INFLUENCE OF PERSONALITY AND ALCOHOL-USE ON RISKY DRIVING BEHAVIOUR AND ACCIDENT PRONENESS AMONG INJURED DRIVERS TREATED IN A TEACHING HOSPITAL IN OSHOGBO, NIGERIA

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FEBRUARY, 2015.

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CERTIFICATION

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DEDICATION

THIS DISSERTATION IS DEDICATED TO GOD ALMIGHTY FOR HIS KINDNESS AND MERCIES.

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ABSTRACT

Road traffic accidents in Nigeria have been on the increase in recent years despite the various programme designed to reduce the carnage on Nigerian roads. Various factors have been implicated in accident aetiology and these include personal predilection to risky driving behaviour, accident proneness and alcohol use. Personality traits of extraversion and neuroticism have been implicated in accident proneness based on several studies carried out in developing countries. Therefore, this study examined the influence of personality types and alcohol use on risky driving behaviour and accident proneness among injured drivers treated in Ladoke Akintola University of Technology Teaching Hospital (LAUTECH), Osogbo, Osun State.

A cross-sectional survey research design was used for the study. One hundred and twenty participants were selected from LAUTECH Orthopaedic, Accident and Emergency Physiotherapy Unit and outpatients' clinic using consecutive recruitment. A questionnaire consisting of five (5) sections made up of standardized instruments was used in collecting data for the study. Informed consent and permission were obtained from both the participants and the hospital administrations before administering questionnaire on the respondents. Five (5) hypotheses were tested using t-tests and multiple regression analysis at $P< 0.05$ significant level.

Results indicated that female participants were more prone to accident than their male counterparts {t (118) = 4.03; P<.01}. Also, those who had higher education scored higher on accident proneness than their counterparts with low education. {t (118) = -2.05, P<.05)}. Male drivers exhibited higher risky driving behaviours than female drivers {t(118) = 5.518; P <.01). Those who are lower in educational qualification are more risky in driving than those with higher education {t (118) = 2.617; P<.05}. Personality types (openness, conscientiousness, extraversion, agreeableness and neuroticism) and alcohol use predicted risky driving behaviour with joint contribution of 29.0% to the variance. Neuroticism (β = -0.29), openness to experience (β = 0.2) and alcohol use (β = 0.40) independently predicted risky driving behaviour. Personality types of extraversion (β = 0.-59) and agreeableness (β = 0.59) independently predicted accident proneness among the injured drivers.

Alcohol and personality types influence accident proneness among injured drivers surveyed. This suggests that an abridged psychological assessment to identify the risk taking drivers before issuance of driver's license and periodic re-evaluation with psycho-education be adopted.

Keywords - Personality traits, Alcohol use, Risky driving behaviour, Neuroticism, Openness to experience traits, Accident proneness.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Risky driving behaviour constitutes any risky driving undertaken by the driver which increases the likelihood of the driver being involved in a car crash and may harm or fatally injure the driver themselves, their passenger(s), and other road users such as pedestrians, cyclists, drivers and passengers in other vehicles. The factors that contribute to crashes include inadequate lighting and slippery surfaces due to vehicle defects such as brake failure and worn out tyres (Sobey and Taylor, 1980, cited in Norris, .Matthews and Riad ,2000)

Risky driving behaviours reflecting non-compliance with general road rules included using a handheld mobile phone whilst driving, not wearing seatbelts, driving after consuming illicit drugs and carrying more passengers than the car was designed for. Definition includes risky driving behaviour which the driver may perform with or without being aware of the increased risks, such as travelling at the posted speed limit during heavy rain. In other words, it encompasses both intentional and unintentional behaviours that increase crash. Of particular concern to the researcher is both the intentional or unintentional risky driving behaviour, such as driving in excess of posted speed limits or after drinking alcohol. A comprehensive understanding of the risky driving behaviour of drivers is fundamental if effective countermeasures are to be developed and implemented.

Many drivers choose to drive and behave in ways that increase their risk of crashing; for example, Elvik, Christensen, and Amundsen (2004) concluded that a re-lationship exists between mean traffic speed number and severity of crashes that occur on

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a road .Non safety belt -use has been associated with increased risk of injury and death in a crash. Driving a vehicle is a psychomotor task and continually monitoring the roadway and anticipating the actions of other drivers are critical for safely operating a motor vehicle and reducing accident proneness. A distracted or inattentive driver is likely to have delayed recognition or no recognition of information necessary for safe driving and is accident prone (Saats et al. 2003). Driver distraction and inattention have been cited frequently as contributing factors in crashes (Hendricks, Fell and Freedman, 1999; Klauer, Dingus, Neale, Sudweeks and Ramsey 2006).

Risky driving behaviour has been identified as an important contributor to road crashes, although its role is not comprehensively understood. These include speeding, drink-driving, driving while fatigued, and not wearing seat belts. Research on drivers' risky behaviours and risk perceptions is crucial to understanding why accident rates are on the increase. There is much to be learnt about the impact of drivers' risky driving and how it is associated with their increased risk of crash. Recent research confirms that certain risky driving behaviours are more prevalent among drivers. These include high-level speeding and speeding for the thrill of it, following too closely to the vehicle ahead, violating traffic rules, not using seatbelts, using mobile phones while driving, text messaging, driving during high-risk night-time hours, and driving older vehicles. In addition, certain driving behaviors have been demonstrated to be of a higher risk for driving. These include carrying peer groups or multiple passengers and driving under the influence of alcohol, even at low concentrations.

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Road traffic accidents occur worldwide but the incidence is more in developing countries due to human error arising from the way of life, personal characteristics, mechanical and road design (Balogun,2006). However, the human nature is at the centre of the causes of accident rates in Nigeria. These necessitate the need to identify those characteristics traits and related factors precipitating problems of increasing accident rates towards a more emphatic intervention in reducing the carnage on Nigerian roads.

Accident is an unplanned, unexpected and undesirable occurrence that disrupts the flow of normal interactions and relationship, which may result in inconveniences, injuries, property damage or death (Yisa, Agbonkhese, Akanbi, Aka and Mondigha, 2013). Accidents on the road are caused by interaction of human, vehicular and environmental factors which the driver found incomprehensible at the movement (Balogun, 2006). Annually, about 1.24 million people die each year as a result of road traffic crashes without action, road traffic crashes are predicted to result in the deaths of 1.9 million people by 2020 (Yisa, et al, 2013).

