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Investigating Factors and Extenuation Strategies for Mobile Phone Use While Driving in Nigeria

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It is well established that mobile phone use while driving is overwhelming and a serious concern worldwide, except Nigeria. In Nigeria, it has become a common practice among both car drivers and motorcycle riders even the law enforcement officials openly use their mobile phone while driving. At present, there is no effective legislation, law enforcement, or public educational campaigns aimed at deterring this behaviour. Nevertheless, several studies reported that use of mobile phone while driving is one of the major causes of driver distraction in both developed and developing countries. While some studies attributes that such action/distraction can lead to a higher probability of driver error, which increases the risk of car crashes, current study revealed that very few drivers had car crash history due to mobile phone distraction. This could be because of long-time driving experience, frequency of mobile phone use while driving, and use of hands-free devices while driving. This paper identifies the factors influencing mobile phone use while driving and possible extenuation strategies in Nigeria. An online survey was designed using Google Form and sent to several WhatsApp group. Data was collected within three days from the sample of 159 drivers. Data about driving frequency and history, use of mobile phone while driving, law enforcement strategies associated with phone use, public campaigns strategies to create awareness about phone use while driving, and driver's car crash history due to mobile phone use. The results show that all the drivers studied had different levels of experience using mobile phones while driving to make or receive calls, with less text or chats, but very rarely check emails or browse Internet. Also, 85% of the drivers reported using hands-free devices while driving, which might help reduce the risk of car crash, as only 4% revealed having car crash history. Almost all the drivers agreed on increasing law enforcement and public campaigns awareness in order to reduce risks associated with mobile phone use while driving in Nigeria.

Keywords: Mobile phone, law enforcement, safe driving, Nigeria.

1. Introduction

Despite the growing concern on safe driving by traffic officials, road users, and researchers, there still appears to be an increasing number of car accident as a result of smartphone use while driving. Lipovac, Deric, Tesic, Andric, and Maric (2017) reported that about 25% of car crashes have been caused by driver distraction probably as a result of smartphone use while driving. Sadly, with the increasing number of new mobile technologies, application, and services while driving there is no doubt the usage will increase which will definitely result in more car crashes and accidents. Though some countries have taken measures to ease and mitigate the use of mobile phones while driving, the attitude is on the increase globally. Several mobile network operators are constantly seeking to improve existing services and to develop new applications that drivers may find useful (such as web browsing, emails, sending, receiving or

reading text messages, viewing or snapping photos, viewing or recording short videos, etc.), overall time and exposure to the risk of mobile phone use while driving increases (Lipovac, et al. 2017). It has become a daily routine of many drivers to return their missed calls or check mails or reply sms while in traffic jam. This is not only practiced by private individuals but even some of the law enforcement agents. This type of distraction causes traffic delay, car crash, abuse from other road users.

As such, the importance of investigating the negative impact of mobile phone use while driving cannot be overemphasized. The extreme dangers of smartphone use while driving attracts many researcher's attention globally. Many researchers found that mobile phone use while driving is a major prevailing cause of car accident. Only a substantial number of drivers

parked by the roadside to receive calls or read/reply SMS or use hands-free equipment been permitted by some countries (Ronggang, Changxu, Rau, & Zhang, 2009). Other studies examined the influence of mobile phone use in driver's distraction and provides suggestions to mitigate/avoid those distractions. Hence, the dynamic and uncontrolled nature of smartphone use is motivating some researchers to develop mobile phone tracking/blocking tools when used while driving (Albert and Lotan (2018).

Moreover, it has been observed that most of the young drivers use cell phone to answer calls while driving, write/reply text message or perform other activities such as web browsing, checking emails while driving (Shaaban, Gaweesh, and Ahmed, 2018). This hazardous behavior is very common among the youth resulting to road accidents. This could be mitigated by understanding the factors influencing young drivers to be distracted by their phones while driving. Thus, the paper aimed at exploring factors influencing drivers to use their mobile phones while driving in Nigeria, as well as identified mitigation strategies to be enforced to reduce the risk of car crash. More specifically, the paper will investigate factors such as drivers' history, driving experience, frequency of driver's phone use, use of hands-free equipment, enforcement to reduce the risk associated with phone use while driving, public campaigns to reduce the risk associated with phone use while driving, and car crash history as a result of phone use while driving.

