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Relationship between Awareness and Practices of Students Regarding Road Safety Rules

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Abstract

Everyday millions of students are interacting with the road and traffic system. The safety of students travelling home to school and schools to home by walking, by cycling or motor cycling and by public transport much needed in modern era. That's why awareness of road safety rules necessary for students for good practices. This study was conducted to explore the relationship between awareness and practices of students regarding road safety rules. The objectives of this study were to explore the accidents rate faced by students during their education, to identify the sources that promotes awareness about road safety, to explore the awareness and practices of students about road safety rules and to explore the relationship between awareness and practices of students on road safety rules. The study was descriptive in nature so questionnaire was used as tool to collect data. The population of this study was the students of 10th, 11th and 12th class of public higher secondary schools in Punjab. Total 400 students from nine districts of Punjab were selected as sample with the help of simple random sampling. Data was collected by visiting sample by the researchers. The frequency and percentage were used as statistic for analysis and Chi-square test for inferential analysis. It was found that most of the students from urban areas faced accidents and they are driving without driving license. The curriculum was the main source for promoting awareness about road safety rules among students. There were strong relationship between awareness and practices of students on road safety rules. It was recommended that Motor way and national highway traffic police should keenly observed the rash driving on roads, then imposed heavy fines for better practice level.

Key Words: *Relationship, Awareness, Practices, Students, Accidents, Road Safety Rules.*

Introduction

The amount of traffic on the roadways is quickly increasing. Numerous individuals have been involved in accidents on the country's roadways. Several people died in these incidents, and many more were seriously injured in smaller collisions (Ishaku, 2015). The term accident conjured up images of passing, wounds, and expensive car accidents in the minds of the people. As a result, an all-around simple and

urgent arrangement of street safety training for understudies is required to save precious lives (Collins, 2009). The present approach to road safety needs a complete overhaul in terms of mindfulness and understudy' and instructors' behaviors. In the present scenario, teachers in schools and public expressway and highway police officers play a critical role in addressing road safety problems in far-flung areas (Tahir, 2018).

Younger students are more likely to be involved in accidents in everyday life, which is why schools can play an important role in providing street safety instruction to prevent young people from dying. For young people who encounter greater hazards on the streets, street safety training is essential (Hodgins, 2016). Part of the work on traffic education has been completed by the government, but the efforts have not been completed. There are many categories of persons who drive without a driver's license or who have illegally obtained driver's licenses (Hussain, Batool, Kanwal, and Abid, 2019).

Literature Review

Recently, it has been observed that children are increasingly being driven to school, and they are more likely to use a cruiser or a bike to go to school than walking. In light of the increasing situation of roadway mishaps, instructional estimates are needed to teach understudies how to handle streets and traffic. Educators may play an important role in keeping kids safe and preventing accidents by providing life-saving advice to students about day-to-day living as well as traffic and street safety regulations (Rahman, 2018).

There is evidence that children learn about the street system at a young age and that this may lead to more secure behaviors later in life. 'road safety education plays an important role in shaping the views and behaviors of children and teenagers, ensuring that they grow up to be competent drivers, passengers, pedestrians, and cyclists (Alonso,2020). With traffic on our streets becoming more congested, it is critical that we all teach children about traffic laws and regulations from an early age. Young people used to be able to ride down the road as cool as a cucumber, but times have changed, and with more automobiles, motorcycles, bicycles, motorbikes, public transportation, and cable cars on the road than at any point in recent memory, it is critical that we all stay safe (Warmbrunn, 2002)

Road safety is an important topic that every child should be aware of and learn about as they grow up. The dangers that exist in the world affect everyone, and as a result, they are a hot topic of discussion all across the world (Sagberg, 2015). Adolescents die and are injured often as a result of bug crashes. When children reach their adolescent years, when they are allowed more independence, the risk is much greater. Drivers under the age of 25 are also at grave risk. For pedestrians and bikers, traffic is a major concern. People who have grasped a better way of life have started to walk or ride their bikes short distances. It allows them to be socially and authentically dynamic (Scott, 2020).

Road safety education provides a foundation for young drivers that will install safety awareness, attitude and basic understanding of the laws that govern driving. A correctional road safety education and training Centre to promote a culture of safe driving among serious traffic is needed (Glendon, McNally, Jarvis, Chalmers, & Salisbury, 2014). The drivers who violate the traffic rule are required to understand road safety before accidents happen and reduce collisions. Road safety education is a kind of formal and informal education that is aimed at learning and improving the knowledge of traffic on roads.