From 1960 through 2004, Nigeria experienced 995,112 cases of road accident, in which 283,240 lives were lost and 833,770 were injured. The FRSC (2004) mounted drastic efforts to reduce the carnage, by 2004 the number of road accidents was 14, 279 and recent statistics recorded between 2006 and 2008 show that more still need to be done. In January 2010, statistics made available by the Federal Road Safety Crops indicated an upsurge in road accident victims in the country with comparative analysis of the 2009 and 2008 exercise showing a 13 percent increase. Out of this figure, Zone RSII command, comprising of Osun, Ondo and Oyo states posted the highest number of 2,908 offenders, 3,141 traffic offences with 769 and 791 vehicles and motorcycle impounded

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respectively. Road traffic accident can be caused by a single factor or a combination of factors. However, the constellations of causes have been summarized to three basic roots these include human, vehicular and environmental factors. The latter two are also believed to have resulted in errors from a human effort. As such, most safety studies come to the conclusion that vehicle operator or driver factors (or human error) are the main causes of accidents. Nevertheless, such a conclusion has not proved to be efficient in its capacity to offer adequate means to fight against this menace. In an effort to better qualifying accident causation, this study looks at factors precipitating accident proneness and risky driving behavior leading to road accidents.

Prediction of accident occurrence and assessment of risky driving behaviour is based on the premise that accidents in general are not due to chance alone (Visser, Pijl, Stolk, Neeleman and Rosmalen, 2007), focuses specifically on analyzing circumstances and factors that affect the risky driving behavior as one of the causes of accidents while he believes that human factor is one of these. One perspective on how circumstances present a risk of accident to humans emphasizes how the human system in general is prone to making errors in a particular circumstance. Recent research has shown, for instance, that car crashes could be predicted from risk-taking personality trait and accident proneness (Iverson and Rundmo, 2002).

Road accident is also believed to occur as a result of accident proneness and risky driving behaviour among road users. The human component in accident involvement is difficult to study because of the lack of consensus on what defines accident proneness. Accident proneness is a concept that refers to an enduring or stable personality characteristics that predisposes an individual towards having accidents (Haddon, Suchman

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and Klein, 1964). Accident proneness is a deceptively easy term; it has been described as "an error with sad consequences but the relationship between the preceding behaviour and the consequences is not at all simple.

Accident proneness is the tendency of an individual to experience more accidents than otherwise identical individuals (in terms of basic personal characteristics like age, gender and place of residence) due to stable personality characteristics. We did not include exposure to risk as part of the definition itself because the extent to which individuals expose themselves to risk may be largely determined by personality characteristics (Mahmoudi, Mohammadfam and Bagi, 2013).

The successful reduction of the incidence of human factors in road accidents and crashes requires a good understanding of contributing factors. However, literature trend and empirical studies have not directly examined these variables beyond its impact on accident rates and less in terms of precipitating factors. Fernandes and Hatfield, (2006) have identified that different factors predict these variables. They located the advent of accident proneness and risky driving behaviours in the development pattern engrained in human innate characteristics interacting with the environment.

The driving behaviours are influenced by many factors including knowledge, awareness, skills, experiences, characteristic and the conditions found in the motor vehicle and the various conditions of the community in which drivers live. Individual characteristics that have been found to be related to motor vehicle morbidity and mortality among drivers include race, age, gender, cognition, driving experience and level of education.

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This study also identified that vehicular accident is often resident in error of human judgment and deliberate omission or addition of certain acts while driving resulting from the drivers to react or act in certain ways due to their innate characteristics or intentions. The act is described as engaging in behaviours or conditions having the possibility of incurring an incidents or events.

Alcohol or alcoholic substances fall among the classes of drugs which exert their major effects on the brain and physiological functioning, resulting in such effects as sedation, stimulation or change in mood or behaviour (Burns, 1988) and are potentially habit forming. Today, alcohol and alcohol distillates (For example *Ogogoro*: illicit gin) remain the elixir of life that readily available in motor parks and roads side kiosk. Alcohol remains the most widely abused substance by drivers with the reasons that it increases alertness, strength for physical work and reduces the impact of stress on drivers (UNDCP, 2006). Several studies have identified the increasing role of alcohol intake in road crashes in Nigeria (Nzegwu et al, 2011).

Available alcoholic beverages in Nigeria include beer and wines, fortified wines and local alcoholic cocktails popular in the motor parks in southwest Nigeria such as "*jedijedi*" (Pile mixture), "*Opa-eyin*" (Back pain elixir) (Nzegwu et al, 2011). All these are not only freely available but are sold without any restriction in public bus stations in Nigeria. After ingestion, its absorption is rather fast in the body and its high alcohol concentration in the blood leads to poor ability to see or locate moving lights correctly, ability to judge distances and increased tendency for risk- taking (Nzegwu et al, 2011).

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Alcohol is consumed by large proportions of adults in most countries around the world. Though not causing significant problems for most drinkers, alcohol use is associated with numerous negative consequences for the drinker and society at large. Globally, alcohol causes 3.2% of all deaths or 1.8 million deaths annually and accounts for 4.0% of disease burden. Many of these deaths are the result of injuries caused by hazardous and harmful drinking. Of the total number of alcohol-attributable deaths, 32.0% are from unintentional injuries, and 13.7% are from intentional injuries. This means that about half of the deaths attributable to alcohol are from injuries.

The problem of alcohol-related injuries is particularly alarming in many low and middle -income countries, where alcohol consumption is increasing, injury rates are extremely high, and appropriate public health policies have not yet been implemented. While there is little doubt that alcohol consumption is associated with injury occurrence, less is known about the level of risk at which various drinking patterns, quantities of alcohol consumed, or drinking situations place the individual at risk for accidental injury.

The path to accident proneness shows that high concentration of alcohol in the blood stream is that its victims' reactions are slower, concentration span is shorter and at 100-120mg/dl level of concentration euphoria sets in and with it, an over-estimation of one's abilities leading to reckless driving. International studies show that alcohol is estimated to be a factor in 20-30% of all accidents (Nzegwu et al, 2011). There is no prior documentation of alcohol being related to accident proneness. Based on this premise, this study examines the contribution of alcohol use to accident proneness and risk driving behavior among drivers who have experienced road crashes in Nigeria.

