



## Enhancing Road Safety: Insights into Driver Knowledge, Attitudes, and Practices in Sahiwal, Punjab

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### Abstract

The present research study examines the Knowledge Attitude and Practices of Drivers towards Road Safety in Sahiwal, Punjab, Pakistan. The majority of studies, reports, and data showed that more than 80% of road traffic accidents occurred due to human error/ fault. The objective of the study is to know the overall level of knowledge of drivers about road traffic rules, and their attitude and practices towards the mentioned rules and regulations. For this purpose, a quantitative research design was selected, and data was collected from one hundred and eighty (180) drivers both males and females randomly. The data was collected from roadsides, bus stands, offices, etc., through the closed-ended structured questionnaire. The data was analyzed through the Statistical Package for Social Sciences (SPSS), where both descriptive and inferential statistical methods were applied. The findings of the study showed that there is a correlation between knowledge, attitudes, and practices of drivers towards traffic rules and regulations. The level of knowledge is not strongly associated with the attitude and practices, but there is a moderate relationship. Drivers in Sahiwal have an informed level of knowledge about traffic rules but are less likely positive attitudes and practices. The major causes of accidents were identified as over-speeding, wrong U-turn, no use of indicators, usage of any types of drugs, underage driving, not wearing helmets, and lack of fastening seat belts. Moreover, lack of education and awareness among drivers also caused road traffic accidents. To overcome the higher number of road traffic accidents, drivers need to be educated about traffic rules, the government needs to make formal and informed control mechanisms to curtail road accidents.

**Keywords:** Road Traffic Accidents, Knowledge, Attitude and Practices

### 1. Background of the Study

Pakistan is a developing country, and the infrastructure is also underdeveloped, where roads, like those in other developing nations, are vulnerable to accidents. Pakistan has ignored the issue of road safety and traffic laws (Zahoor, Chan, Utama, & Gao, 2015). In Pakistan, around 14,000 people die in car accidents annually. Though many laws have been introduced to overcome the issues, they do not bear any results due to a lack of efficient implementation. Pakistan first put its Motor Vehicles Act 1939 into effect, to prevent the issue of road traffic accidents necessary to give the transport system and vehicle operations legal protection following independence (Swami, 2006).

#### 1.1. Road Safety in the Context of Pakistan

On June 8, 1965, the National Assembly also passed the West Pakistan Motor Vehicles Ordinance 1965, which was a revised version of the law. The Punjab Bus Stands and Traffic Control [Lahore] Ordinance 1963 and the Punjab Bus Stands and Traffic Control [Gujranwala] Ordinance 1963 were in place to regulate the transport system in Lahore and Gujranwala. These acts were also enforced in other districts of Punjab with minor modifications. The Provincial Assembly then established the Provincial Motor Vehicles Rules in 1969 to give mass transit projects legal support in Lahore and other districts. The Punjab government also formed the Punjab Mass Transit Authority in 2015 (Rana & Bhatti, 2018).

The Punjab Transport Department shaped the Punjab Provincial Transport Authority (PPTA) in acquiescence with the law. Its purpose was to use authority and carry out precise measures to guarantee safe vehicle processes throughout the province and to support and guarantee the horizontal and smooth operation of the transport department and transport authority. The District Regional Transport Authorities (DRTA) were established throughout the province, one in each district (Bank, 2018) intending to spread the smooth running of the transport authorities all over the province from the base.

A study conducted by Shamim et al., (2011) stated that the first road traffic injury monitoring study in Pakistan's capital city of Karachi revealed that there were 5.7 fatalities for every 100,000 people and an annual incidence of RTIs of 184.3 per 100,000 people. Aberrant driving behaviors by both regular and professional drivers (bus and taxi) are one of the major causes of traffic accident injuries and fatalities. The overarching goal of all the reports and studies underscores the fact that road safety is the guarantee of any nation's progress worldwide. Safe and secure roadways are an indication of a progressive and developed society. One of the major reasons for traffic accidents is road safety rules and laws not being followed and inadequate road safety systems (Chadyiwa, 2019; Malau & Syahrin, 2020; Twesigomwe, 2014).