2. Literature Review

Nowadays, the main factor distracting driver's attention may be the use of mobile phone while driving, which can lead to the increased risk of car crash occurrence with serious consequences (Lamble et al., 2002; McEvoy, Stevenson, & Woodward, 2006; Nadeau et al., 2003). Driver distraction was classified into four as follows (Lipovac, et al., 2017):

- a) Physical distraction occurs when a driver needs to use one or both hands in order to operate a mobile phone when dialing a number or answering or rejecting an incoming call, instead of focusing on physical tasks to drive such as steering, shifting gears, giving light/sound signals.
- b) Visual distraction involves looking away from the road to a mobile phone, as well as a loss of visual "attentiveness", often referred to as "looked, but did not see", when drivers, although their eyes are on the road, fail to see what is in front of them.

Auditory distraction occurs during the ringing of the mobile phone or during a conversation on the mobile phone, when a driver is focused on the sounds not related to driving.

Cognitive distraction involves lapses in attention and judgement. This type of distraction occurs when two or more mental tasks are performed at the same time.

Mobile phone use while driving received a lot of attention recently from the research community (Sheila, et al., 2014 & McDonald et al., 2019) because it is becoming a common behaviour among young adult drivers. The use of mobile phone by the drivers is expected to increase cognitively due to increasing interaction with some hardware, software and other related mobile phone resources, thereby making it difficult to concentrate on the driving task (Mattys and Palmer, 2015). It has been discovered that mobile phone use has increased dramatically among all the different categories of people globally causing driver distraction while moving on the road (Mirman et al., 2017).

It is worthy to note that the use of mobile phone while driving is one of the main reasons leading to the road traffic crashes (Ige, Banstola, & Pilkington, 2016). This is because mobile phone use while driving can significantly decrease the drivers' capacity to control a vehicle and consequently distracts drivers' attention away from driving and increases the likelihood of traffic crashes. The authors in (George et al., 2018), examined the mobile phone functions used by young adult drivers that are causing driver's distractions while driving. A mixed method including an online survey and a focus group was adopted by the authors to collect the data, which was later analyzed. They discovered that mobile phones are commonly used by drivers with full license when compared with learners or provisional drivers, which consequently resulted to fatal crashes of about 22% of all road crashes in Australia (Department of Transport and Main Roads, 2017).

Evidence from the current rise in mobile phone technology indicated that mobile phone functionality goes beyond the typical calling or writing text messages. Other functions include, internet browsing, email, reading social media and posting on social media as well. Previous research has shown that using a mobile phone while driving has a negative effect on driver safety and performance. The authors in (Przepiorka, Blachnio, & Sullman, 2018) used the theory of planned behaviour (TPB) to determine the number of factors that are related to mobile phone use while driving. The result

showed that attitudes and perceived behavioural control were major predictors of general intention to use a mobile phone while driving. Writing a text message generally is very dangerous while driving since it requires the driver's attention and distract him away from the road. Consequently, it reduces the perception of safety related messages from the neighbour vehicles (Irwin, Monement, & Desbrow, 2015) and increases the probability of crashes (Irwin, Monement, & Desbrow, 2015).

A study was conducted in Beijing, China (Shi, Xiao, and Atchley, 2016), where the authors examined the reason why drivers choose to engage with a mobile phone while driving. An Internet survey was conducted to gather data about making phone call and writing text messages while driving. Factors affecting drivers' choice to engage with a mobile phone use while driving, such as making a call, writing text messages and internet browsing have been investigated. The authors also employed a structural equation model to analyze the collected data from the survey.

Research carried out by authors in (Hill, Sullman, & Stephens, 2019) has shown that using a mobile phone while driving is one of the main contributing factors to driver distraction, which subsequently increases the risk of causing accidents (Caird *et al.*, 2014 & Lipovac, 2017). Shaaban *et al.* (2018), in their paper identifies some factors affecting the mobile phone use while driving in Qatar and proposed the potential solutions for the problem. They conducted a survey using a face-to-face interview specifically considering young adult drivers between the ages of 18 – 25 years old. The analysis was conducted using a structural equation modeling technique. The result showed that public campaign can significantly minimize the mobile phone usage while driving. While many countries have been trying to discourage this behaviour through promulgation of laws, educational campaign as well as law enforcement agencies (Shi, Xiao, and Atchley, 2016), in Nigeria, this issue has only become publicized recently. Therefore, the main focus of this research paper is to explore the factors leading to the use of mobile phone while driving in Nigeria and suggest possible ways that can provide solutions to the identified problems.