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Personality traits are the underlying factors affecting peoples' estimations, attitudes and behavioural tendencies. Personality can be defined as a collection of emotion, thought, and behaviour patterns unique to a person that interacts to determine how individuals perceive and respond to events. In the driving context, personality can influence risky driving behavior and driving outcomes such as traffic offences and crash involvement. Extroversion is associated with being impulsive and this has been found to be a feature in people who have car accident (Furnham and Heaven, 1999). Personality traits have been reduced to five dimensional domains called the "Big Five" personality traits based on extensive years of study (Costa and McCrae, 1996; Golberg, 1990). These five personality traits are used to understand the relationship between personality and various behaviors. These traits include:

- Openness
- Conscientiousness
- Extraversion
- Agreeableness
- Neuroticism

Openness to experience reflects the degree of intellectual curiosity, creativity, and preference for novelty and variety. Conscientiousness is a tendency to show self-discipline, act dutifully, and aim for achievement conscientiousness also refers to planning, organization, and dependability. Extraversion includes energy, positive emotions, assertiveness, sociability, talkativeness, and the tendency to seek stimulation in the company of others. Agreeableness is the tendency to be compassionate and cooperative rather than suspicious and antagonistic toward others. Neuroticism is the

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tendency to experience unpleasant emotions easily such as anger, anxiety, depression, or vulnerability. Neuroticism also refers to the degree of emotional stability and impulse control which is sometimes referred to as emotional stability.

All these factors are assumed to represent the basic structure behind all personality traits. These five factors were defined and discovered by several different researchers during multiple periods of research. However, as a result of their broad definitions, the Big Five personality traits' are not nearly as powerful in predicting and explaining actual behavior as are the more numerous lower-level, specific traits. According to Santos (1995), psychological variables (such as personality) are associated with high levels of inter-individual variability, which can have a significant impact on the driving behavior.

Numerous studies have investigated the relation between emotional stability and driving style, driving anger, aggression in traffic and reactive aggression (Booth-Kewley and Vickers, 1994, Herzberg, 2009, Bettencourt, Talley, Benjamin and Valentine, 2006). Jovanovic et.al(2010) highlight that people with high scores on the emotional stability factor show a high level of physical and verbal aggression in traffic.

Extraversion, which means the pleasure of interacting with others, the tendency to be assertive, sociable, energetic, outward (John and Srivastrava, 1999) was studied in relation to aggressive driving behavior with some studies finds a positive relation between extraversion and reckless driving (Renner and Ander, 2000). Dahlen and White (2006) showed that extraversion predicts reckless driving and traffic accidents, the high level of extraversion being one of the causes of road accidents.

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People with high scores on the openness factor tend to be characterized by aesthetic appreciation, values, idea acceptance, self-actualization, personal growth and development (McCrae and Costa, 2006). Taubman - Ben-Ari and Yehiel (2011) studied the openness factor in the context of driving styles, finding a positive relation between openness and careful driving style while between styles characterized by aggressive, anxious and hostile behavior, there was no significant association with openness. Among the few studies that have found the openness factor associated with aggressive driving behaviour is that of Dahlen and White (2006), the authors showing a negative link between openness and reckless driving, individuals with high scores on openness factor being less prone to engage in risky traffic than those with a low score.

People with high scores on agreeableness factor are inclined to trust others, are altruistic, empathic, and tolerant, are likely to forgive, generous and gentle (John and Srivastava, 1999, McCrae and John, 1990). People with a high score on agreeableness practice careful driving style, and those with a low score drive in anger, reckless, anxious and desolate way (Taubman - Ben - Ari and Yehiel, 2011). It has been shown that there is a negative relation between agreeableness and violation of traffic rules, people with low scores on agreeableness factor, often violating traffic rules. Also, a negative association was found by Jovanovic et.al (2010) between agreeableness manifested anger while driving.

High conscientiousness is characterized by orderliness, self-discipline, organization, intention to do and resolve things and problems (John and Srivastrava, 1999). Arthur and Graziano Jr. (1996) have demonstrated the existence of a negative relation between conscientiousness and involvement in accidents. Thus, those with a high

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score on this factor, being characterized by organization and self-discipline, are rarely involved in traffic accidents than those with low conscientiousness scores. Jovanovic et.al (2010) show that physical aggression and verbal aggression manifested while driving relate negatively with conscientiousness, those with high scores on this factor manifesting a reduced physical and verbal aggressive behaviour when driving, than those with low scores. Looking at personality traits, risky driving behaviour and accident proneness, individuals are compelled to test new "personal potentialities" closer to the infringement of the law (Sousa, 2000)

Age is associated with accidents in a number of ways. Firstly, it influences the number and severity of the hazards individuals are exposed to. Secondly, it is connected to the competence that individuals have at particular tasks, such as crossing the road, their skills and attitudes. In younger drivers, the judgment of depth and speed may not be fully developed and they may as well be as unaware of some dangers. For the older person, the problem is limited mobility or failing eyesight (Donaldson 2000).

1.2 STATEMENT OF PROBLEM

The magnitude and trend of the crash Worldwide is heart-breaking, unfortunately, the rising tide of this global problem has continued to outstrip effort to curtail it. The chance of vehicle killing a road user in Nigeria was 47 times higher than in Britain according to Atunbi (2012). Road traffic crashes are one of the world's largest health and injury prevention problems. The problem is more acute because the victims were overwhelming healthy prior to their crashes. According to the World Health Organization, (2010) more than a million people are killed on the worlds' road each year. A joint report

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between WHO and World Bank (2006) noted that in spite of the growing burden of road traffic injuries, road safety has received insufficient attention at local and international level due to lack of awareness on the socio economic scale of the problem and that road traffic crashes and injuries do not belong to any specific agency in most Countries.

The use of psychoactive drugs followed by driving has been an issue of continual concern to law enforcement officers, physicians, attorneys, forensic toxicologists and traffic safety professionals in the U.S. and throughout the world (National Highway Traffic Administration, 2005). Alcohol consumption has been identified as the most important factor in road traffic accidents (European Transport Safety Council, 1995). The relationship between the blood-alcohol level and risk of accidents has been known for a long time. It was estimated that driving under 35% level of alcohol for those with light injuries and 10% for those without injury (Council on Scientific Affairs, 1986).

The role played by alcohol use on road safety has become subject of increasing interest, these substances can reduce driving performance and increase accidents risk; compared to other areas of traffic accident research, the study of social psychological and behavioral correlate of crashes involvement has attracted only a relatively small number of researchers. Kraus et al (2009) cited several studies which had found that drivers involved in or responsible for traffic accidents differed from their matched control groups in certain psychological trait such as aggression, intolerance of authority, non-conformity and so on The role of personality trait in traffic accidents has been central in explanations emphasizing accident proneness (Farmer and Chamber 1939,Tilliman and Hobbs 1949).The notion that one general personality traits is the cause of drivers ‘ accident

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involvement has ,however been rejected. Still, the influence of personality on driving behavior and accident involvement is not totally abandoned.

One of the personality characteristics that have attracted some attention is the type A behavior pattern, it might be that the urgency to the type A pattern leads people into risky situation. Among the myriad of factors is the contribution of the moderating role of alcohol use and enabling personality's trait of the drivers in Nigeria. Nigeria drivers are believed to be accident prone due to their life styles and the nature of their jobs (Obot, 2002, Odejide and Morakinyo 2007). Some salient facts emerging from these various studies on substance abuse in Africa (For example Obot 2002, Gureje, 2007), affirmed that Nigeria drivers are at risk population for alcoholic substance use.

