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Research Article

**ROAD TRAFFIC ACCIDENTS ATTITUDE AND BEHAVIOR IN  
AL-DIRIYAH, RIYADH 2016**

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**Abstract:**

**Background:** Road traffic accidents are a major health hazard in the world. Everyday thousands of people are killed and injured on our roads.

**Objective:** Our study aimed to determine attitude and behaviour of road traffic accident among high school student in Riyadh.

**Methodology:** school based cross sectional study sample size was 197 among high school students in Diriyah, Riyadh, Saudi Arabia. high school students of Diriyah province. Inclusion level was 29 and 30 year of high school students. Exclusion was female and staff. Sample Technique was systematic random. Data collection using pretested, preceded questioner and analysed using SPSS version 20. P-value of less than 0.05 was considered significant result.

**Results:** 96.5% of participants showed a good level of knowledge toward traffic regulation. 83.25% of participants showed a good attitude. 53.8% of participants were fully aware of the traffic signs. 51.3% of participants had an accident before. 26.9% had driving license.

**Conclusion:** The majority of our respondent showed good level of knowledge regarding of traffic regulation, the minority of participants has driving license, almost half of participants use mobile phone while driving, most of participants don't use seat belt.

**Keywords:** Attitude, Behaviour, Accidents, Traffic.

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**INTRODUCTION:**

Road traffic accidents are a major health hazard in the world. Every day thousands of people are killed and injured on our roads. Men, women or children walking, biking or riding to school or work, playing in the streets or setting out on long trips, will never return home, leaving behind shattered families and communities.

Millions of people each year will spend long weeks in hospital after severe crashes and many will never be able to live, work or play as they used to do (1). Deaths caused by road accidents had exceeded 1.2 million per year, making traffic accident injuries the main cause of fatalities among youth world wide 1. Traffic accidents

have massive economic and social impacts on every society 2-3. Farther more, traffic accidents resulted in a loss of 1.3% Gross Domestic Product (GDP) in developing countries. Therefore, calls for more preventive actions are on the rise globally (2). The world health organization (WHO) global status report on road safety, reports that mortality due to road traffic accidents per 10000 population in Saudi Arabia 24.8 (>13000 deaths annually), statistics (per 10000 population) from other gulf countries varies from 10.5 (Bahrain), 30.4 (Oman), 16.5 (Kuwait) and 12.7 (UAE). Studies have revealed that currently more than 19 deaths occur daily and approximately 4 people injured every hour in the country due to road traffic accidents, Saudi Arabia was found to have higher number of deaths from RTAs among high income states (accident to death ratio is 32:1 versus 283:1 in USA) and is considered to be the countries main cause of death for 16-17 year old males. The rise of RTAs is the result of rapidly growing urban developments, and increase in the numbers of roads. Saudi Arabia has the highest RTA-toll in the world, according to a report from the world health organization. From 2008 to 2009, the total number of RTA deaths was 645,813, and around one-third of all hospital beds in occupied by RTA victims, with the most common RTA-injury being limb loss. In addition, 13 of every 1,000 accidents result in a fatality (3). The trend of young males affected more

than females was mostly reported in all studies over the last 2.5 decades with some variations in the type of estimates among regions, and period of reporting. The overall age-gender-adjusted for non-fatal RTIs was 20.7/100 persons/year. The rate for non-fatal RTIs was found to be higher in the 10-19 year age group (4). An audit of RTAs over a one year period revealed that 16% of the victims were less than 10 years old, and 47% were between 11 and 30 years old (5). Males had twice, or greater incidence rate for RTI compared with females (4). In another study, an even higher male to female ratio of 4:1 was reported, and attributed to the driving laws in KSA.

OF PREDECINE While 50% of road injuries among children were observed in pedestrians (6).

It was noted that the dependence on cars for transportation has created a diversity who are not sufficiently familiar with the local driving rules, and lack the basic skills for safe driving. 28,32 An assessment of knowledge (6). The top regions in KSA regarding the occurrence of RTAs were found to be Riyadh, Jeddah, Makkah, Madinah, and Qassim (7). The research aims to determine attitude and prevalence of road traffic accident among high school student in Riyadh.

**METHODOLOGY:**

school based cross sectional study, sample size was 197 among high school students in Diriyah, Riyadh, Saudi Arabia. High school students of Diriyah province. The study included level was 2nd and 3rd year of high school students. Exclusion was female and staff. Sample Technique was systematic random. Data collection using pretested, pre-validated questionnaire developed specifically for the purpose of this study after consulting literature and epidemiologist. The questionnaire was piloted before used in the field. Data analysed using SPSS version 20. P-value of was considered significant result. Consents obtained from participants before data collection emphasizing on confidentiality and the right of participant to withdraw from the study at any point of time.

