PUBLIC OPINION ON USE OF MOBILE PHONES WHILE DRIVING

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***ABSTRACT*:** Road traffic accidents are known to be the leading cause for human premature deaths. As per the WHO study, nearly 1.2 million people are killed on roads due to road traffic accidents annually all around the world. Among leading causes for road traffic accidents, human errors place at the top. Mobile phone considered to be one of the major tools for human distractions. Therefore the objective of this paper is to investigate the public opinion on using mobile phone while driving. The survey was conductedusing a questionnaire distributed through e-mails. Experience of respondents on using mobile phones while driving, opinion on use and the experience of accidents and near misses were investigated

KEYWORDS: traffic accidents, mobile phone, public opinion, driver distraction

1. INTRODUCTION

Mobile phone has become a part of lifestyle of humans all around the world. According to the BBC news there are over 5 billion mobile connections around the globe. For the 21 million people living in Sri Lanka, 17.34 million mobile phone connections are given up to 2010. This led to use this tool at almost all the places and situations. Let it be a meeting, while dining, short visit to toilet, while driving and walking, etc.. As this tool is portable and free to use it at any moment, it is becoming a leading cause for accidents. Mobile phonecauses heavy casualties due to mis-use at unwanted places.

It is estimated by various researchers that mobile phone is becoming a leading cause for driver distraction and end up in traffic accidents in different magnitudes. Unfortunately, police reports does not show the contribution of mobile phones to traffic accidents.It is because, by the time investigating officers visit the site, most of the situations are altered.

As such, this study was carried out based on a questionnaire distributed among e-mail users for a period of three years targeting questions related to use of mobile phones and their opinion on allowing mobile phones while driving and their experience on accidents and near misses. Data collected were presented to highlight the categories of respondents and finally the results for future reference on this issue.

1.1 Data Collection

A structuredquestionnaire was administered to collect data among e-mail users. In the questionnaire, demographic factors, travelling pattern of the respondent were asked before asking about usage of mobile phones by the respondent. Finally their experience of traffic accidents and/or near misses due to driving while using mobile phones was asked. Finally an opportunity was given to express their opinion on using mobile phone while driving.

Respondents had to fill a form and send back to me via e-mail. Data received were tabled in an excel sheet prior to analysis. Then the data was treated to categorize according to their usage and finally opinion on use of mobile phones while driving.

2. METHODOLOGY

Data collection for the study was administered by a structuredquestionnaire distributed via e-mail. As the target group of respondents was email users, there can be biasness in the sample. To minimize it, email questionnaire was sent to addresses collected through chain mail and junk mail circulation lists.

In the questionnaire initially basic information such as gender, age, profession of the respondent was asked. In the second part, driving frequency, frequency of mobile phone usageunder different situations were questioned. In the latter part of the questionnaire, their opinion about use of mobile phones while driving and the experience of accidents and/or near misses were questioned. Self reported behavior of respondents while walking was also asked using one question.

2.1Data analysis

A weighted probability approach was used to estimate main factors related to the study. Driving frequency was categorized to four groups as never, rarely, once a week and daily. Weights allocated for those categories were 0,1,2 and 3 respectively. Use of mobile phone while driving and use of handsfree while using mobile phones were also categorized into four groups. It was never, rarely, often and very often. Weights allocated to groups were 0,1,2 and 3 respectively.

If a respondent drive daily and use mobile phone very often, such respondent gets 3*3=9 marks. If the same respondent uses handsfree very often he will get 3*3*3=27 for such a situation.

These numbers (weights) to be corrected by a follow up study to represent the suitable weightage. Based on the assumed weights, following calculations were carried out.

Probability of Mobile phone usage while driving=(3*d1+2*d2*d1)*(3*u1+2*u2+u3)/3*3*p

Where;

d1: daily driving

d2:once a week driving

d3: rarely driving

u1:very oftenmobile users

u2:often mobile phone users

u3:rarelymobile phone users

p: sample population

Probability of handsfree usage while using mobile phone

=(3*d1+2*d2*d1)*(3*u1+2*u2+u3)*(3*h1+2*h2+h3)/3*3*3*p

h1: veryoften handsfree users

h2: often handsfree users

h3: rarely handsfree users

2.2datainetrpretation

Among respondents there were 326 male participants and 86 female participants. Maximum age among respondents was 77 years while minimum was 21 years and the median was 44 years.