The brief review of literature above suggests that a number of factors may explain the causes, consequences of alcohol use "accident proneness". Therefore, the following specific questions were however noted in relation with the study. What is the relative variance in personality factors accounted by risky driving behaviour and accident proneness? Finally, what is the influence of religion, belief, mood, intolerance, aggression, age and experience in the relationships between risky driving behaviour and accident proneness?

Based on these premises, the following questions arise:

Research Questions

(a) Will age influence accident proneness and risky driving behaviour?

(b) Will level of education influence risky driving behaviour?

(c) Will level of education influence accident proneness?

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(d) Will personality factors play a significant role in predicting accident proneness and risky driving behaviour?

(e) Will alcohol use play a significant role in predicting accident proneness and risky driving behaviour?

(f) Will the combination of personality and alcohol use play a significant role in predicting accident proneness and risky driving behaviour?

1.3 PURPOSE OF STUDY

The study main aim was to examine personality traits and alcohol use as predictors of driving behaviour and accident proneness among injured drivers. In the light of this study, the specific objectives were to –

1 investigates the influence of socio-demographic factors on accident proneness and risky-driving behaviour;

2 assess the influence of personality traits on accident proneness and risky driving behaviour;

3 determine the influence of alcohol use on accident proneness and risky driving behavior.

4. assess the joint influence of personality traits and alcohol use on accident proneness and risky driving behaviour..

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1.4 RELEVANCE OF THE STUDY

A research into accident proneness and risky driving behaviour with information on the incidence, severity and effects of personality, alcohol use against driving behaviour and accident proneness adds to existing scientific literature with respect to the influence of these variables on accident proneness and risky driving behaviour. This study developed a new instrument to measure risky driving behaviour. This contributes to psychometric methodology as it provides a tool for screening and assessing drivers for risky driving behavior. Drivers found to score high on could be counseled about safe driving behaviour deconditioning them so that they can adopt a safer and better driving behaviour.

This study contributes to the present practice of clinical health psychology as provides the need to include psychologists especially the clinical health psychologist to work as members of multidisciplinary teams in the public health sectors to provide psycho-education and cognitive behaviour therapy for those who engage in risky driving behavior. The study will add to knowledge on understanding what risk factors contribute to the occurrence of road traffic accidents and related injuries in Osun state. The data obtained in this study, can be used by the road safety authorities for planning and evaluating road safety measures. The data can also be utilized by the health authorities and possibly at the nation level for planning health care delivery. The recommendations given if considered are going to benefit the public at large on prevention of road accidents. The data can also be utilized as baseline data in future related research.

Furthermore, evidence has not clearly distinguished the role behaviour as distinct factors in predicting accident; hence, this study will extract the common specific driving behaviour as applicable to Nigeria drivers, even though various studies have been

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conducted in other parts of the world, this study is considered as exploratory in Osun State because it is paying particular attention to the drivers or motorists in the area.

The findings of this study will be helpful to all drivers in preventing frequent accident/death on our roads. The result will be useful to corps marshal for effective follow up and strategies to improve the drivers' driving behaviour.

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CHAPTER TWO

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

2.1 THEORETICAL BACKGROUND

The scope of this chapter is to present an overview of basic propositions that can help in fostering an understanding of the role of personality and alcohol use in risky driving behaviour and accident proneness .Theories have been selected for review include the following :Risk Homeostasis theory ,Disposition theory of personality and Big Five model .In this chapter ,the trend of accident rate and overview of Nigeria's transport policy were looked into while classification of some key concepts were dealt with.

2.2 THEORIES

2.2.1 Risk Homeostasis Theory

Risk homeostasis theory maintains that in any activity, people accept a certain level of subjectively estimated risk to their health, safety and other things they value in exchange for the benefits they hope to receive from that activity (transportation, eating, recreation, drug use and so on. In an ongoing activity, people continuously check the amount of risk they are exposed to. They compare this with the amount of risk they are willing to accept and try to reduce the difference to between two to zero. Thus, if the level of subjective experienced risk is lower than is acceptable, people tend to engage in actions that increase their exposure to risk. However, the level of subjective experienced risk is higher than is acceptable; they make an attempt to exercise greater caution. Consequently, they will choose their next action so that it is subjectively expected amount of risk matches the level of accepted risk. During the next action, perceived and

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accepted risks are again compared and the subsequent action is chosen in order to minimize the difference and so on.

Each particular adjustment action carries an objective probability of risk of accident thus; the sum of total adjustment actions across all members of the population over an extended period of time (one or several years) determines the temporal rate of accidents in the population. These rates, as well as more direct and frequent personal experiences of danger, in turn influence the amount of risk people expect to be associated with various activities, and with particular actions in these activities, over the next period of time. They will decide on their future actions accordingly and these actions will produce the subsequent rate of human made mishaps. Thus, a 'closed loop' is formed between past and present, and between the present and the future. And in the long run, the human-made mishap rate essentially depends on the amount of risk people are willing to accept.

The theory of risk homeostasis predicts that people become accustomed to some acceptable level of risk, and that when they are required to reduce a risk they are exposed to, they will increase other risks until they have re-established the level of risk they have accustomed to, If drivers are required to wear a seat belt, the evidence suggests that they drive faster and pass other cars more dangerously, putting on make-up and so on, so as to maintain the level of risk they are comfortable with.

According to risk homeostasis theory, an individual attempt to optimize the exposure to risk in an activity, where 'optimal' means the degree of risk at which the aggregate needs of that individual are likely to become best fulfilled, instead of aiming at the elimination of risk (Wilde, 2000). People choose an amount and manner of mobility such that the associated level of subjective risk corresponds with the point at which the

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expected net benefit is maximal. Interacting with the characteristics of the rule, the characteristics of the individual have a significant effect on rule-governed behaviour. As such taking alcohol and engaging in risky driving are usually towards achieving maximal benefit for being on the road i.e. arriving on time, drive faster than other and making other accept you and your car as king of the road .Certain elements of personality make risky behaviours more likely, simply because they are committed in order to satisfy the individual's personal needs come into conflict with the rule-system.

High scores on certain personality traits such as conscientiousness may be thought of as 'exposing' the individual to the likelihood of committing acts of rule violation. Low conscientiousness traits will seek arousal and this may lead to inappropriate behaviour. A sense of personal control over the particular sensation-seeking behaviour can increase the likelihood that the behaviour will take place, and a highly impulsive individual may engage in the behaviour without waiting to think about the potential consequences. Other elements of personality prescribe the nature of the effects on individual's socialization on these 'risky' behaviours. Breaking rules invites social disapproval, and human socialization processes have ensured that this social disapproval creates an aversive state of arousal in the individual.

