire and field observation. Relevant data were collected through the use of the questionnaire

to obtain data on the socio-demographic variables of the respondents. Field observation was used to determine level of compliance, gender, and daily pattern of phone use on the wheel. The field observation was carried out at intersection along roads in three residential densities in the study area. They include Awolowo Junction Bodija, Sango Juction Sango and Oja-Oba representing the Low, Medium and High residential density areas of the study area respectively.

Secondary sources of data for this study were collected from published journals, articles, textbooks, unpublished dissertation and thesis. Other relevant data were collected from Federal Road Safety Corps (FRSC). However, the bulk of the secondary data was retrieved from publications on the internet due to the paucity of data in relation to the subject matter in Nigeria.

The sample frame for this research was the average number of registered automobile (private) drivers in Ibadan municipal from January 2008- December 2010 which is 2,660 (FRSC, 2011). The reason for using data from 2008-2010 was to avoid the possibility of double counting; this is because the validity of a license is three years. Using a sample size of 0.1% of the sample frame 2,660 gave 266.

A residential classification system was adopted for the administration of questionnaires to respondents. According to Olayiwola (2006), cited in Ipingbemi (2010) three residential development zones can be identified in Ibadan, they are: (i) the high density area (inner traditional core area), (ii) medium density area (intermediate zone between the inner traditional core and the periphery) and (iii) low density area (the newer residential districts and periphery).

Stratified sampling method was adopted in the administration of the questionnaire to the respondent in areas which represent the three strata: Inalende and Olo Oba (high density), Mokola and Sango (medium density), Bodija and Oluyole estate (low density). Based on an earlier study conducted by Sanni (2005), the questionnaire was distributed in the following proportion: 24%, 30% and 46% for low, medium and high density areas respectively. Hence, 64, 80, and 122 questionnaires were administered in the low, medium, and high density areas respectively. However, the researchers were able to retrieve a total of 250 questionnaires for analysis. Purposive sampling technique was adopted in the selection of respondents within each of the residential density. Only automobile drivers who have been identified to have mobile phone are served questionnaire at mechanic workshops where they are expected to spend more time waiting.

Data collected from the study was analyzed using descriptive and inferential statistics. Graphical representations such as frequency and percentage tables and line charts were used to depict findings in the study. The hypotheses for the study was tested using the student T-test and AVOVA to determine if there is any significant difference between traffic volume and traffic violation with regards to use of mobile phone while driving in the three residential density areas.

Results and discussion

Gender of Respondents

The distribution of the respondents by gender in the study area shows that there were more male (62.4%) than female respondents (37.6%). Further classification of these figures reveals that in the low density areas 60.9% of the respondents were male while 39.1% were female. In the medium density 65.4% were male and 34.6% were female. The corresponding figures in the high density area reveal that 61.1% were male and 38.9% were female. As earlier noted, the figures show that there were more male respondents than female in all the density areas. This might be due to the fact that there are more men going to the mechanic workshops to repair either personal or family cars. Hence, more male were available to respond to the questionnaires.

Gender pattern of mobile phone use while driving

Table 2 shows that more male tend to use mobile phone while driving than their female counterparts. Further analysis of gender pattern to traffic violation in the three residential areas in the study area shows that in the three zones more male were spotted using mobile phone while driving than their female counterparts. Figure from the table below shows that 93.32%, 90.22% and 92.75% of male automobile drivers in the low, medium and high density area respectively where spotted using mobile phone while driving compare to 6.68%, 9.78% and 7.25% of female drivers respectively. There was evidence indicating male drivers tended to use a mobile phone while driving more females (Lamble et al., 2002; Poysti, et al., 2005; Brusque and Alauzet, 2008), and females were almost twice as likely to expect certain mobile phone use restrictions as males were (Lamble et al., 2002).

Traffic volume and compliance rate

Table 1 reveals that the total volume of traffic per day is highest in the medium density area (30,857); this is closely followed by the low (28,832) and high density area (27,943) respectively. However, the rate of traffic violation as a result of mobile phone use while driving is highest in the low density area (4.78%); followed by the high and medium density with a figure of 4.74% and 4.38% respectively. The low rate of mobile phone usage by drivers in the medium density area could be as a result of the busy nature of the route as such the task of driving is higher along the route (Sango-Mokola) as against Bodija and Oja-Oba.

