

Reasons and Solutions of Car Accidents in Dalian from 2010 till 2015

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I. INTRODUCTION

Car accidents is an important issue and a number of investigators make a study of car accidents. In 2012, Lovenheim, Michael F. and Steefel, Daniel P. found a few reasons can cause a car accident, but this problem was solved by the Blue Laws. Hence, in 2000, Philip Reed summarized six steps when we encounter and deal with a car accident. In addition, Yuichi Inoue suggested that drivers should have a full sleep before driving to avoid car accidents in his 2014 study. Bae, Yong-Kyun and Benitez-Silva, Hugo advised drivers should make sure that they check their car frequently to make themselves more safety and decrease the car accident rate on the road.

The reason for people regard car accident as an important issue is a large number of drivers were killed in a car accident, the surviving people suffered from a lot of money loss in the car accident. Besides, the car accident is in an ascendant trend in recent years. However, an accident is unpredictable, not every driver is luck to avoid an accident. A number of car accidents caused by negligence of drivers. What is more, there are still lots of drivers do not observe the traffic laws to cause a car accident. Government formulated the traffic laws gradually and a lot of scholars summarized many reasons and gave some suggestions to make sure drivers can avoid this problem. Many researchers believe that if every driver can compliance with traffic laws, car accidents would be decreased exactly as the study of reasons and solutions of car accidents in Dalian from 2010 till 2015.

II. LITERATURE REVIEW

Philip Reed in his 2000 study entitled the What to Do After a Car Accident suggests six things we should do when we encounter and deal with a car accident. The six steps are: You must have an emergency kit; Keep safety first; Exchange information; Take a photo or write notes of the accident; Report the accident; Make sure your insurance covers. This method helps us to react the dangerous situations after a car accident (1).

Bae, Yong-Kyun in 2011 paper entitled Do Vehicle Recalls Reduce the Number of Accidents? The Case of the U.S. Car Market. He did this study with Benitez-Silva, Hugo. They found that from 1990-2010 the vehicles recall rate has increased sharply. It means some of cars have quality problems and make the rate of the car accident happen increasing but the car recalled also make drivers more safety and decrease the car accident rate on the road. So make sure that you check your car frequently. (821-862)

Lovenheim, Michael F. in 2012 who was entitled Do Blue Laws Save Lives? The Effect of Sunday Alcohol Sales Bans on Fatal Vehicle Accidents, he did this study with Steefel, Daniel P., they found that after people drunk too much alcohol then they drive on the road become another reason that cause the accident. But this problem is solved by the Blue Laws. (821-862)

David Bosanquet, Hamish G. MacDougall, Stephen J. Rogers, Graham A. Starmer, Rebecca McKetin, Alexander Blaszczyński, and Iain S. McGregor in their 2012 study which is entitled the Driving On Ice: Impaired Driving Skills In Current Methamphetamine Users. They found that METH (a kind of drug) will add to the impaired driving, and accident culpability. They did a survey, and made three groups of age, gender, and driving experience. In this study they studied about METH users and demonstrated risky driving behavior. METH added to the car accidents(170).

Dorothy Still Smoking, and Debbie White grass Bull Shoe in their 2012 study which is entitled Reducing Teenage Binge Drinking and Drunk Driving on the Reservation: The Pikanii Action Team. They examine the participants are a high rate of drinking among teenage youth and extensive involvement in high risk behaviors. This investigation also shows the way to reduce the teenagers binge drinking and drunk driving is make laws (41).

Timofey Y. Grechkin, Benjamin J. Chihak, James F. Cremer, Joseph K. Kearney, and Jodie M. Plumert in their 2013 study which is entitled Perceiving and Acting on Complex Affordances: How Children and Adults Bicycle Across Two Lanes of Opposing Traffic. They examine when children and adults bicycling across two lanes of opposing traffic, child usually cannot judge directions, and adults have more skills to avoid the car accident than child (23-35).