The process of internalizing the rule-system leads to large individual differences in the degree to which people are socialized. Differences in socialization will determine whether the risky, rule-breaking behaviour is encouraged or suppressed. Indeed, it determines whether or not any consideration of the social environment takes place at all, prior to the act being committed. This is where the role of education being felt, highly educated persons may or may not view over speeding or eating while driving as risk

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behavior in as much the socio-cultural milieu does not frowns at it. Personality traits may be thought of as 'moderating' the inhibitory or facilitators effects of social influence. Clearly, a balance is required in terms of perceived control. Individual differences in the tendency to look into the future for potential consequences of behaviour will also determine whether or not a person breaks the rules. They are thus more likely to behave in an inappropriate way than someone who thinks carefully about all the potential future consequences of their behavior which may be a product of educational attainment.

2.2.1a Application of Risk Homeostasis theory to the study: The theory of risk homeostasis predicts that people will consume roughly all the enhanced safety imposed upon them in order to desirable risky activities (for example, more exciting driving to fight boredom, eating or talking on the phone while driving and so on) unless reward or punishment moderates their risk taking behaviour. This model extends that risk taking behaviour is predicated that factors like personality and drug induce high risk taking behaviour. This study opined that personality traits such as high extraversion, openness to experience, and neuroticism coupled with low conscientiousness and agreeableness increases the homeostasis level thereby making the individual desire for speed, negligence and reckless driving to be on the increase leading to accident proneness while reducing the desire for safety and avoidance of road crashes. As such drivers high on extraversion, openness to experience, and neuroticism personality traits coupled with low conscientiousness and agreeableness traits are expected to have higher risky driving behaviour and accident proneness compared to those low on high extraversion, Openness to experience and neuroticism coupled with high conscientiousness and agreeableness. In addition alcohol use is expected to further compound the problem as it

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alters the drivers sense of judgment shifting the homeostasis level for risky driving and accident proneness higher due to altered state of the mind.

Driving is an activity that requires maximum concentration that allows the individuals to cope with distraction is their homeostasis risk levels. It have been noted that alcohol use alter the knowledge of timing, slows down the cognitive processing period and affects the muscle tone. As such drivers high on alcohol use while driving are more prone to drive in a risky way and would be more prone to accidents compared to those who did not take alcohol. Thus, the combination of the possession of personality traits that makes drivers prone to risky driving and accidents with alcohol use are more likely to play a major role or be responsible for the increasing incidence of road crashes on Nigeria roads even in the face of increasing legislation against risky driving and alcohol use. Several studies conducted have demonstrated that most drivers (commercial and private) drink alcohol before driving. Alcohol could make drivers feel high behind the wheels. They drive carelessly despite the laws and regulation.

2.2.2 Disposition Theory of Personality

The disposition approach view personality is a combination of stable internal characteristics that defines who people are and what motivates them to behave in certain ways (Murray, 1961 Allport, 1961). These approaches to personality focus on what is termed as personality type and personality trait even the personality combination. Based on personality type, it was said that this attempt goes back to as far as Hippocrates, a Physician of Ancient Greece. He suggested that certain temperaments or basic behaviours' are associated with each of four bodily fluids or humors: phlegm, black bile and yellow

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bile. Hippocrates said personality type depends on how much of each humor a person has. The terms for those personality types are: sanguine {angry, irritable}. This notion has great appeal; people tend to maintain some mental schema telling them that certain types of people have a certain "look". Further, as personality type is seen as a discreet category, traits, and contrast is continuous quality that individual possess in different amount. A person can posses a lot or little of some trait or fall anywhere in between on a measure of that trait. Thus, according to the trait approach each personality can be described in terms of how strong the individual is on various traits such as hostility, sociability and the likes. The notion of traits is very familiar for instance if an individual is asked to describe him or herself would probably do so in terms of traits. Traits are reasonably stable elements of personality that are inferred from behaviour. For instance if one describes a friend as shy, it may be because one has observed social anxiety or withdrawal in that person's encounter with others. Traits are assumed to account for consistent behaviors in divers' situation. As such, one would probably expect shy friend to be quiet in most social confrontations. The concept of traits is also found in other approaches to personality for example, Freud linked development of certain traits to children experiences in each of psychosexual development.

Allport {1961} spent thirty years studying traits combing to the normal personality. He also found that many of the labels for these traits refer to the same thing. According to him a set of labels represent a person's central traits, those that are usually apparent to others and constitute characteristics that organize and control behaviour in many different situation. Centre traits are roughly equivalent to the descriptive term used in letters [for example, Reliable distractible] that are meant to convey what can be

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expected of a person most of the time (Phares, 1991), Allport also found what he termed secondary traits as those that are more specific to certain situations and control far less behaviour. In his research Allport often took a homothetic approach that is he carefully compare many individuals terms of the personality traits commonly found in most people to some degree.

Further on the traits perspective, British Psychologists. Hans J. Eysenck (Eysenck and Eysenck, 1977) has focused much of his research on the relationship between two important traits; introversion and extraversion. He has catalogued various personality traits according to where they are situated along these dimensions, and based on the factor analytic method carried out by Eysenck (1985), he eventually obtained three (3) dimensions of extraversion, neuroticism and psychoticism, each of which is measured in continuum or on a dimension.

2.2.2a Application Dispositional Theory of Personality to the study: Central to the Dispositional traits theory is that a person is likely to behave across the situations as well as over time. As such a personality trait is linked to risky driving and accident proneness among drivers. Human behavior and personality traits have been placed on a continuum or organized into a hierarchy. Dispositional theorist divide personal dispositions into three categories: Cardinal Traits are traits so dominant that a person's entire life revolves around it. Central Traits are the general characteristics that form the basic foundations of personality. These central traits, while not as dominating as cardinal traits, are the major characteristics you might use to describe another person. Terms such as *intelligent*, *honest*, *shy* and *anxious* are considered central traits. Secondary Traits are characteristics

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that are exhibited in specific situations, while third traits are more easily modified than central traits.

Dispositions are presumed to be relatively enduring and stable, producing some degree of consistency in behaviors across times and circumstances. Most dispositional psychologist conceptualizes an individual's enduring dispositions as permanent, inherent elements of personality and distinguishes them from temporary conditions, or states. States result from transient situations or conditions like illness, fatigue, or sudden changes in life circumstances. These secondary traits are often linked to risky behavior because of the impact that changes in the environment have on it. As such, individuals for which high extraversion, openness to experience, and neuroticism coupled with low conscientiousness and agreeableness are secondary traits they are likely to be prone to accident and high risky behavior especially when they are driving.