3. Methodology

In order to achieve the main objectives of this research, the most suitable research method is required. The research objectives and the respondents for this research, primarily influenced the selection of the most suitable

method of data collection and analysis in order to achieve the objectives of this study. Quantitative method was deemed more appropriate for this study.

3.1 Research Instrument

The survey question for this research was adapted from the existing literature on the use of cell phone while driving by Shaaban *et al.* (2018). Most of the items associated with the four adopted factors were slightly modified to suit this study. One item was added to the "Factor 2" regarding "seizing the mobile phone from drivers if caught using the phone while driving" as additional enforcement to reduce the risk of using mobile phone while driving. Factor 4 items was only answered by the respondent who had any car crash experience as a result of using mobile phone while driving. In order to ascertain the clarity of the questions and identify any possible ambiguity in the wording of the instrument, an independent expert who had experience on survey method was asked to evaluate the instrument. The expert feedback provided valuable suggestions for addition, removal, rewording some items, as well as restructuring the instrument.

The survey instrument was divided into sections A and B. Section A contained demographics data, driving information, and use of mobile phone while driving. The demographics data collected includes respondents' gender, age, state of origin, and occupation. The driving information collected includes driving experience, period of driving, time spent driving to places of work/business/school, use of mobile phone while driving, use and frequency of use of hands-free equipment during driving. Section B of the instrument contained questions related to the four factors under investigation. Factor 1 was about 'Mobile phone use while driving in Nigeria' containing five items. Factor 2 was about 'Increase law enforcement to reduce the risk associated with mobile phone use while driving' containing six items. Factor 3 was about 'Increase public campaigns to reduce the risk associated with mobile phone use while driving' containing six items. Factor 4 was about 'Car crash history due to mobile phone use while driving' containing four items. Factor 1, 2 and 3 items were assessed using 5-point Likert scales (i.e. Factor 1: 1 = once and 5 = always; Factor 2 and 3: 1=strongly disagree and 5=strongly agree); Factor 4 items were assessed using 'yes' or 'no' option and open-ended questions.

3.2 Population and Sample

The population for this research includes four categories of drivers in Nigeria. The sample for this research was drawn from the population of Nigerians participating in many WhatsApp groups. The minimum expected sample was 200 responses based on a convenient sampling technique. The online survey link was created using G-form and was sent and shared among several WhatsApp groups targeting four categories of Nigerians (i.e. government workers, staff of private organization, business people, and students of tertiary institutions) with experience using mobile phone while driving. The online survey was conducted within 3 days, between Wednesday 8th, and Friday 10th, July 2020. According to Shi, Xiao, and Atchley (2016), there was consistent results from a sample of Chinese drivers obtained through paper and online surveys (Shi et al., 2010). Similarly, an online survey proved to be faster and cost effective (Weible & Wallace, 1998) yielding minimum missing data (Stanton, 1998) with less or no bias.

Out of the 159 responses received, 22 responses were found empty with no data and therefore dropped. Also, 13 responses were deleted because they answered 'No' to the question 'do you drive a car?' which means they indicate lack of driving experience talk less of using mobile phone while driving. Finally, a total of 124 responses were considered fully completed and therefore used in the analysis of this study. This number of responses was considered sufficient to meet the minimum sample size requirement for conducting simple statistical analyses (Gefen et al., 2000; Kim, Oh, Shin and Chae, 2009). The detailed breakdown of the respondents' profile for the survey was presented in Table 1.

4. Results and Findings

This section presents the results from the statistical analyses and the overall findings of this study. The section begins with the discussion on the demographic factors, followed by driving experience factors such as mobile phone use, law enforcement, public campaigns, and car crash history.