Yuichi Inoue in his 2014 study which is entitled the Sleep Loss, Sleep Disorders and Driving Accidents. Inoue works with Yoko Komada to do this study. He realizes that in the past ten years, traffic accidents often happened due to drowsy driving. Various sleep problems result to many kinds of car accidents. Inoue and Komada find that 29% of subjects had experienced almost falling asleep at the wheel, and 18.3% had experienced near misses due to falling asleep at the wheel (96). In this study Inoue suggests that drivers should have a full sleep before driving to avoid car accidents.

Dayi Qu in her 2014 study which is entitled that Modeling of Car-Following Required Safe Distance Based On Molecular Dynamics. Her participants were Xiufeng Chen, Wansan Yang, and Xiaohua Bian. In order to demonstrate that distance can influence car safety, Qu and her partners did a model of car/following required safe concentrates. They did an experiment and found that the distance between the first car and followed car can influence the happening of accidents. Qu suggests that drivers should pay attention to the car-following distance. The short distance may make some car accidents and hurt the drivers(1).

Weina Qu in his 2015 study which is entitled the Dangerous Driving In a Chinese Sample: Associations With Morningness-Eveningness Preference and Personality. His participants were Yan Ge, Yuexin Xiong, Richard Carciofo, Wenguo Zhao, and Kan Zhang. He finds that more people use vehicle transportation in the whole day from morning to night. Qu did a survey to investigate the relation between morning-evening preference and dangerous driving behavior. The main idea about this study is to prove that the morning is passively correlated with dangerous driving behavior(1).

III. RESEARCH QUESTIONS

This study was conducted to answer these question: 1) Which area has the highest number of car accidents in Dalian? 2) What are the major reasons for car accidents in Dalian? 3) Are there many accidents caused by teenage drivers? 4) Are there many accidents caused by drunk driving? 5) How about the punitive measure in car accident? 6) Does the driving education take some measures to reply those problems?

IV. THE STUDY

1. Participants:

Mr. He is one of the constable in the Sha Hekou local police office. He is official on the car accident study. He accepted the interviewed and gave some ideas about the car accidents happened in Da Lian. There are many car accidents happened every day. The government published an articles of law about the punitive measure in car accidents. Mr. He gave an example to explain the application on car accidents. At the same time, the government pay attention to the driving education. The driving skill is important at the beginning of the driving. In order to reduce those problems, maybe add some new test processes and change a little of them.

2. Instrumentations:

In-depth Interviews

Zhang Xin was responsible for asking Mr. He some questions on car accidents, Wu Weixuan's job was to note the answers of questions especially some important data, Ling Nan was asked to take photos of people. To authenticate the results of this study, Mr. He was interviewed for a time span of about 30 minutes during which he was asked about six questions to those included in the items of the measurements. Those six questions are the basic knowledge about the car accident. Some more questions were added, for example, "What's the criminal responsibility about the car accidents?", "Do you have some advices to drivers?", "How do you feel when on the way to go to work?", "Have you ever make some trouble in car accident?" At the beginning of the interview, Mr. He has answered the six basic questions briefly. Next, Zhang Xin asked him some in-depth questions and he also gave us a perfect result. After those questions, Mr. He told to us some personally opinions with his perspective about the actual traffic laws.

