

# OBSERVATIONAL SURVEY OF SEAT BELT USAGE IN DOHA, QATAR

Ali M Darabi Golshani<sup>1</sup>, Hamid Nikraz<sup>1</sup>, Zhila Darabi Golshani<sup>2</sup>  
<sup>1</sup>Curtin University of Technology; <sup>2</sup>Perth Institute of Western Australia  
a.golshani@curtin.edu.au, web: www.curtin.edu.au

## INTRODUCTION

Most industrialized and many developing countries have passed laws that require the use of seat belts in motor vehicles. It is widely believed that seat belt use is an effective way to reduce road accident fatalities and injuries [1][2].

The State of Qatar, located in the Middle East has a population of 821,000 people. One of the main causes of death in this country is due to road traffic injuries. According to national authorities, during the year 2000, Qatar recorded 14.7 deaths per 100,000 people.

In a major move to curb the growing number of accidents and reckless driving on Qatari roads, the government has introduced new traffic laws stipulating severe penalties. The government also enacted a law making seat belt usage compulsory for all drivers and front-seat passengers. Children under age of 10 have also been banned from sitting in the front seat of the car. Despite all these laws, statistics show that a large number of children were killed or injured while sitting in the front seat without wearing seat belts. In order to substantiate these claims, during November 2007, an observational survey of 500 vehicles was conducted in Doha using two intersections near local schools.

## SURVEY DESIGN AND IMPLEMENTATION

An observational survey was conducted using two sites. Each site was used to collect data between 7:00-8:00 am, prior to the start of the school day and between 14:00-15:00 pm at the end of the school day. At the traffic intersections, the field officer collected data while the traffic lights were red. The Surveys objective was to collect accurate and reliable data and answer the following questions:

1. How many people are in the car?
2. How many adults (people over age of 18)?
3. How many children?
4. How many passengers are sitting in the front of the vehicle?
5. Does the front seat passenger wearing the seat belt?
  - a. Is he/she an adult?
  - b. Is he/she a child?
6. What is the type of vehicle? Using AUSTRROADS vehicle classes
7. Day of the week
8. Weather condition
9. Time of the day

Prior to conducting the actual survey, a pilot survey was administered.

One field officer was used to conduct the survey in two different sites. Data was collected for up to 100 vehicles in every visit. In order to collect this data, the field officer spent one hour in each site on two different days. All the necessary safety issues were observed.

After conducting the survey, data was transferred from the tape recorder to an Excel Spreadsheet. Three separate worksheets were established as follows:

- a) Data Dictionary
- b) Survey Data
- c) Survey Data – Coded

## ANALYSIS OF DATA

In order to analyze the collected survey data and achieve our objectives, it was decided to adopt the systematic approach. In this approach the following steps were considered:

- a) Identification of Data type
- b) Calculation and interpretation of:
  - i. The central tendency
  - ii. Spread of the data
  - iii. Shape of the distribution
- c) Identification of assumptions required for Statistical Techniques
- d) Identification of any requirements for data transformation

## DISCUSSION

After collecting and analyzing the survey data, it was concluded that the method used in the collection was effective and adequate, however, time consuming and expensive.

Findings of this survey indicated that nearly 17% of children and 11% of adults sitting in the front of a vehicle were not wearing seat belts. This is a clear indication that driving habits in the state of Qatar have not improved and the government is required to implement more rigorous measures and educational programs.

## REFERENCES

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2. Simon Barry, Stephen Ginpil, Terence J. O'Neill, "The effectiveness of air bags", *Accident Analysis and Prevention* 31 (1999), pp 781-787.