Hourly pattern of mobile phone use while driving

The total hourly pattern of traffic violation as a result of mobile phone use while driving according to Table 3 shows that the highest percentage (12.93%) of violation was recorded between 3pm-4pm, closely followed 10.53% and 10.13% for between the time brackets of 4pm-5pm and 5pm-6pm respectively. The lowest figure 5.20% was recorded between the time brackets of 11am-12am.

A further breakdown of hourly violation in the different residential density reveals that 3pm-4pm time frame recorded the highest percentage of people spotted using mobile phone while driving, that is, 12.36%, 13.68% and 12.85% in the low, medium and high density area respectively. This is closely followed by 4pm-5pm timeframe with 10.86%, 10.26% and 10.44% in the low, medium and high density respectively. The 11am-12noon timeframe recorded the lowest rate of violation in the low and medium densities with 5.62% and 4.70% respectively while the lowest percentage (4.82%) was recorded between the timeframe of 10am-11am for the high density area.

Troglauer et al. (2006) investigated the extent and variations in mobile phone use among drivers of heavy vehicles in Denmark. Despite a prohibition of hand-held mobile phone use while driving 31% of the drivers reported to do so. Analysis of the variations in usage found a positive significant relationship between driving hours and phone use. That is, the longer the hour driven the higher the probability of using a mobile phone. AL-Darrab et al. (2009) noted the danger associated with prolonged mobile conversations especially during night driving.

Daily pattern of mobile phone use while driving

The daily pattern of mobile phone use while driving reveals that a total of 4051 people were spotted using mobile phone on the wheel. A further breakdown of the figure according to days of the week shows that 750(18.51%) people were spotted using mobile phone on the wheel on Monday. 671(16.56%), 658(16.24%) and 587(14.49%) were recorded on Tuesday, Wednesday and Thursday respectively. The lowest figure of violation which is 351 (8.66%) is recorded on Sunday and 407 (10.05%) for Saturday. The implication of this is that people tend to use mobile phone more while driving on working days, as such the usage may be as a result of business call (see Table 4).

A further analysis according to residential density shows that Monday recorded the highest percentage of violation in the three densities with 267(19.39%), 234(17.33%) and 249 (18.81%) for the low, medium and high density area respectively. However, the lowest figure of violation was recorded on Sunday in the three residential densities with a figure of 101(7.33%), 130(9.63%) and 120(9.06%) for low, medium and high density respectively.

Table 1: Volume of Traffic and Proportion of Violation

	Low Density			Medium Density			High Density			Grand Total		
Days	Volume of traffic	Violation (freq)	(%)	Volume of traffic	Violation (freq)	(%)	Volume of traffic	Violation (freq)	(%)	Volume of traffic	Violation (freq)	(%)
Monday	4851	267	5.50	4957	234	4.72	4729	249	5.27	14537	750	5.16
Tuesday	4795	220	4.59	4948	233	4.71	4695	218	4.64	14438	671	4.65
Wednesday	4536	221	4.87	4572	220	4.81	4324	217	5.02	13432	658	4.90
Thursday	4349	190	4.37	4526	207	4.57	4048	190	4.69	12923	587	4.54
Friday	4647	257	5.53	4752	162	3.41	4575	208	4.55	13974	627	4.49
Saturday	2569	121	4.71	3681	164	4.46	2597	122	4.70	8847	407	4.60
Sunday	3085	101	3.27	3421	130	3.80	2975	120	4.03	9481	351	3.70
Total	28,832	1377	4.78	30,857	1350	4.38	27,943	1324	4.74	87632	4051	4.62

Source: Field Survey, 2011

Table 2: Gender pattern of mobile phone use while driving

Days	Low Density						Medium Density						High Density					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Mon	244	91.39	23	8.61	267	100	206	88.03	28	11.97	234	100	231	92.77	18	7.23	249	100
Tue	204	92.73	16	7.27	220	100	202	86.70	31	13.30	233	100	197	90.37	21	9.63	218	100
Wed	211	95.48	10	4.52	221	100	198	90.00	22	10.00	220	100	204	94.01	13	5.99	217	100
Thur.	183	96.32	7	3.68	190	100	192	92.75	15	7.25	207	100	179	94.21	11	5.79	190	100
Fri	239	93.00	18	7.00	257	100	153	94.44	9	5.56	162	100	200	96.15	8	3.85	208	100
Sat	110	90.91	11	9.09	121	100	144	87.80	20	12.20	164	100	106	86.89	16	13.11	122	100
Sun	94	93.07	7	6.93	101	100	123	94.62	7	5.38	130	100	111	92.50	9	7.50	120	100
Total	1285	93.32	92	6.68	1377	100	1218	90.22	132	9.78	1350	100	1228	92.75	96	7.25	1324	100

Source: Field Survey, 2011.