4.1 Demographic factors

At the end of the data screening a total number of 124 responses were considered for the data analysis. Table 1 shows that male respondents are 90 (72.6%) and female 34 (27.4%), and coming from 15 states of Nigeria, with majority from Sokoto state (70; 56.5%) probably because

that is where the study was conducted. 14 (11.4%) of the respondents are between the age of 15-25, 59 (47.6%) are aged 26-35, 51 (41.1%) are aged above 36 and above. Moreover, majority of the respondents (83; 66.9%) are government workers, only 3 (2.4%) respondents did not indicate their occupation. All the respondents without driving experience were removed from the study. More than half (56; 45.2%) of the respondents indicates they have 1-10 years driving experience, only 12 (9.7%) have more than 31 years of driving experience. The time spent by the respondents driving to their places of work was almost equally distributed as shown in Table 1. All the respondents agreed that they used their mobile phone while driving at different rates, with only 14 (11.3%) reported using their mobile phone while driving once. Though considering that people are always carrying their mobile phones around 24/7 and important calls comes in anywhere and anytime. However, these shows that 11% of these respondents valued their safety and others more than their personal calls/commitments. Only 35 (28.2%) out of 124 respondents said they do not possess hands-free equipment. More than half (80; 64.5%) indicates use of hands-free tools while driving for safety and convenience. Only 44 (35.5%) said they do not use hands-free tools while driving, this is because 35 out of 44 did not have the equipment. this means only 9 out of 80 respondents with hands free devices are not using them while driving.

4.2 Driving Experience Factors

This study investigated four driving experience factors while using mobile phone and possible car crash history among all categories of drivers in Nigeria. The factors investigated are as follows: mobile phone use while driving, increase law enforcement to reduce the risk associated with phone use while driving, increase public campaigns to reduce the risk associated with mobile phone use while driving, and car crash history due to mobile phone use while driving.

4.2.1 Factor 1: Mobile phone use while driving

Overall, respondents indicate using their mobile phones while driving to dial or answer call, send or receive text messages, and chat or browse Internet. Particularly, only 42 and 19 respondents said they never dial or answer calls while driving respectively. The overwhelming majority of the drivers says they never used their mobile phone while driving for chats, photos,

audio, video, emails, and browsing. Also, there is large number of respondents who says their usage was only once as shown in Table 2. The results show that the least frequent none usage of mobile phone was browsing the Internet while driving, with 78% reporting they never did such. Followed by 71% reporting never engaged in

social media text, photos, audio, or video chats while driving. However, approximately 42% of the respondents reported they always engage in one thing or another with their mobile phone while driving.

Table 1: Respondents' demographic profile

Demographic		N	%	State of Origin	N	%
Gender	Male	90	72.58	Benue	2	1.61
	Female	34	27.42	Borno	1	0.81
Age	15 – 25	14	11.39	Gombe	2	1.61
	26 – 35	59	47.58	Kaduna	2	1.61
	36 above	51	41.13	Kano	6	4.84
Occupation	Government work	83	66.94	Katsina	4	3.23
	Private Organization	6	4.84	Kebbi	20	16.13
	Business	11	8.87	Kogi	1	0.81
	Students	21	16.94	Kwara	2	1.61
	Others	3	2.42	Niger	3	2.42
How long have you been driving?	1 – 10 years	56	45.16	Ogun	2	1.61
	11 – 20 years	34	27.42	Osun	2	1.61
	21 – 30 years	22	17.74	Oyo	1	0.81
	31 above	12	9.68	Sokoto	70	56.45
How many minutes do you spend driving to your place of work/business/school?	1–10 minute	30	24.19	Zamfara	6	4.84
	11–20 minute	45	36.29			
	21–30 minute	29	23.39			
	31+ minutes	20	16.13			
How often do you use mobile phone while driving?	Always	9	7.26			
	Regularly	25	20.16			
	Rarely	76	61.29			
	Once	14	11.29			
Please select the hands-free equipment you use?	Earpiece	51	41.13			
	Bluetooth	38	30.65			
	AUX	34	27.42			
	None	35	28.23			
	Others.....	2	1.61			
Which hands-free equipment do you use while driving?	Earpiece	38	30.65			
	Bluetooth	35	28.23			
	AUX	32	25.81			
	None	44	35.48			
	Others.....	1	0.81			

4.2.2 Factor 2: Increase law enforcement to reduce the risk associated with mobile phone use while driving

The result on increasing the law enforcement regulation associated with mobile phone use while driving was presented in Table 3. The overwhelming majority of drivers strongly agreed with the law enforcement regulations listed in Table 3. This shows that large number of participants (59% saying strongly agreed) believes that there is need to introduce and also enforce driving regulations regarding the use of mobile phones. The 99% of respondents agreed that conducting public workshops and seminars will increase awareness on the consequences of using mobile phone while driving. Surprisingly, some of the respondents reported they don't know whether to increase law enforcement or not. Likewise, 51% disagreed with the confiscation of their mobile phones if used while

driving. This could be because people beliefs mobile phone is a personal and private device that should not be seize or accessed by another person talk less of been seized by the police.