Mobile phone usage behavior against driving pattern and handsfree usage pattern of mobile phone users were also tabulated as shown below,

Table.1 self reported mobile phone usage pattern against driving pattern

			Mobile phone usage frequency			
			very often	often	Rare	never
Driving frequency	Daily	0.63	0.13	0.32	0.38	0.17
	once a week	0.13	0.08	0.13	0.57	0.20
	Rarely	0.07	0.00	0.06	0.35	0.55
	Never	0.08	x	x	X	x
	Not indicated	0.08	x	x	X	x

As per the above expression, probability of using mobile phone while driving is 0.33.

Table2. Self reportedhandsfree usage pattern against mobile phone usage frequency for daily drivers

Driving Frequency: Daily			Handsfree usage frequency			
			very often	often	Rare	never
Mobile phone Usage Frequency	Very Often	0.13	0.22	0.30	0.27	0.22
	Often	0.32	0.19	0.22	0.24	0.35
	rarely	0.38	0.06	0.07	0.21	0.64
	never	0.17	x	x	X	x
	Not indicated		x	x	X	x

Table3. Self reportedhandsfree usage pattern against mobile phone usage frequency for once a week drivers

Driving Frequency: once a week			Handsfree usage frequency			
			very often	often	rare	never
Mobile phone Usage Frequency	Very Often	0.08	0.20	0.00	0.80	0.00
	Often	0.13	0.00	0.38	0.00	0.63
	rarely	0.57	0.03	0.03	0.09	0.85
	never	0.20	x	x	X	x
	Not indicated	0.02	x	x	X	x

Table4. Self reportedhandsfree usage pattern against mobile phone usage frequency for drivers driving rarely

Driving Frequency: rarely			Handsfree usage frequency			
			very often	often	rare	never
Mobile phone Usage Frequency	Very Often	0.00	x	x	x	x
	Often	0.06	0.00	0.00	0.00	1.00
	rarely	0.35	0.00	0.27	0.27	0.45
	never	0.55	x	x	x	x
	Not indicated	0.03	x	x	x	x

As per the above equation probability of handsfree usage among mobile phone users while driving is .12.

Though the weightage values assigned for calculations to be verified, it is clear that little less than one third of mobile phone users while driving use a handsfree kit. Anyway, according to many studies, there is not much benefit by using a handsfree kit while driving other than having both hands for maneuvering the vehicle.

Table 5.self reported mobile phone behavior while walking

If mobile phone rings while walking, what would you do	%
Answer immediately	37.07
Answer only if it is important	19.77
Move to a side and stop and answer	28.08
not responded	15.05

According to table 6, more than half of the respondents indicated that they will answer the mobile phone, if it rings while walking. It is an indication of the necessity of a mobile phone for general public and in the same time an indication of careless behavior of using it.

Table 6. Opinion about allowing mobile phone while driving

Opinion about allowing mobile phone while driving			Opinion on using mobile phone while driving			
			Allow without a restriction	Allow with a handsfree	Ban completely	other
Driving frequency	Daily	0.63	0.04	0.51	0.36	0.02
	Once a week	0.13	0.07	0.30	0.52	0.05
	rarely	0.07	0.06	0.26	0.45	0.10
	never	0.08	0.03	0.31	0.44	0.11

Table 7.Opinion about allowing mobile phone while driving

Opinion about using mobile phone while driving	%
Allow without a restriction	5
Allow with a handsfree	48
Ban completely	43
Other	4

As indicated in Tables 6 and 7, a large portion of respondants wanted to use mobile phone while driving. In overall, 48% wanted to use mobile phone while driving. When the driving frequency is considered, among frequent drivers half of the respondents wanted to use mobile phone while driving. On the reverse, rarely driving respondents majority wanted to ban use of mobile phone while driving.

2.4Concluding remarks

This study was carried out based on a questionnaire survey carried out through e-mails. Therefore, it is clear that respondents are only those who have access to e-mails. They may not represent a proper cross section of driver population. Out of those who have responded, a mathematical calculation was done to estimate the percentage of mobile phone users while driving. Though there is a doubt on the assumed weighting parameters used, chance of using ahandsfree kit while using a mobile phone during driving is nearly one third.

According to the self reported behavior, those who are driving more frequently uses mobile phone more frequent than other drivers.

Considering the driving frequency, half of the population of frequent drivers requests to use mobile phones while driving. In other categories, nearly half

request to ban mobile phones while driving.

These may take as a reference in deciding future rules and regulations on use of mobile phones driving.

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