2.2.3 Big Five Model

The "Big Five" personality traits are five broad factors of personality dimensions developed through lexical analysis. This is the rational and statistical analysis of words related to personality as found in natural language dictionaries. The traits are also referred to as the "Five Factor Model'. The model is considered to be the most comprehensive empirical or data-driven enquiry into personality. The first public mention of the model was in 1933, by Thurston.

The five factors are: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism [OCEAN] which can be summarized as follow: Openness is a general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and

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variety of experience. The trait distinguishes imaginative people from down – to – earth and conventional people. People who are open to experience are intellectually curious, appreciative of art, and more aware of their feelings. They are more likely to hold unconventional beliefs. People with low scores on openness tend to have more conventional, traditional interests. They prefer the plain, forward and obvious over the complex, ambiguous, and subtly. They are conservative and resistant to change.

Conscientiousness is a tendency to show self-discipline, act dutifully, and aim for achievement. The trait shows a preference for planned rather than spontaneous behaviour. It influences the way in which people control, regulate and direct their impulses, this can explain why a cyclist will choose to act either spontaneously or rationally while riding. It can help in measuring one's perceived vulnerability Conscientiousness includes the factor known as need for achievement. The benefits of high conscientiousness are obvious. Conscientious individuals avoid trouble and achieve high levels of success through purposeful planning and persistence.

Extraversion or extroversion is characterized by positive emotions, urgency, and the tendency to seek out stimulation in the company of others. The traits are marked by pronounced engagement with the external world. Extraverts enjoy being with people, and are often perceived as full of energy. They tend to be enthusiastic, in groups they like to talk, assert themselves, and draw attention to themselves. Introverts lack the exuberance, energy, and activity levels of extraverts. They tend to be quiet, low-key, deliberate, and less involved in the social world. Their lack of social involvement should not be interpreted as shyness or depression.

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Agreeableness is a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. The trait reflects individual differences in concern for social harmony. For example, agreeable individuals' value getting along with others, they are generally considerate, friendly, generous, helpful, and willing to compromise their interests with others. Agreeable people also have an optimistic view of human nature; they believe people are basically honest, decent, and trustworthy. Disagreeable individuals place self-interest above getting along with others. They are generally unconcerned with others' well-being and are less likely to extend themselves for other people; sometimes their skepticism about others' motives can cause them to be suspicious, unfriendly and uncooperative.

Neuroticism is the tendency to experience negative emotions, such as anger, anxiety, or depression; it is sometimes called emotional instability. Those who score high in neuroticism are emotionally active and vulnerable to stress. They are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods of time, which means they are often in a bad mood. These problems in emotional regulation can diminish neurotic's ability to think clearly, make decisions, and cope effectively with stress. At the other end of the scale, individuals who score low in neuroticism are less easily upset and are less emotionally active. They tend to be calm, emotionally stable, and free from persistent negative feelings. Freedom from negative feelings does not mean that low scores experience a lot of positive feelings. Frequency of positive emotions is a component of the extraversion domain.

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The Big Five personality traits have been found to define an individual's personality traits which are the driving force of an individual exhibited behaviour. The theory argue that the five core personality traits, consisting of Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism, contain six additional underlying traits within each factor (Costa and McCrae 1992; Somer and Goldberg 1999). This theory suggests that the drivers' behaviour is seen as reflecting a balance between personal motives (for example, thrills, the desire for speed or position in the traffic stream) and the subjective risk of crash involvement.

The theory opined that drivers in general do not perceive any risk of crash involvement due to vulnerability of their personality (extraversion, low conscientiousness and high openness to experience). This lack of subjective risk of accident involvement allows drivers to fulfill a variety of other needs thus leading to high risky driving and involvement in road crashes due to their poor perceptions informed by their personality. Another approach to the concept of subjective risk has different implications for driver risk taking. According to Santos (1995), psychological variables (such as personality) are associated with high level of inter-individual variability, which can have a significant impact on the driving behaviour. Personality traits seem to be good predictors of crash-related conditions, aggressive risky driving, driving with anger expression and risky driving violations

2.2.3a Application Big Five Model to the study : According to Atkinson's, Smith's, Bem's, and Nolen-Hoeksema's (1996) views personality is represented by the distinctive and specific patterns of thoughts, feelings and behaviours that identifies the interaction

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with the physical and social environment .The researchers concluded that there are five dimensions of personality. Neuroticism includes anxieties, worries, anger issues, uncontrolled actions, insecurities and depression. People with neurotic tendencies, complain of at least one of many psychosomatic indications, such as chronic fatigue, headaches, insomnia, vision disability or anorexia. For this reason, neurotics can be described as leaning towards negative emotions, especially anxiety, depression and anger which makes them prone to risky driving behavior and accidents. On the contrary people with high levels of emotional stability tend to be very temperate, relaxed, and resistant even under stress conditions. Low emotional stability, sometimes called neurosis (meaning high level of neuroticism), and often affects personality adversely. Those with a low emotional stability are more likely to experience psychological distress (for example, depression, anxiety, anger, and insecurity), unrealistic beliefs, and poor coping strategy.

Empirical evidence in favour of the relation between emotional stability and risky driving: drivers who have a higher score on the neuroticism scale are easily angered and insecure and they have an increased risk of driving behavior (Lajunen,2001). Extroverted people on the other hand, tend to engage in frequent activities, positive emotions, entrepreneurship and social behaviors. They are adventurous, active, talkative, cheerful, optimistic and energetic, enjoy fun and action. Extraversion is characterized by sociability, assertiveness, impulsivity, and activity. There is evidence that extraversion is positively associated with traffic accidents (Lajunen, 2001), road errors (Verwey and Zaidel, 2000) and violations of traffic rules. Theoretically, extraversion should be related to risky driving behaviour and accident proneness because it is marked by active and sometimes impulsive behaviors. Given that risky driving behaviour and accident

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proneness behaviors appear to be impulsive by nature, we expect that drivers with a high level of extraversion to be more prone to aggressive behavior while driving.

Openness to experience is a trait in people characterized by creativity, imagination, liberalism in thoughts and they embrace new perspectives and multi-dimensional ways of thinking and mental curiosity. The opening is marked by traits such as imagination, culture, curiosity, originality, open mindedness, intelligence, and artistic sensibility. Although this factor has received the least attention of the Big Five in literature, there is some evidence that might be relevant to driving behavior. It postulates that an egocentric mentality often associated with aggression in traffic is lower among more sensitive, broad-minded, and tolerant people (for example, those with a large opening). Therefore, openness to experience may increase the likelihood that a driver will make more realistic assumptions and relies more on situational factors. Assignment of situational "apologies" to other drivers implies that errors are caused by circumstances that are, at least partially, beyond their control, which in turn is less likely to rely on hostile reactions.