The road users like pedestrians, ridden or herded animals, buses and other conveyances, either singly or together (Porter, 2011). Traffic laws are the laws that may have developed over time to facilitate the

orderly and timely flow of traffic. Road safety education is the program of educational activities around road safety that is provided to children and young people in formal and community Education about road safety that can be aimed at children and adults and delivered in many contexts, such as schools, colleges, sporting clubs and workplaces (Southworth, 2013).

On Pakistani highways, accidents occur on a daily basis. On the highways, there are many casualties. According to the School Education Department's 2018 census report, 399211 upper secondary pupils, 2242978 high, 1244137 middle, and 2683530 elementary kids attend school on a daily basis. The majority of secondary school pupils begin to travel alone on highways to and from school. The incidence of accidents among young pupils aged 4 to 6 years is the highest in the world (Kitamura, Hayashi, & Yagi, 2018). Primary school pupils are at a higher risk of being involved in a traffic accident than secondary school students. In urban regions, pedestrian traffic rules offer comparable rights and protection as they do in rural ones. (Riaz 2019) In 2018, the Pakistan Bureau of Statistics released its annual report on traffic accidents and fatalities in Pakistan. According to the study, 11121 accidents resulted in the deaths of 5948 individuals.

It is essential to prevent traffic accidents in order to save people's lives. The public's awareness of traffic education may help to decrease road accidents. As a result, a well-coordinated and timely provision of road safety instruction to kids is required to save valuable lives. The current research on road safety rules a thorough revamp in terms of student awareness and implementation of road safety regulations (Batool, Hussain, Kanwal, 2018).

Following were the objectives of this study: -

1. To explore the accidents rate faced by students during their education.
2. To identify the sources that promotes awareness about road safety.
3. To explore the awareness and practices of students about road safety rules.
4. To explore the relationship between awareness and practices of students on road safety rules.

Rational of the Study

It's a matter of life and death when it comes to safe driving. Taking even the tiniest action to follow the laws and regulations of the road may make the difference between arriving at your destination in one piece or adjusting to misfortune and suffering the consequences of a catastrophe. Accidental fatalities have risen to become the tenth largest cause of mortality worldwide. Every year, 1.2 million individuals are killed in traffic accidents. In industrialized nations, the number of fatalities is lower than in developing ones. The country's road safety research has resulted in a reduction in the number of accidents.

As a student, you should be aware of road safety instruction in order to create a good attitude among road users. Millions of pupils engage with the road and traffic system every day. The safety of children going from home to school and from school to home, as well as cyclists and motorcyclists, as well as public transportation, is critical in today's world. Road safety education begins in infancy with parental teaching, followed by classroom lectures and trainings by the National Highway and Patrolling Police Departments. The public's knowledge of traffic education has a significant effect on reducing accidents and ensuring people's safety.

Research Design

The aim of this study was to explore the relationship between Awareness and practices of Students about Road Safety rules. The present study is descriptive in nature. The further research methodology as under:

Population of the Study

All the Students of public schools in Pakistan were population of the study. According to school census (2020), the number of student's enrolment shown in the following table

Table 1: Students enrolment in schools

School Level	Higher secondary	High	Total
Students	399211	2242978	6592025

Source: School Education Department census (2020)

All the Students of 10^{th}, 11^{th} &12^{th} class of the Punjab province was the population of study.

Delimitation

This study was about the students of public Schools of Pakistan. So, it required a lot of resources and time. This study was delimited to the nine districts of Punjab. The study further delimited as:

1. Only boy's public Schools of the Punjab.
2. Only students of 10th, 11th &12th class from boy's public schools of the Punjab.

Sampling and Sample

Sampling is a method to draw sample from population so for selecting the sample size "Yamane (1967)" formula was used as

$$n = \frac{N}{1+Ne2}$$

Where " N" denote Population) and "e " denote Error (0.05) at 95 %. The sample of this study was consisted on 400 students of (10^{th} , 11^{th} & 12^{th}) classes from the public schools of province Punjab.

Research Instrument

Research requires primary data for analysis. In this study researcher developed a questionnaires and it was consisted on three parts for data collection. The parts of the questionnaire were demographic, awareness of students and practices of students on road safety rules.

Data Collection

The data was collected from the students of 10^{th},11^{th} and 12^{th} class from public schools of province Punjab. The consent was obtained from respondents before data collection.

