

## Use of Cell Phone while Driving: What Customers Think

Dr. Muhammad Nadeem Safwan  
Assistant Professor Foundation University, Islamabad  
nadeemsafwan@yahoo.com

Muhammad Ashfaq  
Ph D Scholar, Iqra University, Islamabad  
ashfaqao@gmail.com

Ijaz ur Rehman  
MS Scholar SZABIST, Islamabad  
ejaaz.1983@gmail.com

Sanaullah Ansari  
Ph.D Scholar SZABIST, Islamabad  
sanaullah@szabist-isb.edu.pk

**Abstract**-The stimulus to carry out this research came from the elevating issue of using cell phones while driving. As numbers of cell phone users are increasing so the use of mobile while driving is also increasing rapidly therefore the risks of accidents are increasing. The purpose of this study was to explore the different perceptions of universities students and faculty member regarding the problem area and to evaluate the factors affecting driving styles while using mobile phone. For this purpose self-developed questionnaire was used and distributed among university students and faculty members. Likert 6 point scale was used to analyze the subject responses Total 450 copies of survey instrument were received back from the concerned subjects. The responses were evaluated by means of frequency distribution, mean and standard deviation analysis. The results depicts that mobile usage while driving cause some sever volition of safety of the subjects as well as others on the road. In most of the results that has been calculated from this research we got to know that driver often does mistakes, avoid rules and make errors being on the road while using mobile phones. Driving is a crucial thing to tackle with, and making errors as going on the wrong lane, crossing red lights, over speeding and getting involved with unofficial races can ultimately cause much danger and can bring the end to the person's life. Usually the drivers, busy on mobile phone forget about the car parking for what they have to pay attention. The study suggests that country-wide law should be imposed to ban use of Mobil phones while driving hence it is partially imposed in some cities of Pakistan. The study further suggests that campaign should be lunch nationwide to minimize cell phone usage while driving and this attempt can captivate laudable contribution to minimize risk associated with use of cell phone while driving.

### I. INTRODUCTION:

Mobile phone is long-range transportable electronic device use in communication. Mobile phone industry is one of the expanding segments around the globe. Less than 20 years, the mobile phone becomes common, luxurious tools, the business privileged to everywhere and low-cost item. In many countries, mobile phones go beyond land-line phones. This fast development and competition lead to lower prices for telephone and communications from time to time. Demand for mobile phones is growing very rapidly. The development of mobile phone expansion was supplemented by an increase in the proportion of people driving while

talking on a mobile phone. Latest computations show that mobile phone users consume 60% of their time on a mobile phone while driving (Hahn, et al, 2000). The suitable impact of cell phone usage in social protection are not understood, furthermore, because of the feasible increment in risk connected with using mobile phones while driving, several judicial activities have been made to stop cell phone usage on the road. In most cases, the constitutionality in the field of cellular phones and driving originates the tacit assumption that the emergence of any dispute from mobile phone use due to external forces, such as dialing and holding the phone while talking. Among other units, our study assesses the validity of this acquisition. The condition in Pakistan is not too different. For new competitors the sector of mobile phone growth is very fast and not only made the country strong in telecommunications, but also to help poor people to afford it due to low prices. Demand is growing day by day. First it was the people's need, but now it has become a necessity. People get used to it, somehow. Their use is very high among teenagers and young adults because of the development of technology that is advantageous to them a lot, in both positive and negative way. Its advantages and disadvantages depend on its use. Along with the positive aspects, Mobile phones generate many problems in society because people already using it while driving which caused great hazard to people on the road. They put their lives in danger and a threat associated with the use of mobile and diverts their attention, which leads to accidents and deaths etc. The motivation to carry out this research came from the raising issue of using mobile phones while driving. As numbers of mobile users are increasing so the use of mobile while driving is also increasing rapidly therefore the risks of accidents are increasing. The purpose of this study is to explore the different perceptions of people regarding the problem area and to evaluate the factors affecting driving styles while using mobile phone

### II. LITERATURE:

The invention of mobile telephone technology goes at least until 1940. Key technology for cellular phone systems present was mature in the U.S. in 1970, and the emerging broadcast system was identified in Japan in 1979. Full broadcast exercise in the United States developed in 1983. New automotive technologies, such as onboard computers and instruction finder, exercising

the complete locating system, to allow other new ways of alternative creations of intelligence will aspire with commanding surroundings for the driver's alertness. One effect was a conflict about the most ordinary and a observable sign of this phenomenon, Cell phone practice while driving is a risk of road. Several studies have concentrated on the usage of mobile phones in the common context of distracting traffic. The study by the University of North Carolina Highway Safety Research Center (2001) perceived at five years of data on adventures where a driver negligence became one of the causes showed that the most pleasure was "an external person, object or circumstance, then the radio and audio system settings, and another passenger in the coach. Cell phone usage was described as the diversion of only 1.5 per cent of that crash. On the other hand, some assesses display that mobile phones imitate a greater risk than some other types of amusement. Learning at the University of Utah determined that "subjects attempted in phone debates exhibited definitively slower responses to the traffic lights and signals are lacked very much more often than subjects who attended to the radio or books on tape.