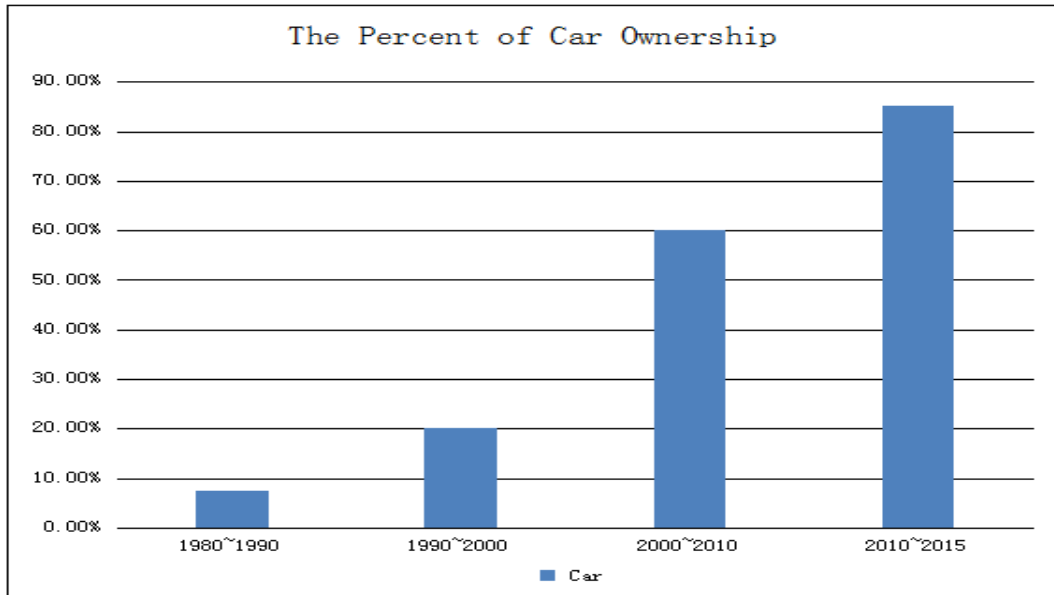
3. Data Collection and Analysis:

We analyzed the answers of Mr. He in the discussion section and relate them to the previous studies.

V. RESULTS

Our group researched some data about the percent car ownership on the Internet. In order to show the trend of the ownership of the car in last few decades from 1980 to 2015, our team members made a chart to show the data clearly.

Chart (1) The Percent of Car Ownership

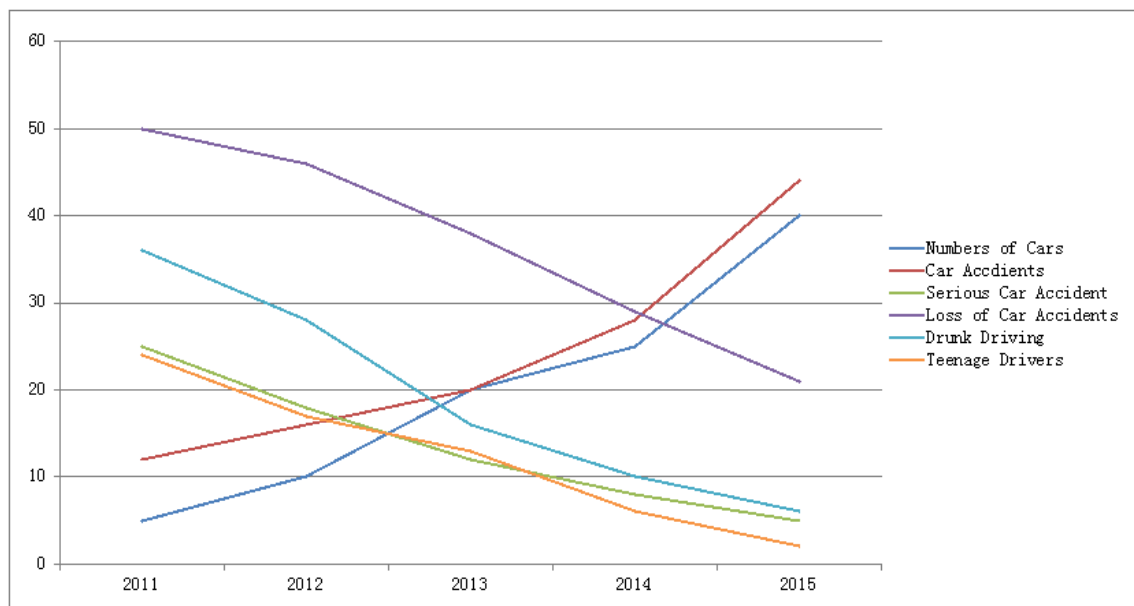


Form (2) The Percent of Car Ownership

Year	Car
1980~1990	7.50%
1990~2000	20%
2000~2010	60%
2010~2015	85%

Raylan found some data from his uncle who is a police man. This chart show lots of datas: Numbers of cars; car accidents; serious car accident; loss of car accident; drunk driving; teenage drivers in Dalian from 2011-2015. This chart inform us the change of these data clearly.