An agreeable appearance represents a friendly, respectful and modest behavior, which means agreeableness includes basic features such as honesty, sacrifice, harmony, modesty, high emotions, trust and friendship. It is associated with physical and emotional care and inclination towards care. Therefore, agreeable people can be described as sincere, intimate, friendly and tolerant.

Agreeableness is associated with being courteous, flexible, reliable, kind, cooperate, forgiving and tolerant. This is the dimension of the BFM associated with maintaining positive interpersonal relations. It should be linked to risky driving behaviour and accident proneness as extremely pleasant individuals would be less likely to behave in a

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hostile manner, even when challenged, as they seek to enhance cooperation and avoid negative emotions.

The construct Conscientiousness covers efficiency, conscientiousness and self-discipline. These include personnel management, self-discipline, debate and basic characteristics of competence. Features most commonly associated with conscientiousness include reliability, care, thoroughness, responsibility, organization, planning, hard work, guidance, achievement. Similar results were reported for thoroughness, a secondary variable that is also part of the conscientiousness spectrum. Moreover, they are more likely to comply with driving rules, do not engage in risky situations, avoid dangerous situations and adhere to standards of performance (Arthur and Graziano, 1996) through self-regulating behavior.

Traffic behavior theories predict that behaviors related to risky driving behaviour and accident proneness (for example , excessive lane changes, speeding) are associated with outcomes such as near misses, physical injuries, stress, and violations of rules. Personality traits can affect behavior and can be associated with many aspects. In this model, degrees of risk-taking are a function of self-regulatory aspects of personality.

2.4.0 OVERVIEW OF TRANSPORT POLICY AND TREND OF ACCIDENT RATE IN NIGERIA

Transport is the pilot on which all development and other economic activities revolve. The collapse of the transport sector, therefore, would affect other economic activities. Transportation is an integral part of the functioning of any society, It exhibit a very close relationship to the style of life, the range , the location of productive, leisure

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activities, goods and services which are available for consumption. No society can urbanize, industrialize and advance the living standard of its people without the aid of transport for the activity center, proximity to place of work, relation, and socializing, shopping, medical care. Transport is an important part of everyday life and in consequence; a large and expansive literature has grown over the years on various aspects of transport. One of the characteristics of road transport is its ability to give door-to-door facility and it acts as feeder to all the other modes of transport.

According to Oni (2004) Transport is a key element in the social and economic development of any nation. Therefore, Nigeria's transport policy has two major thrusts, namely: that transport services are adequate to meet the social and economic needs of the country and to provide an effective instrument of national development; and that the transport system ensures the most efficient use of resources within the transport sector and a sustained improvement of the sector's productivity.

Therefore, there is need to develop a national transport policy that is responsive to the needs of the country and its people. According to Oyesiku (2004) the prime of such a policy is the provision of an affordable adequate and efficient transport system. The policy of the federal republic of Nigeria, as contained in its National Economic Empowerment and Development strategy (NEEDS), is to increase the participation of the private sector and private initiative in the national economy. Under this arrangement, the private sector "will be executor, investor and manager of businesses, while the government will play the role of enabler, facilitator and regulator, helping the private sector to grow, create job and general wealth". The national transport policy therefore acknowledges this need for introduction of the discipline of market economy into the

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country's transport sector, in order to attract private investment initiative and as far as possible, to transfer responsibilities for the functioning of the transport system from government to the private sector.

This does not mean the abdication of government responsibilities, but rather a focus on the role of the government leading to a true public – private sector partnership (PPP), with both the private and public sector performing their proper function; this is the main goal of the current national transport policy for Nigeria. The fundamental goals of Nigeria's transport policy are to develop an adequate, affordable, safe; environmentally sound and efficient transport system in the context of a progressive and competitive market economy.

Previous transport policy had also hampered formulation, development, regulation, control and implementation of urban transport guidelines. These have somewhat made the concept of the policy difficult and the appraisal of the policy document impossible before implementation. Moreover, the process of formulation of the policy alienates the stakeholders, particularly private sector operators of the transport system as well as the ordinary transport users or riders. The fact that there was little consultation with stakeholders made the previous efforts of putting together national transport policy an exercise destined for the shelves. Closely associated with the problem of inadequate data and poor consultation, the approaches of government in the evolution of transport policy are the inability of even government stated policy statement to change overtime. A good regulatory and control system, like a transport system must be subjected to modification and review. Despite so much in the literature of urban transportation development, even in several developing countries, virtually all – urban

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centers in Nigeria do not have an urban transport development plan. Lagos has one but this is not updated.

As a result of these constraints, although the potential effect of urban transport policy is great, efforts to put in place urban transportation policy have relatively little effect on the provision, use and rider ship of urban transportation services and therefore, poor qualities of the services and welfare of the people. The issues in urban transport policy in Nigeria as being discussed call for government intervention in setting the rules guiding urban transport system in the country. These issues do not support government direct participation in the provision of services or setting out rigid guidelines for the operation and management of urban transportation systems in the country. Indeed, the issues are not the basis of arguments for regulation or deregulation but articulating urban transportation policy that would guide efficient, adequate safe, comfortable and cost effective urban transportation system.

Nigeria was ranked 191 out of 192 countries in the world with unsaved roads with 162 death rates per 100,000 populations from road traffic accident. According to World Health Organization (WHO, 2007) estimate over 1.3million people are killed annually in road accident while over 50million people sustain different degrees of injuries from crashes.

The chief executive of the Federal Road Safety Commission (FRSC 2012), Mr. Osita Chidoka disclose that over 80 percent of above figure occurs in the developing countries with Africa accounting for the highest death rate. He went further to say that WHO predicted that if nothing is done by the countries to stem the tide, death by Road Traffic Accident would increase by 65percent by the year 2015/2020 overtaking malaria and tuberculosis.

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According to Federal Road Safety Corps reports of 2007; the following months (May, June December and September) had the highest number of persons involved in road accidents and number of persons injured compare to other months of the year , in the year 2008 the months of February, March, July, August and December recorded the highest number of persons involved in accidents, number of serious cases and number of persons injured compare to other months of the year. 2009 showed that January, November and December reported highest number of persons involved in the accident, number of serious cases, and number of persons injured and number of persons killed compare to other months in the year.