#### 1.2. Factors behind Road Accidents

Another major reason for the excessive road accidents that these studies have highlighted is careless driving. A study by Batool (2012) found the role that drivers' attitudes play in road traffic accidents in Pakistan. Driving habits in the nation are severely impacted by being affluent, female, and a student. The results of the research

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were utilized to suggest specific and broad information-based road safety solutions. Similarly, Chakrabarty, Gupta, and Bhatnagar (2013) researched to find out the knowledge of the drivers about traffic safety in Delhi, India. The findings showed different degrees of awareness of road signs among drivers. The one being highly recognized was the signs on Hills Road (89%) and the use of seat belts while driving (89%) followed by the safest way to stop in an emergency (40%), the safest location to park the car (39%), and road workings (27%) altogether. The average awareness level among drivers ranged from 52% to 77% respectively.

Another such study was conducted by the study (Issa 2016) to abstract the overall impact of a driver's traits (socio-demographic profile) on traffic accidents in Tabuk, Saudi Arabia. According to the findings of the study, over 80% of accidents involving human factors include drivers under 30 years of age, and 60% of all accidents involve young drivers. The results also demonstrated a substantial correlation between drivers' age and educational attainment and traffic accidents. Furthermore, Muvuringi (2012) investigated the causes, effects, and mitigation techniques of traffic accidents in Zimbabwe. The results highlighted weak law enforcement, corruption, and road users' disregard for traffic safety laws as some of the major causes of road traffic accidents.

Similarly, Hammoudi (2014) investigated the major reasons and preventative measures for traffic accidents in Abu Dhabi. The most dangerous driving behaviors according to the researcher are over-speeding, tailgating, failing to use indicators, and crossing red lights on the road. This study has suggested awareness campaigns, education campaigns, and traffic safety initiatives as effective ways to lower RTAs in Abu Dhabi, which need cooperation between government agencies and general stakeholders. Apart from the above-mentioned study, Tajvar et al. (2015) conducted a study on the attitudes, knowledge, and behavior of drivers in Bandar-Abbas, Iran regarding traffic laws. The study found that drivers' expertise and work experience differed significantly from one another. The study concluded that many taxi drivers had unsafe practices, poor understanding, and negative attitudes about traffic laws and regulations. The major reason for this was the lack of education and awareness among these drivers.

### **1.3. Knowledge Attitude and Practices of Drivers regarding road safety**

Road traffic accidents are not only common in developing countries, but the situation is worsening also in developed regions of the world. According to a study by Kareem (2003), in Malaysia road accidents have reached an alarming situation due to the lack of knowledge among the drivers about road traffic safety matters. Where 40% of accidents were caused by small distances between two vehicles, while 26% of accidents took place due to wrong turns taken by drivers. This shows that the overall practices of drivers are also a major cause of road accidents. Similarly, 13% of all accidents occurred because of dangerous overtaking, while 20% were due to over-speeding. The facts mentioned above are associated with the human factor and imply that 90% of all road traffic accidents are driver's fault or human error and not technical faults. Human error means neglecting the traffic rules and regulations without consciousness and sometimes without knowing everything. The driver's attitude is negative and aberrant towards driving and road safety rules.

Similarly, the condition is also worsening in African countries where the rate of road accidents is high due to human factors. Many South African countries particularly Malawi, Uganda, and Ethiopia are at higher risk of road traffic accidents, where fatality rates are higher (deaths per 10,000 motor vehicles) followed by Thailand, Malaysia, and Saudi Arabia. On the other hand, Hong Kong has recorded the highest percentage of pedestrian deaths, which is almost 67%, followed by South Korea where the percentage is 48%, and Sri Lanka, where the percentage is quite high a 45%, respectively. All of these figures show that road accidents kill more people across the world many leaders and countries have neglected these issues, and it is not even in many such country's policy priority to overcome road traffic accidents and improve the knowledge, attitude, and practices of drivers towards road safety.