4.2.3 Factor 3: Increasing public campaigns to reduce the risk associated with mobile phone use while driving

Table 4 shows the results regarding the need to increase public campaigns in order to mitigate the risks of using mobile phones while driving. This including use of TV, Radio, social media, posters, teaching materials, debate groups, and driving course. Remarkably, 92% of the respondents indicates the need to increase awareness among young drivers right from driving school. 86% agreed that the use of TV, FM, and Radio stations as well as social networks and the Internet will increase people awareness on the dangers using of mobile

phone while driving. Similarly, majority of the respondents (78%) indicates the importance of using billboards screens and signposts on the roadside as a reminder to road users. About 76% of respondents indicates the need to include driving regulations and safety measures in school curriculum and also to create debating groups and interschool debating competitions on the dangers of using mobile phones while driving.

Similarly, some of the respondents suggested additional public campaigns strategies that can be adopted and implemented by the law

enforcement agencies concern with road and public safety. The suggested strategies include organizing sensitization programmes at government and private places and on social media (e.g. Facebook), Introducing mobile phone tracker tool that can suspend/reject calls or text messages while driving, involving community and religious leaders using word of mouth, organizing awareness campaigns such as jingles, drama, and comedy at market places, motor packs, clubs, camps, place of worship etc., and lastly, including driving safety rules and regulations in school curriculum.

Table 2: Mobile phone use while driving

Factor 1 Items	Never	Once	Rarely	Regularly	Always
Dialling a phone call while driving	42 (33.9%)	40 (32.3%)	23 (18.5%)	11 (8.9%)	8 (6.5%)
Answering a phone call while driving	19 (15.3%)	27 (21.8%)	40 (32.3%)	22 (17.7%)	16 (12.9%)
Reading short messages (chats), photos, audio, video, and/or emails while driving	71 (57.3%)	26 (21%)	9 (7.3%)	8 (6.5%)	10 (8.1%)
Sending messages (chats) photos, audio, video, and/or emails while driving	84 (67.7%)	20 (16.1%)	9 (7.3%)	4 (3.2%)	7 (5.6%)
Browsing the internet while driving	97 (78.2%)	17 (13.7%)	4 (3.2%)	1 (0.8%)	5 (4%)
Chat a text, photo, audio, and/or video on social media while driving?	88 (71%)	14 (11.3%)	13 (10.5%)	3 (2.4%)	6 (4.8%)

Table 3: increase law enforcement to reduce the risk associated with phone use while driving

Factor 2 Item	Strongly Disagree	Disagree	Don't know	Agree	Strongly Agree
Increasing mobile phone law enforcement	13 (10.5%)	8 (6.5%)	11 (8.9%)	19 (15.3%)	73 (58.9%)
Introducing automated cameras to catch mobile phone users while driving	14 (11.3%)	9 (7.3%)	21 (16.9%)	13 (10.5%)	67 (54%)
Increasing the fine amount for using mobile phone while driving	15 (12.1%)	11 (8.9%)	27 (21.8%)	13 (10.5%)	58 (40.8%)
Seizing the mobile phone from the driver if used while driving	35 (28.2%)	16 (12.9%)	23 (18.5%)	12 (9.7%)	38 (30.6%)
Introducing driving license suspension/ban for a period of time	29 (23.4%)	12 (9.7%)	25 (20.2%)	23 (18.5%)	35 (28.2%)
Conducting public workshops and seminars to increase awareness among drivers	4 (3.2%)	3 (2.4%)	18 (14.5%)	15 (12.1%)	84 (67.7%)

Table 4: Increasing public campaigns to reduce the risk associated with mobile phone use while driving

Factor 3 Items	Strongly Disagree	Disagree	Don't know	Agree	Strongly Agree
Increasing media campaigns in TV, FM, and radio	1 (0.8%)	3 (2.4%)	14 (11.3%)	12 (9.7%)	94 (75.8%)
Increasing media campaigns on the internet and social networks	2 (1.6%)	4 (3.2%)	12 (9.7%)	15 (12.1%)	91 (73.4%)
Increasing billboard images and posters media campaigns on the roadside	5 (4%)	3 (2.4%)	19 (15.3%)	14 (11.3%)	83 (66.9%)
Including related teaching material in schools	3 (2.4%)	4 (3.2%)	23 (18.5%)	22 (17.7%)	72 (58.1%)
Discussing in debate groups	6 (4.8%)	7 (5.6%)	18 (14.5%)	21 (16.9%)	72 (58.1%)
Increasing awareness in driving schools	1 (0.8%)	2 (1.6%)	7 (5.6%)	15 (12.1%)	99 (79.8%)

4.2.4 Factor 4: Car crash history due to mobile phone use while driving

Figure 1 presented the result of questions on the respondent's car crash history due to use of mobile phone while driving. The majority of the respondents says they never had a car crash using mobile phone while driving as shown in Figure 1.