Table 3: Hourly pattern of mobile phone use while driving

Time	Low Density		Medium Density		High Density		Grand Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
7am -8am	25	9.36	21	8.97	26	10.44	72	9.60
8am–9am	27	10.11	23	9.83	24	9.64	74	9.87
9am-10am	21	7.87	19	8.12	17	6.83	57	7.60
10am-11am	18	6.74	15	6.41	12	4.82	45	6.00
11am-12am	15	5.62	11	4.70	13	5.22	39	5.20
12am-1pm	23	8.61	20	8.55	21	8.43	64	8.53
1pm-2pm	20	7.49	17	7.26	19	7.63	56	7.47
2pm-3pm	15	5.62	13	5.56	17	6.83	45	6.00
3pm-4pm	33	12.36	32	13.68	32	12.85	97	12.93
4pm-5pm	29	10.86	24	10.26	26	10.44	79	10.53
5pm-6pm	27	10.11	24	10.26	25	10.04	76	10.13
6pm-7pm	14	5.24	15	6.41	17	6.83	46	6.13
Total	267	100	234	100	249	100	750	100

Source: Field Survey, 2011

Table 4: Daily pattern of mobile phone use while driving

Days	Low Density		Medium Density		High Density		Grand Total	
	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.
Mon.	267	19.39	234	17.33	249	18.81	750	18.51
Tue.	220	15.98	233	17.26	218	16.47	671	16.56
Wed.	221	16.05	220	16.30	217	16.39	658	16.24
Thur.	190	13.80	207	15.33	190	14.35	587	14.49
Fri.	257	18.66	162	12.00	208	15.71	627	15.48
Sat.	121	8.79	164	12.15	122	9.21	407	10.05
Sun.	101	7.33	130	9.63	120	9.06	351	8.66
Total	1377	100	1350	100	1324	100	4051	100

Source: Field Survey, 2011.

Testing of research hypotheses

For the purpose of this research three hypotheses was tested using student T-test and ANOVA. The hypotheses tested are as follows;

Ho_1: There is no significant difference among three residential density areas in terms of volume of traffic and the amount of traffic violation.

Table 5: Paired Samples T-test

	t	df	Sig. (2.tailed)
Pair1 Low Density Traffic Volume and Violation	12.192	6	0.000
Pair2 Medium Density Traffic Volume and Violation	19.225	6	0.000
Pair3 High Density Traffic Volume and Violation	12.340	6	0.000

Source: Field Survey, 2011

Result from Table 5 above shows that there is a significant difference among three residential density areas in terms of volume of traffic and the amount of traffic violation. Thus the null hypothesis is rejected and the alternative hypothesis accepted.

Ho_2: There is no significant difference among the three residential density areas in terms of traffic volume, traffic violation and proportion of traffic violation.

Table 6: ANOVA test for the three residential density areas

		Sum of Squares	df	Mean Square	f	Sig.
Traffic Volume	Between Groups	637254.38	2	318627.190	0.490	0.620
	Within Groups	11695825	18	649768.032		
	Total	12333079	20			
Traffic Violation	Between Groups	200.667	2	100.333	0.037	0.964
	Within Groups	49459.143	18	2747.730		
	Total	49659.810	20			
Violation %	Between Groups	0.487	2	0.244	0.691	0.514
	Within Groups	6.345	18	0.352		
	Total	6.832	20			

Source: Field Survey, 2011

Result from Table 6 implies that there is no significant difference among the three residential density areas in terms of traffic volume, traffic violation and the proportion of traffic violation. Thus the null hypothesis is accepted and the alternative hypothesis rejected.

Ho_3: There is no significant difference among the weekdays in the three residential density areas in term of traffic volume, traffic violation and proportion of traffic violation.