### **1.4. Problem Statement**

World Health Organization (WHO) has estimated that worldwide approximately 1.37 million people die, and more than 4 million people get injured in road accidents annually. Some of the injured people face permanent disability in traffic accidents. Several studies show that 75-80% of total road accidents are caused by drivers' faults which include speeding, wrong overtaking, U-turns on highways, usage of drugs, mobile phones, nighttime driving, poor maintenance of vehicles, and less experienced drivers. Road accidents are not only affecting the lives of people in developing nations, but developed countries are also facing this problem. In developing countries, including Pakistan, most of the drivers do not have updated knowledge of traffic rules and regulations. Drivers have more negative attitudes and are involved in violations of road safety rules.

The same situation is observed in the context of Pakistan where drivers in Pakistan are less knowledgeable about road traffic rules and regulations, are involved in bad practices, and have negative attitudes towards road safety. Due to these reasons, in Pakistan, the number of road traffic accidents is high in big cities such as Karachi, Rawalpindi, and Multan etc. A similar situation is observed in the city of Sahiwal, where road traffic accidents are high. But there is no authentic number of accidents in the context of Sahiwal. The research has been examined to be the first sociological study to analyze the drivers' knowledge, attitude, and practices of drivers toward road safety and how the lack of knowledge, bad attitude, and negative practices of the driver leaders toward road traffic accidents in Sahiwal, Punjab Pakistan.

### **1.5. Objectives of the Study**

The main objective of the research is as follows:

- To determine the relationship between knowledge, attitude and practices regarding traffic rules in Sahiwal Punjab.

## 2. Research Design

For the present research, the quantitative research design was adopted to know the drivers' attitudes, knowledge, and practices toward reading safety rules and regulations in Sahiwal, Punjab. The study is based on numeric data in the form of frequencies, percentages, graphs, and charts.

### 2.1. Locale/Research Site of the Study

The research locale or site refers to the particular area, location, or subject that is being studied or examined for the research purpose. The locale of the study varies from subject to subject, such as in social sciences, the locale or subject area is society, however, in natural sciences mostly a laboratory area. For the present research, the site or locale of the study was limited to Sahiwal City. The Sahiwal (Punjabi and Urdu: ساہیوال), formerly known as Montgomery, is a city in Punjab, Pakistan. It is the 21st largest city in Pakistan by population and the administrative capital of both Sahiwal District and Sahiwal Division.

### 2.2. Target Population

The target population allows the researcher to formulate and facilitate to implementation of the research properly. The target population is being identified and defined; therefore, the chances of reliability and validity are high. For the present research, the target population was both drivers both professional and non-professional who are above the age of eighteen (18) years old driving in the city of Sahiwal, Punjab.

### 2.3. Sampling Techniques

For the present research, the total population is unknown because the respondents are drivers both professional and non-professional who are driving on the roads of Sahiwal city. Therefore, the major sampling techniques have been chosen to reach respondents, i.e. convenient and simple random sampling techniques by the researcher to collect data from the whole population. The major positive implication of both sampling techniques is that it is cheap, easy, efficient, and simple to implement during fieldwork. In the present study, the researcher has selected respondents as per their requirements.

### 2.4. Sample Size

For the present research study, the sample size was limited to one hundred and eighty (180) respondents (drivers). The 180-sample size was enough to get the required results. The total sample of one hundred and eighty (180) was selected on random basis as there was no sampling frame available hence, researcher collected the data from 180 respondents.

## 3. Data Collection Tool/Instrument

Research instruments/tools are the tools for collecting data from respondents. The functions of research instruments are measuring data, analyzing, and collecting the data. For the current study, the researcher has utilized a closed-ended structured questionnaire as a data collection tool/instrument. The English language was used to design the research tool. The educated drivers fill out the tool by themselves, and for illiterate or uneducated drivers, the researcher has conducted an interview and filled out the questionnaire. The research tool is divided into the following four sections:

- Socio-demographic profile of drivers such as age, education level, possession of a driving license, driving experience, etc.
- The overall knowledge among the drivers about road safety rules and regulations.
- The third section dealt with the attitude of drivers towards road safety rules and regulations.
- The final section examined the practices of drivers towards road safety rules and regulations.