Data Analysis

Data feeding was carried on during data collection in SPSS software. After completion the feeding data was analyzed accordingly. Thus, data was analyzed by frequency and percentage. The chi-square test was used for inferential analysis.

Table 2: Socio demographic characteristics of Higher Secondary School Students

Demographic variable	Options	DISTRICTS									
		Rawalpindi	Sargodha	Faisalabad	Gujranwala	Lahore	Sahiwal	Multan	Dera Ghazi Khan	Bahawalpur	Total
Class	10 th	14	14	14	14	14	14	14	14	14	126
	11th	14	14	14	14	14	14	14	14	14	126
	12th	16	16	16	16	16	16	16	16	20	148
Age (Year)	15-16	11	8	8	8	12	7	8	8	9	79
	17-18	17	18	18	18	19	16	16	14	16	152
	19-20	16	18	18	18	13	21	20	22	23	169
Area	Urban	19	33	26	32	23	26	27	28	36	250
	Rural	25	11	18	12	21	18	17	16	12	150
Vehicle do you drive	Bicycle	22	20	17	15	12	20	16	20	18	160
	Motor-cycle	18	18	17	20	22	18	22	18	21	176
	Car	2	3	6	6	6	2	2	3	3	33
	Tractor	2	3	4	3	4	4	2	3	6	31
Transportation to School	Pedestrian	2	1	4	8	2	10	14	18	12	71
	Bicycle	17	11	6	10	10	12	10	16	12	104
	Motorcycle	20	24	22	15	12	15	12	6	10	136
	Car	2	3	2	3	4	1	1	0	2	18
	Public Convince	3	5	10	8	16	6	7	4	12	71
License Holder	Yes	2	1	2	3	2	2	3	1	1	17
	No	42	43	42	41	42	42	41	43	47	383

The analysis of socio demographic characteristics of higher secondary school students is presented in table 2. It shows that 126 students belongs to 10th class, 126 students belongs to 11th class and 148 students from 12th class. Majority of students were in the age group of 19-20 year that means those students eligible for driving license (age 18 year) in Pakistan. The 250 students belong to urban schools and 150 from rural schools. There were 176 students out of 400 (44%) can drive motorcycle and majority of students (136) were used motorcycle to reach school. There were only 17 students out of 400 (4%) have driving license of category LTV.

To explore the accidents rate faced by students during their education.

Table 3: Students faced accidents

Sr. No	Accidents faced by students					Total
	District	No	%	Yes	%	
1	Rawalpindi	12	27%	32	73%	44
2	Sargodha	23	52%	21	48%	44
3	Faisalabad	16	36%	28	64%	44
4	Gujranwala	23	52%	21	48%	44
5	Lahore	15	34%	29	66%	44
6	Sahiwal	17	38%	27	62%	44

7	Multan	20	45%	24	55%	44
8	Dera Ghazi Khan	16	36%	28	64%	44
9	Bahawalpur	28	58%	20	42%	48
	Total	170	42%	230	58%	400

The table shows that 230 (58%) students out of 400 were faced accident from the different districts of Punjab. The rate of accidents high in district Rawalpindi 32 (73%) students out of 44 students and 29 (66%) students out of 44 belongs to district Lahore were faced accident.

Table 4: Number of accidents area wise faced by students

Sr. No	Numbers of accidents in Area					Total
	District	Urban	%	Rural	%	
1	Rawalpindi	20	62%	12	38%	32
2	Sargodha	15	71%	6	29%	21
3	Faisalabad	20	71%	8	29%	28
4	Gujranwala	17	81%	4	19%	21
5	Lahore	22	76%	7	24%	29
6	Sahiwal	15	56%	12	44%	27
7	Multan	16	57%	12	43%	28
8	Dera Ghazi Khan	19	79%	5	21%	24
9	Bahawalpur	15	75%	5	25%	20
	Total	148	64%	82	36%	230

The table shows that The 148 (64%) students out of 230 belongs to urban areas were faced accident in different districts of Punjab. While 82 (36%) students out of 230 belongs to rural areas were faced accident in different districts of Punjab. The majority of students (81%) faced accidents in urban areas of district Gujranwala and rate of accidents (79%) was also very high in urban areas of district Dera ghazi khan.

To identify the sources that promotes awareness about road safety

Table 5: Sources of Promoting Awareness about Road Safety Education.