The signal of impairment while the driver uses a mobile phone has been conformed in some analytical studies that have been attentively examined (i.e. Goodman et al, 1997; McKnight and McKnight, 1993). Such concentration to studies observed at pleasure for the different stages of practicing mobile phone such as dialing (Kantowitz and Hanowski, 1996; Reed and Green, 1999), responding (Waugh et al, 2000), and holding the phone (Brookhuis 1991, Haigney and Taylor Westerman, 2000). However, the effect of diversion is crippled due not only to the employment of resources apportioned to execute and operation of the phone, or even optical alertness necessary for the identification and monitoring appliances (Strayer and Johnston, 2001). For example, if one concentrates on ones conventional (mostly) hand in bimanual domination tasks, and then increase the results of the asymmetry, which can negatively control performance (Amazeen, Amazeen, Treffner and Turvey, 1997; Riley, Amazeen, Amazeen, Treffner and Turvey, 1997). In general, seem fundamental in the association between cognitive exercise, speech, and motor domination. To investigate the common perception of people regarding use of mobile phones while driving, to what extent the usage of mobile phone technology is considered a serious source of distraction while driving and To evaluate the factors affecting driving style while using mobile

### III. METHOD:

The study was conducted in Pakistani Universities of Rawalpindi- Islamabad. The data was gathered from different universities students and teachers that include people of different departments such as management sciences, social sciences, fashion, textile, and computing technology. The sample size for conducting this research was 450. Questionnaires were distributed among all the departments of the universities to get the fair idea. Simple random sampling was be used for this

purpose. The information required for research purpose was to be collected from primary sources by means of survey instrument. Self developed questionnaire was used as research tools for collecting primary data, The questionnaire two sections. First part of the questionnaires comprises of demographic information of the survey respondents whereas second section contains questions regarding; crossing red-light while using mobile phones, disregard speed limit while using mobile, overtake on the inside lane while using mobile, get involved in races while using mobile, overtake the left turn while using mobile. ignoring pedestrians crossing road while using mobile, underestimate the speed of an overcoming vehicle while using mobile, approaching wrong lane while using mobile, hitting something when reversing while using mobile, forget about car park while using mobile phone, fail in checking rearview mirrors while using mobile phone, missing giveaway signs while using mobile phone, no clear recollection of road while using mobile phone, applying sudden brakes on slippery road while using mobile phone, misread the sign while using mobile phone. All these items were measured at 6 point scale as 1 for Never and 6 for nearly all the time. The reliability co-efficient reported for 15 items was reported .754. The main purpose of developing this was to get feedback from students and faculty members on the subject area.

### IV. RESULTS AND DISCUSSION:

The study captures both student and faculty member perceptions on usage of cell phones while driving. Table-1 reports gender, age and occupation of the respondents. The figures in table-1 stated that 58.7% male respondents and 41.3% female respondents take part in this research survey. Table-1 further indicates that 67.3% study sample belongs to age group of 18-25 years, whereas, 25.3% survey subjects fall under the category of 26-30 years and 7.3% survey participants fall under the category the 31-35 years age group. Table-2 signifies frequency distribution of different items asked in survey instrument, mean, and standard deviation of the responses. The result in table depicts that majority of survey subjects reports that they cross red-light while using mobile occasionally and the mean value indicates that survey subject often crossing red-light while using mobile and disregarding speed limit in driving while using cell phones. The table further signifies that students mostly get involved in race while driving and overtake the left turn while using cell phone and majority of the survey subjects have no clear recollection of road while using mobile phone and misread the sign while using mobile phone. Table-2 further signifies that majority of survey subject reports that they ignore pedestrians crossing road while using mobile, underestimate the speed of an overcoming vehicle while using mobile and hitting something when reversing while using mobile often.

### V. CONCLUSIONS AND RECOMMENDATION:

This research was conducted to examine the respondent's perception about driving style and the

effects of the mobile phone usage on driving skills. Many factors were included in the research which is violations, errors, and risks that can cause much danger to the person and his life. The results that came out of the research indicated that mobile usage has a bad affect on the person as well as others on the road. In most of the results that has been calculated from this research we got to know that driver often does mistakes, avoid rules and make errors being on the road while using mobile phones. Driving is a crucial thing to tackle with, and making errors as going on the wrong lane, crossing red lights, over speeding and getting involved with unofficial races can ultimately cause much danger and can bring the end to the person's life. Usually the drivers, busy on mobile phone forget about the car parking, they have to pay attention. It is important to be in proper senses while driving and to avoid unnecessary talks which lead to distraction of mind while one is driving on the road. Most of the people make errors when they are using mobile phone and they are having an aggressive talk. Based on the findings and subjects perceptions hence it is recommended that country-wide law should be imposed to ban use of Mobil phones while driving hence it is partially imposed in some cities of Pakistan. The study further suggests that campaign should be lunch nationwide to minimize cell phone usage while driving and this attempt can captivate laudable contribution to minimize risk associated with use of cell phone while driving.