## 4. Results and Findings

This section examines the association or correlation among the selected variables, i.e. knowledge, attitude, and practices of drivers towards road safety. For this purpose, a descriptive analysis of all variables has been done, and then a correlation between knowledge, attitude, and practices. All the variables have been added and divided into the total number and the mean value of each variable.

**Table 1. Correlation Among Knowledge, Attitude, and Practices**  
Correlations (N-180)

		Knowledge	Attitude	Practices
Knowledge	Pearson Correlation	1	.477**	.470**
	Sig. (2-tailed)		.000	.000
Attitude	Pearson Correlation	.477**	1	.754**
	Sig. (2-tailed)	.000		.000
Practices	Pearson Correlation	.470**	.754**	1
	Sig. (2-tailed)	.000	.000	

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table no 1 shows the correlation between the knowledge, attitude, and practices of drivers towards traffic rules and regulations. The table found that all three variables are correlated with each other.

**Table 2. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764 <sup>a</sup>	.584	.579	.41810

a. Predictors: (Constant), Attitude, Knowledge

Table 2 shows the model summary where the model summary shows that there is a .586% variance of rejection of the association between knowledge and attitude with the practices. The figure showed the somehow higher chances of rejection and fewer chances of acceptance.

**Table 3 ANOVAa**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.435	2	21.718	124.235	.000 <sup>b</sup>
	Residual	30.941	177	.175		
	Total	74.377	179			

a. Dependent Variable: PRACTIC

b. Predictors: (Constant), Attitude, Knowledge

The results reflected the prediction of how knowledge and attitude affect the practices of drivers, whereas the significant (Sig = 0.00, < p = 0.05), so F (2, 177) = 124.235 p = 0.00. So, the knowledge and attitude of drivers have a strong positive correlation with the practice of drivers towards road safety in Sahiwal, Pakistan.

**Table 4. Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	.397	.140		2.845	.005	.122	.672
	KNOW	.199	.077	.143	2.588	.010	.047	.351
	ATTITUDE	.789	.063	.686	12.432	.000	.663	.914

a. Dependent Variable: Practices

Table 4 shows the coefficient where the coefficient showed that the value of Beta for knowledge is .143 & attitude is .686, so it would be predicted 14% for knowledge and 686% for attitude. The level of significance sig. 0.01 for both and p = 0.05. Where (Sig.0.01 and 0.000 < p = 0.05). It concluded that a strong positive correlation existed between knowledge and attitude to the practices of drivers toward road safety.

From the above inferential tables, it can be stated that there is a strong association between the selected variables, i.e. knowledge, attitude, and practices of drivers towards road safety. To further examine the results, it was found that the overall mean value of knowledge is 1, which indicates strong knowledge among the drivers regarding traffic rules and regulations. On the other hand, for attitude, the mean value is 2 which shows that practices were slightly agreed upon and their overall practices are somehow different from their level of knowledge and attitude towards traffic rules and regulations. However, it can be found that there is an association between the level of knowledge, attitude, and practices. But when it comes to the practices the knowledge is not applied.

The reason is explained in the literature, in demographic profiles, and theory that other factors such as financial status, family issues, depression, anxiety, and frustration influence the overall attitude and practices of drivers when they are practically on the roads. That's why in many papers there was also agreed that the chances of rejection that knowledge has less influence on the practices and the same results were also found in the present study that there is a 58% variance of rejection of the association between knowledge and attitude with the practices. In addition, the overall coefficient could be predicted that 14% for knowledge and 686% for attitude. It concluded that a strong positive correlation existed between knowledge and attitude to the practices of drivers toward road safety.

## 5. Conclusion

It is concluded that the majority of drivers are also less educated, and their attitudes and practices are quite risky, and they have knowledge about traffic rules. This needs awareness and education to the drivers, especially professional drivers about the traffic rules and regulations. The proper check and balance of drivers can ensure the proper implementation of traffic rules on roads. Without proper mechanisms by the police, the accident rate becomes higher. Therefore, the government needs to introduce proper license issuing mechanisms, an online challenge system, and higher penalties as well as provision of education and awareness to the drivers.

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