Chart (2) the change about the cars and accidents.



Form (2) the change about the cars and accidents.

	Numbers of Cars	Car Accidents	Serious Car Accident	Loss of Car Accidents	Drunk Driving	Teenage Drivers
2011	5	12	25	50	36	11
2012	10	16	18	46	28	13
2013	20	20	12	38	16	20
2014	25	28	8	29	10	28
2015	40	44	5	21	6	43

VI. DISCUSSION AND CONCLUSION

Recent years, with the development of the economy and technology, people have more money and cars are better, so having a car becomes a fashion, there are more cars in Dalian; Similarly, the number of car accidents is increasing gradually. However, serious accidents which can take one's life become less, also people lose less money in one car accident. What is more, the number of drunk driving in Dalian is decreasing, we think it is the result of the more serious punishments of drunk driving in traffic laws of China, such as the drunk driver must pay fines and be detained a few days. Besides, we believe there are two main reasons for the less accidents caused by teenage drivers. One is teenage drivers are afraid of driving on the crowded road, the other reason is the standard of driving license test is upgrading, it is not easy to get a driving license for teenage driver. What is the most important we think is that if we would like to reduce the number of car accidents, people must practice driving skill and observe traffic laws.

After we finished the interview and chart. we found that there are something are the same but something are different. Before that the drunk driving cause more and more car accident also in Dalian but in recent years due to the policy is more complete than before. So less people drive after drunk. After people drunk too much alcohol they usually ask driver to drive instead of themselves.

In the city less people feel sleepy when they are driving. Because the time is so short. But more and more people feel sleepy and tired when they have driven for a long time in the motorway. Especially the truck driver, they want to make goods deliver faster some times they even drive for one week or on month without any rest.

As our countries people become richer than before. They will choose the car which have a good quality like Germany cars or Japanese cars. They have good safety insurance and people will go to 4S store to change the lubricating oil once a month and check if have some problems with the type, engine. The car accident rates has decreased a lot.

Due to people are willing to buy expensive cars. The service after they bought is really good. If the car have some problems with the break the car company will recall all these cars and repair it from the original factory. That not only make the car perfect but also protect people from car accident. As we know lot of accident caused by vehicle failure, in fact the car company through recall the cars which have many problems to raise their reputation. At the same time they protect the drivers efficiently.

In Dalian, the accident is always happened in the morning and night. This result is the same as before. Because in china the population is larger than any other countries. Lots of workers are go to their companies in the morning and get back home in the night about 6pm. That cause traffic more crowded even traffic jam. The car accident also happen frequently at that time in Dalian.

There are many car accidents happened every day in Dalian. The highest cause of death is the car accidents now. Due to the result, we think there are three things need to improve. They are the driver's quality, laws and regulations, and the quality of the car. First, sometimes Chinese drivers are irritable on the way. Some of the drivers' quality is lower than other country. When they cannot move on the way, especially in front of some markets in ShaHekou area, don't angry with that. It's useless. Please calm down, believe that the policemen can help you to drive on. Next, although the car accidents happened present an increasing way, there are still many accidents happened in Dalian every. We think the most important reason is the laws and regulations are not very perfect. So our opinion is the government should pay attention to the laws about the car accident and also can strengthen the penalties, make it more severe. Last, about the car quality. The origin of the car accidents is the car company. There are about 25% of the car accidents happened because of the car quality. If the companies pay attention to the quality of the car then the accidents may happened less. We hope that the car company should pay attention to use the material, and the production process. If every driver follow the law and be careful on the way then there will be less disaster.

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