Sr.	Sources of promoting awareness	Frequency	Percentage
1	Through curriculum	70	17.50%
2	Through TV programs	60	15.00%
3	Through newspaper or magazines	55	13.75%
4	Through printed brochures	48	12.00%
5	Through students while teaching	45	11.25%
6	Through road safety walks	42	10.50%
7	Through road signboards	30	7.50%
8	Through highway traffic police	27	6.75%
9	Through internet/ mobile app	23	5.75%
	Total	400	100.0%

Table 5 shows detail about source of promoting awareness about road safety education. It can be seen that majority of students 70(17.50%) narrated through curriculum, 60(15%) through TV programs,

through newspaper or magazines 55(13.73%), through printed brochures 48(12%) through students in the school 45(11.25%), were the main source of promoting awareness in society. The Through road safety walks 42(10.5%), through road signboards 30(7.5%) Through internet/ mobile app 27(6.75%) and through highway traffic police 23(5.75%) were also main sources of promoting awareness about road safety in all division of province Punjab.

To explore the awareness and practices of students about road safety rules

Table 6: Awareness and practices of students on road safety rules

Sr.No	Factors	Awareness		Practices		Awareness %	Practices %	Results
		Yes	No	Yes	No			
1	Zebra Crossing	98	302	66	334	24%	16.5%	Awareness and practices both less
2	Wear Helmet	122	278	131	269	30.5%	32.75%%	Awareness and practices both less
3	Fasten Seat Belt	132	268	124	276	33%	31%	Awareness and practices both less
4	Using Mobile Phone	162	238	293	107	40.5%	73.25%	Awareness less but more practiced
5	Drive vehicle in fast Speed	138	262	304	96	34.5%	76%	Awareness less but more practiced
6	Wrong Overtaking	192	208	270	130	48%	67.5%	Awareness less but more practiced
7	Stop on Red Signal	300	100	325	75	75%	81.25%	Awareness & practiced more
8	Using Proper U-turn	196	204	119	281	49%	29.75%	Awareness more but less practiced
9	Parking place	180	220	118	282	45%	29.5%	Awareness more but less practiced

According to table 6, that majority of students were less aware and less practiced of road safety rules like zebra crossing, wear helmet, fasten seat belt. The majority of students less Aware but more practiced the road safety rules like using mobile while driving, fast driving and wrong overtaking while the majority of students act as awareness more but less practiced the remaining safety rules like stop on red signals, taking proper U-turn and park vehicle at parking place. The low percentage of awareness than practiced shows that students' awareness level is very low and also their practice level on road safety rules.

Explore the Relationship between Students' Awareness and Students Practices about Road Safety Education

This section explores the relationship between students' awareness and students practices about road safety. The inferential statistics (chi square test) were used to find the result about hypothesis (H0: There is no significant association between awareness of students and practices of students.) from collected data. The questionnaire statements were based on awareness and practices on road safety rules. A Chi-square test was performed to check the association between two variables. The result was found on the basis that Asymp. Sig. value is less than 0.05 then it is considered to be significant (95% confident that the relationship between the two variables). The null hypothesis rejected and it was concluded that there is association between two variables.
Asymp. Sig.value < 0.05 (Reject H_0)

H_0: There is no association between awareness and practices of students about road safety rules
$H_{1:}$ There is association between awareness and practices of students about road safety rules

Table 7: Association between Awareness and practices of students

Sr. No	Factors	Awareness		Practices		Pearson Chi-Square	Sig value	Result	Conclusion
		Yes	No	Yes	No				
1	Zebra Crossing	98	302	66	334	1.791	0.001	Less than 0.05	Reject H_0
2	Wear Helmet	122	278	131	269	0.48	0.000	Less than 0.05	Reject H_0
3	Fasten Seat Belt	132	268	124	276	3.028	0.004	Less than 0.05	Reject H_0
4	Using Mobile Phone	162	238	293	107	1.309	0.000	Less than 0.05	Reject H_0
5	Drive vehicle in fast Speed	138	262	304	96	0.409	0.000	Less than 0.05	Reject H_0
6	Wrong Overtaking	192	208	270	130	2.981	0.001	Less than 0.05	Reject H_0
7	Stop on Red Signal	300	100	325	75	1.962	0.000	Less than 0.05	Reject H_0
8	Using Proper U-turn	196	204	119	281	7.227	0.025	Less than 0.05	Reject H_0
9	Parking place	180	220	118	282	2.037	0.002	Less than 0.05	Reject H_0

The table 7 shows the results of chi-square test of different road safety factors of the respondents (students). According to table that majority of the factors have the sig. value is less than 0.05 (d.f = 2), then we reject H_0 and accept H_1 and concluded that there is association between awareness and practices of students on road safety rules.