Table 7: ANOVA test for the weekdays

		Sum of Squares	df	Mean Square	f	Sig.
Traffic Volume	Between Groups	11193908	6	1865651.270	22.928	0.000
	Within Groups	1139171.3	14	81369.381		
	Total	12333079	20			
Traffic Violation	Between Groups	42627.143	6	7104.524	14.143	0.000
	Within Groups	7032.667	14	502.333		
	Total	49659.810	20			
Violation %	Between Groups	2.512	6	0.419	1.357	0.297
	Within Groups	4.320	14	0.309		
	Total	6.832	20			

Source: Field Survey, 2011

Result from Table 7 shows that, there is a significant difference between the weekdays (That is Monday to Sunday) in the three residential areas in terms of traffic volume and traffic violation. However, there is no significant difference in the proportion of traffic violation among the weekdays in the three residential densities at a significant value of 0.297.

Conclusion and recommendations

Despite the legislation to prevent the use of mobile phones while driving, automobile drivers in the three residential density areas of Ibadan engage in the act of using their mobile phones while driving. Gender, time of day or weekday and volume of traffic in the three residential density areas seem to proportion of traffic violation. In order to curtail the risks associated with mobile phone usage in the three residential density areas, the officials of Federal Road Safety Commission should start prosecuting all offenders to act as deterrent to others. Moreover, there may be spot fine for offenders as well. The official of FRSC should intensify the campaign against the use of mobile phone with emphasis on the associated risks involved in such act.

Further research

A study could be conducted to look at the influence of other socio-demographic characteristics on the use of mobile phone while driving by automobile drivers. More so, a study can be conducted on commercial drivers on the use of mobile phone while driving with the same methodology in the study area.

References

Al-Darrab, I.A., Khan, Z.A., and Ishrat, S.I. (2009). An experimental study on the effect of mobile phone conversation on drivers' reaction time in braking response. *Journal of Safety Research* 40, 185-189.

Brusque, C., and Alauzet, A. (2008). Analysis of the individual factors affecting mobile phone use while driving in France: Socio-demographic characteristics, car and phone use in professional and private contexts. *Accident Analysis and Prevention* 40: 35–44.

Haigney, D. E., and Westerman, S. J. (2001). Mobile (cell) phone use and driving: A critical review of research methodology. *Ergonomics*, 44, 132– 143.

Ipingbemi, O. (2010). Travel characteristics and mobility constraints of the elderly in Ibadan, Nigeria. *Journal of Transport Geography*, 18, 285–291.

Lamble, D., Rajalin, S. and Summala, H. (2002). Mobile phone use while driving: Public opinions on restrictions. *Transportation*, 29, 223–235.

McEvoy, S. P., Stevenson, M, R. and Woodward, M. (2006). Phone use and crashes while driving: a representative survey of drivers in two Australian states. *Medical Journal of Australia*, 185, 630-634.

Nelson, E., Atchley, P. and Little, T. D. (2009). The effects of perception of risk and importance of answering and initiating a cell phone call while driving. *Accident Analysis and Prevention*, 41, 438-444.

Poysti, L., Rajalin, S., and Summala, H. (2005). Factors influencing the use of cellular (mobile) phone during driving and hazards while using it. *Accident Analysis Prevention, 37*, 47–51.

Sullman, M. J. M., and Baas, P. H. (2004). Mobile phone use amongst New Zealand drivers. *Transportation Research: Part F* 7, 95–105.

Tornros, J., and Bolling, A. (2006). Mobile phone use–Effects of conversation on mental workload and driving speed in rural and urban environments. *Transportation Research Part F: Traffic Psychology and Behaviour* 9, 298−306.

Treffner, P. J., and Barrett, R. (2004). Hands-free mobile phone speech while driving degrades coordination and control. *Transportation Research Part F* 7,229–246.

Troglauer, T., Hels, T., and Christens, P.F. (2006). Extent and variations in mobile phone use among drivers of heavy vehicles in Denmark. *Accident Analysis and Prevention* 38: 105–111.

Zhou, R., Wu, .C., Rau, .P.P., and Zhang, .W. (2009). Young driving learner intention to use a handheld or hand-free mobile phone when driving. *Transportation Research Part F* 12, 208-217.

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