**RESULTS:**

Table (1): Personal information

Variable	Number	%
<b>Age</b>		
16 – 17	96	48.7%
18 – 19	98	49.8%
20 – 21	3	1.5%
<b>Nationality</b>		
Saudi	105	53.3%
Non-Saudi	92	46.7%
<b>Educational-Level</b>		
2 <sup>nd</sup> year	87	44.2%
3 <sup>rd</sup> year	110	55.8%
<b>Residency</b>		
Al-Diriyah	107	54.3%
Riyadh	90	45.7%

n=197

The table (1) showed that the students with age 16- 17 are 48.7 % and from 18-19 are 49.8 % and from 20-21 are 1.5%. The Saudi citizens are 53.3% and non-Saudi are 46.7%. The educational level of the student in 2nd year is 44.2% and in 3rd year is 55.8%. The residents in Riyadh are 45.7% and in Al-Diriyah are 54.3%.

Table (2): Level of awareness regarding traffic regulation (K)

N	Question			Total	
Q11	When you are in the roundabout who has the preference?	Inside roundabout: 193 Per : 98%	Outside roundabout : 4 Per : 2%	197	
Q14	What do you do when you see yellow traffic light? ( far from the traffic light )	Increase speed : 46 Per : 23.4%	Decrease speed : 151 Per : 76.6%	197	
Q12	This picture is related to?	Pedestrian crossing:190 Per : 96.5%	Race track :4 Per : 2%	I don't know : 3 Per : 1.5%	197
Q13	This picture is related to?	Mountain: 7 Per : 3.6 %	Home : 2 Per : 1%	Ground Bump: 188 Per : 95.4%	197

n=197

Table (3A): Participant's responses:  
Attitude toward traffic regulation (A)

n	Question	Yes	No	Total
Q1	Do you think that following safety regulation helps to decrease traffic accidents?	190 (96.4%)	7 (3.6%)	197
Q3	Do you see that using seat belts helps in decreasing traffic injuries?	174 (88.3%)	23 (11.7%)	197
Q5	Do you think that compliance with speed limit decreases RTA?	174 (88.3%)	23 (11.3%)	197
Q7	Do you think that using mobile during driving may increase accidents?	179 (90.9%)	18 (9.1%)	197
Q9	Do you think that it's important to have driving license?	144 (73.1%)	53 (26.9%)	197

n=197

Table (3B): Attitude toward traffic regulations.

	Yes	No	Total
Number	190	7	197
Percentage	96.4%	3.6%	100%

n=197

Table 3 Shows attitude of students concerning the road traffic regulations, 190 (96.4%) do have good attitude while 7 (3.6%) doesn't Table (4): History of accidents

	Yes	No	Total
Number	101	96	197
Percentage	51.3%	48.7%	100%

n=197

Table 4 Shows that 51.3 % said yes, they had an accident and 48.7 % said they hadn't.

Table (5A): Behaviour regarding traffic regulation (B)

n	Question	Yes	No	Total
Q1	Do you follow safety regulation?	Yes : 190 Per : 96.4%	No : 7 Per: 3.6%	197
Q4	Do you use seat belt?	Yes : 77 Per : 39.1%	No : 120 Per: 60.9%	197
Q6	Do you comply with speed limit while you are driving?	Yes : 119 Per : 60.4%	No : 78 Per: 39.6%	197
Q8	Do you use mobile while you are driving?	Yes : 89 Per : 45.2%	No : 108 Per: 54.8%	197

n=197

Table(5B): Behaviour:

Good	Moderate	Poor	Total
106	46	45	197
53.8%	23.4%	22.8%	100%

The behaviour regarding traffic regulation was 53.8% had good behaviour about traffic signs, 23.4% were moderate and about 22.8% were having poor behaviour regarding traffic regulation.

#### Statistical Analysis:

Students who use mobile phones while drive have more accidents ( $p=.134$ ). Students who don't comply with speed limits have more accidents ( $p=0.54$ ). Students aware of reading the traffic signs have less accident than students who could not by ( $p=.541$ ).

#### DISCUSSION:

Our study shows that The majority of participants fully aware of the traffic rules and this goes in line to a study, 2016, Saudi Arabia - Tabuk city, (9). Intensifying traffic campaigns to arrest violators.

Raising awareness of the dangers of non-compliance with traffic regulations. the majority of participants have a good attitude toward traffic regulation and this goes in contrary to a study, 2016, India, (8). This deference may be due to presence of different social believes in two different countries. Working to activate the role of media towards traffic regulations and work to change negative behaviors.

About half of participants had an accident before and those goes in line to a study, 2016, Saudi Arabia-Tabuk city, (9). More than half of participants have a good behavior toward traffic regulation and this goes in contrary to study, 2015, Saudi Arabia,(1). Difference may be due to high number of cars in or may be due to roads conditions. Penalties and fines for violators of traffic regulations. Raising awareness through the preparation of programs and brochures and linking them to the results of accidents and deaths.

#### CONCLUSION:

We concluded that, the majority of our respondent showed good level of knowledge regarding traffic regulation, the minority of participants has driving license, almost half of participants use mobile phone while driving, most of participants don't use seat belt.

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