Discussion and Conclusion

In demographic characteristics of higher secondary school 126 students belongs to 10^{th} class, 126 students belongs to 11^{th} class and 148 students from 12^{th} class. Majority of students were in the age group of 19-20 year, 250 students belong to urban schools and 150 from rural schools. There were 176 students out of

400 (44%) can drive motorcycle and majority of students (136) were used motorcycle to reach school. There were only 17 students out of 400 (4%) have driving license of category LTV, some of them faced accident. The 230 (58%) students out of 400 were faced accident from the different districts of Punjab. The rate of accidents (minor or major) high in district Rawalpindi 32 (73%) students out of 44 students and 29 (66%) students out of 44 belongs to district Lahore were faced accident. The 148 (64%) students out of 230 belongs to urban areas were faced accident in different districts of Punjab. While 82 (36%) students out of 230 belongs to rural areas were faced accident in different districts of Punjab. The majority of students (81%) faced accidents in urban areas of district Gujranwala and rate of accidents (79%) was also very high in urban areas of district Dera ghazi khan.

When students were asked about the source of promoting awareness about road safety education. It can be seen that majority of students 70(17.50%) narrated through curriculum, 60(15%) through TV programs, through newspaper or magazines 55(13.73%), through printed brochures 48(12%) through students in the school 45(11.25%), were the main source of promoting awareness in society. The Through road safety walks 42(10.5%), through road signboards 30(7.5%) Through internet/ mobile app 27(6.75%) and through highway traffic police 23(5.75%) were also main sources of promoting awareness about road safety in all division of province Punjab.

It is evident that majority of students were less aware and less practiced of road safety rules like zebra crossing, wear helmet, fasten seat belt. The majority of students less Aware but more practiced the road safety rules like using mobile while driving, fast driving and wrong overtaking while the majority of students act as awareness more but less practiced the remaining safety rules like stop on red signals, taking proper U-turn and park vehicle at parking place. The low percentage of awareness than practiced shows that students' awareness level is very low and also their practice level on road safety rules.

The results of chi-square test of different road safety factors of the respondents (students). According to table that majority of the factors have the sig. value is less than 0.05 (d.f = 2), then we reject H_0 and accept H_1 and concluded that there is association between awareness and practices of students on road safety rules.

This study was designed to explore the relationship between awareness and practices of students at higher secondary level about road safety rules. It was concluded that majority of them were from age group 19-20 year but few of them have driving license of category LTV as Riaz, & Shahid, (2018) discussed about the importance of driving license in their study "Knowledge, Attitudes, and Practice of Drivers towards Traffic Rules and Regulations in Multan, Pakistan". It is so because authorities have no attention on the issue mentioned above. Rate of accidents are very high faced by students in district Rawalpindi as compared to other districts as it is a far flung area and authorities had neglected that area about the implementation of traffic rules.

Zebra crossing is helpful for pedestrians to cross the busy roads but most of the student's having less awareness that's why they do not practiced zebra crossing while crossing the road. It is so because of non-serious attitude of the students. Helmet is necessary for motor bike and cycle riders according to traffic rules of Pakistan, most of the students do not use helmets although they have awareness about importance of helmet as the findings of the study matches with similar studies conducted by Swami, Puri, & Bhatia (2006) was important to be safe from serious injuries during road accidents. The students were well aware about fasten seat belt for driving a vehicle but their practices about seat belt not seen. The students well aware about use of mobile while driving cause accidents but they never stop the using of mobile. Reducing speed is necessary in public place areas but students drive a vehicle fast and becomes

the result accidents. Majority of the respondents told that they always stop the vehicle when red signal is on as most of the time traffic wardens are there. While parking majority of students well aware about parking place but they less practiced (they park vehicle where no parking signboard is placed).

There is association between awareness and practices of students on road safety rules. Good thing for students to take proper awareness about road safety rules which is requirement for good practiced on road safety rules.

Recommendations

On the basis of conclusions following recommendations were made:

1. The school education department should include the road safety rules in the curriculum of each class for increasing the awareness about road safety.
2. Motor way and national highway traffic police should keenly observed the rash driving on roads, then imposed heavy fines for better practice level.
3. Govt. may take necessary action for the betterment of licensing procedures. The Govt. should open the departments in the universities for issuing the license on completion of successful driving education as like issues the other license of doctors and engineers etc. by universities.

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