#### REFERENCES

- [1] Hahn, R. W. Tetlock, P. C & Burnett, J. K. (2000), Should you be allowed to use your cellular phone while driving Regulation, 23, 46-55.
- [2] Brookhuis, K. A., De Vries, G., & De Waard, D. (1991). The effects of mobile telephoning on driving performance. *Accident Analysis & Prevention*, 23, 309-316.
- [3] Briem, V., & Hedman, L. R. (1995). Behavioural effects of mobile telephone use during simulated driving. *Ergonomics*, 38(12), 2536-2562.
- [4] Alm, H., & Nilsson, L. (1995). The effects of a mobile telephone task on driver behaviour in a car following situation. *Accident Analysis & Prevention*, 27(5), 707-715.
- [5] McKnight, A. & McKnight, A. (1993). The effect of cellular phone use upon driver attention. *Accident Analysis & Prevention*, 25(3), 259-265.
- [6] Goodman, M., Bents, F.D., Tijerina, L., Wierwille, W., Lerner, N., Benel, D., 1997. An Investigation of the Safety Implications of Wireless Communications in Vehicles. Report No. DOT HS 808-635. National Highway Traffic Safety Administration, Washington, D.C.
- [7] Kantowitz, B., & Hanowski, R. (1996). Simulator evaluation of heavy-vehicle workload: II. Complex secondary tasks. *Proceedings of the Human Factors and Ergonomics Society 40th Annual Meeting* (pp. 877– 881).
- [8] Reed, M. P., & Green, P. A. (1999). Comparison of driving performance on road and in a low-cost simulator using a concurrent telephone dialing task. *Ergonomics*, 42(8), 1015–1037.
- [9] Waugh, J. D., Glumm, M. M., Kilduff, P. W., Tauson, R. A., Smyth, C. C., & Pillalamarri, R. S. (2000). Cognitive workload while driving and talking on a cellular phone or to a passenger. *Proceedings from the IEA 2000/HFES 2000 Congress*. New Jersey7 Prentice Hall.
- [10] Brookhuis, K. A., de Vries, G., & de Waard, D. (1991). The effects of mobile telephoning on driving performance. *Accident Analysis and Prevention*, 23(4), 309– 316.
- [11] Haigney, D. E., Taylor, R. G., & Westerman, S. J. (2000). Concurrent mobile (cellular) phone use and driving performance: Task demand characteristics and compensatory processes. *Transportation Research - Part F*, 3, 113–121.
- [12] Strayer, D. L., & Johnston, W. A. (2001). Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular telephone. *Psychological Science*, 12(6), 462– 466.
- [13] Amazeen, E., Amazeen, P., Treffner, P. J., & Turvey, M. T. (1997). Attention and handedness in bimanual coordination dynamics. *Journal of Experimental Psychology: Human Perception and Performance*, 23, 1552–1560.
- [14] Riley, M. A., Amazeen, E. L., Amazeen, P. G., Treffner, P. J., & Turvey, M. T. (1997). Effects of temporal scaling and attention on the asymmetric dynamics of bimanual coordination. *Motor Control*, 1, 263–283.

#### Appendix

TABLE I. DEMOGRAPHIC PROFILE OF THE SURVEY RESPONDENTS

Category	Category	Frequency	Percent
Gender	Male	264	58.7
	Female	186	41.3
Age	18-25	303	67.3
	26-30	114	25.3
	31-35	33	7.3
	Total	450	100.0
	Student	393	87.3
Occupation	Faculty Member	57	12.7
Total		450	100.0

TABLE II. FREQUENCY DISTRIBUTION OF ITEMS RELATED TO MOBIL PHONE USAGE WHILE DRIVING, MEAN AND STANDARD DEVIATION

Items	Never	Hardly Ever	Occasionally	Quite often	Frequently	Nearly all the time	Mean	Std.devn.	Total
Crossing red-light while using mobile	3	84	87	138	57	81	2.900	1.357	450
Disregard speed limit while using mobile	-	165	213	63	6	3	1.820	.767	450
Ignoring pedestrians crossing road while using mobile		120	294	36			1.813	.559	450
Underestimate the speed of an overcoming vehicle while using mobile		126	225	81	18		1.980	.788	450
Approaching wrong lane while using mobile		60	249	105	36		2.260	.788	450
Hitting something when reversing while using mobile		72	324	42	6	6	2.000	.654	450
no clear recollection of road while using mobile phone		54	342	45	3	6	2.033	.605	450
applying sudden brakes on slippery road while using mobile phone	6	18	228	147	42	9	2.507	.847	450
Misread the sign while using mobile phone		30	285	99	18	18	2.353	.827	450