Figure 1: Car crash history due to mobile phone use while driving

Only a very small number of the respondents (N=5; 4%) reported experiencing a car crash as a result of using mobile phone. The type of car crash they experienced were minor scratches, hit a cow, ran into bush, smash someone's car and tyre burst. All these minor car crashes could be as a result of distraction caused by the use of mobile phone while driving. Regarding the question on the reason why they were driving and using mobile phone which caused them the car crash, the respondents said they were emergency calls, important calls, for simple communication only, and a fantastic way to call.

According to Lipovac, et al. (2017), driver distraction was termed as carrying away driver's focus from the main driving activities critical for safe driving (Lee, Choi, Hong, Son, & Yu, 2008). Despite the results from several studies reporting that mobile phone use while driving increases crash risk, the results from this study reports otherwise as only 4% (5 out of 124 respondents) had a car crash history due to use of phone while driving. This study has shown that majority of drivers using mobile phones while driving in Nigeria did not have car crash incident after years of driving experience. This lack of car crash experience could be the reason of increasing number of phone usage while driving by a lot of drivers in Nigeria and worldwide (McCartt, Hellinga, & Bratiman, 2006; Svenson & Patten, 2005).

5. Conclusion

This study investigated four factors associated with mobile phone use while driving among a convenient sample of Nigerian drivers. A large number of the study respondents (124 out of

137) acknowledged using their mobile phone while driving to their places of work. This result corroborated findings from existing studies from different parts of the world (Hill, Sullman, & Stephens, 2019; Gras et al., 2007; White et al., 2010). Overall, the result obtained from this study revealed that there is prevalence of mobile phone use while driving with less connection between mobile phone use and a car crash risk. This study revealed that only a very negligible number of drivers involved in car crash as a result of mobile phone use.

The study also found out that majority of the drivers make and receive calls only as against reading or sending text messages, chatting on social media or browsing the Internet. Which means majority of the drivers believed that texting, chats and browsing while driving are more distracting and riskier compared to making and receiving calls. It has also revealed that majority of the drivers having hands-free equipment uses them while driving which might have enhanced their driving performance and ultimately reduce the risk of car crash.

Also, the findings indicates the need for an increase law enforcement regulation in order to reduce the risks associated with mobile phone use while driving. Increase public campaigns in schools, offices, market places, camps, clubs etc. in order to create more awareness on the dangers of using mobile phone among different categories of drivers in Nigeria. Use of community and religious leaders to sensitize their followers through word of mouth. Lastly, the drivers investigated indicates that only important and emergency calls should be entertained while driving. Otherwise, use of mobile phone while driving is risky and wrong and therefore, laws should be promulgated to punish offenders.

6. Recommendation

Based on the outcome of this study the following recommendations were made to the following stakeholders:

- Road users (drivers) should desist from using mobile phone while driving to avoid risk of car crash. In case of emergency they can park by the roadside to use their mobile phone. They should also understand the various laws and regulations associated with mobile phone use while driving. They should be encouraged to participate in various public awareness campaigns aimed at enlightening them on the dangers and consequences of using mobile phone while driving.
- Law enforcement agencies such as the road traffic officials, road safety officials, and police

officers should understand the applicable offences and laws on mobile phone use while driving and act appropriately against offenders/violators.

- Government should consider reinforcing road safety laws and regulations taking the recommendations from the outcome of this study with a view to incorporating them into the body of existing regulations. It should also sponsor and organize the suggested public campaigns reported in this study to increase awareness on the risk of mobile phone usage while driving in Nigeria.

Both automobile and mobile phone manufacturers should consider developing an in-built tracker system that can suspend/block all calls and text messages for drivers while driving.

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Conflict of interest

The authors declare no conflict of interest.

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