Furthermore, in the year 2010 accident rate showed that the months of March, June, November and December recorded the highest number of persons involved in the accident, number of serious cases and number of persons injured and number of persons killed compare to other months in the year. The highest number of persons involved in accident and number of serious cases and persons injured in the year 2011 occurred in November and December compare to other months of the year.

No matter how one drives, there is always a chance that an accident might happen, no one can predict when it will occur. In other words, road accident is unpredictable it usually occurs at any given time with or without warning signal(s) to motorist and other road users. However, accidents do not just happen, every accident has a cause, the causes may be external to the individual, it may be within or it may result from both sources. But with broad based knowledge of road safety, the worst road accident can be prevented or

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avoided. According to Oyeyemi (2006) the causes of road traffic accident was classified into four major factors namely:

Human factors: Road user is the most capable factor of causing accident and it often results from unsafe interaction with other road user or any other causative agent of road accidents.Human factors constituted about 80 percent of the cause of road traffic accidents as recorded in FRSC Data sheet every year, Onakomaiya, (1988) agreed that a greater percentage of accidents is attributable to human factors and argued that highways and vehicles as mere passive agents of mobility. The revised Highway Code Osita(2012) highlighted some specific avoidable causes of road accident which includes drivers, pedestrians and passengers:

Mechanical Factor: Mechanical factor is the issue of the road worthiness of vehicle. This has to do with the Mechanical fitness of the Vehicle. If all of the vehicle plying Nigerian roads especially the commercial ones, are subjected to Potential Mechanical Defect Test (PMDF), the percentage that will contravene existing rules and regulations will be incredible and unbelievable as majority will rank as junks. Oyeyemi (2003) observed that: "The abundance of mechanically defective vehicle is common sights on our road".

According to Oyeyemi (2009), "Many of these vehicle lack minimum vehicle safety standards". However, it will be difficult to shy away from the fact that the popularity of rickety vehicles and the general use of imported second hand vehicles romantically labeled as tokunbo are not unconnected with the more often than not, mechanical induced accidents are incidental to human errors or acts of omission or commission. To keep a vehicle in good mechanical condition, some of the devices that require particular attention are: brakes, steering mechanism, horn and mirrors.

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Road Factor: Road factor concerns road design, construction, maintenance and usage as well as complementary road infrastructure and street furniture. In most parts of Nigeria, the roads constitute serious hazards to road users. Road infrastructure and furniture like road signs and side rails are conspicuously absent. It was until the current road maintenance drive embarked upon by the Federal Ministry of Work (FMW) through the establishment of the Federal Road Maintenance Agency (FERMA), maintenance of the very few roads that were in good shape used to be an abandoned issue. However, the importance of ergonomic design and construction of road to traffic safety cannot be over-emphasized as the physical condition of the road constitutes important psychological factors in safe driving.

As a matter of fact, there is no justification for the serpentine road network that stretches all over the place especially in the south west. It is even more disgusting that road constructed in Nigeria several decades ago are more "Modern" than recently constructed ones. A classic example of poorly constructed road is the Ilesa/Ile-Ife/Ibadan dual carriage expressway with its major intersections, Ilesa/Osu and Ile-Ife town road/Ile-Ife by pass, as inherent death traps. Disappointedly, it is difficult to compare any of these two newly constructed intersections with either the Lagos Bye Pass/Challenge or Lagos/Ojo/Gate/Iwo Road flyover intersection, both in Ibadan.

A good road, no doubt, is a prerequisite to good driving, but a bad road itself will not cause accident if the drivers are conscious of the state of the road. Adeyemi (2003), in an article "Catching them young for safer roads" in the PUNCH newspaper on November 25, 2003 observed that, "it is unarguable that roads are in bad shape, traffic signs are not

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conspicuously displayed on the highways (excuses often given by errant drivers) but all these will be secondary if the human mind is constantly is altered or alert to the fact that these deficiencies are always preset and there is a need to make the best advantage of a worst circumstance."

Environmental Factor: The environmental Factor consists principally of the weather and climate condition. Torrential rain falls and extreme sunshine subject road to early deterioration. "Driving becomes much more difficult and hazardous when visibility is blurred by weather conditions such as rain, moist, fog, harmatan dust or other related factors" (FRSC, 2009).

Road will be become slippery when they are wet and become impassable if there is flood. Other factors that may cause environmental hazards include indiscriminate dumping and abandoning of wrecked vehicles, wrongly-packed broken vehicles, trees and poles, animal herding abandoned stones, woods or other hard objects used for raising vehicles or as chocks when motorists change deflated tires on the road. These objects often cause accidents because other vehicles can run into them of particular concern are mangled vehicles. All these bad sight can distract attention from concentration which is the pivot of driving. Generally, accidents can be influence by any adverse environmental factor.

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2.5.0 CLARIFICATION OF KEY CONCEPTS

2.5.1 Concept of Risky Driving Behaviour: Driving behaviour may comprise ;(1) exposure (for instance, duration of driving), (2) patterns, or when and where, and (3) habits for example speed, common errors and so on). Exposure is commonly reported as distance (km) driven per week (for example, Huebner, Porter and Marshall, 2006; Johnson, 2003, Marshall et al. 2007) or year (for example, Carr, Flood, Steger-May, Schechtman and Binder,2006; Gallo, Reebok and Lesikar, 1999, Ozkan, Lajunen and Summala, 2006), frequency of trips per day for example Collia, Sharp and Giesbrecht, 2003, O'Fallon and Sullivan, 2003) or week (for example Gallo et al.,1999, Johnson, 2003) and length of trips, such as km per trip (for example ,Marshall et al., 2007).

Furthermore, exposure is widely cited when discussing crash risk and driver safety (For example, Bedard et al., 2001; Evans 1991; Hakamies-Blomqvist and Wahlstrom, 1998, Margolis et al., 2002, Maycock, Lockwood and Lester, 1991) as well as self – regulation (for example, Burns, 1999.Cox 1989, McGhee, 1983; Raitanen, Tormakangas, Mollenkopf and Marcellini, 2003). Some researchers (for example Hildebrand, Gordon and Hanson, 2004) define exposure in terms of encounters of risky situations (for example number of left hand turns); however, behaviour that considers situation (for instance, When and where) can also be classified in terms of 'patterns'.

Night time driving is more hazardous than day time driving for all age groups of drivers but has marked impact on the crash involvement of teen drivers (Rice, Peek-Asa and Kraus, 2003). Teen drivers have diurnal crash patterns that are distinct from those of adults, for teen driver crashes peak at 7am and remain elevated until 9am. Fatal crashes have the same morning and afternoon spikes but the numbers of fatal crashes remain

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elevated until midnight, after which they descend slowly to a low level at 4am for all drivers, the risk of motor-vehicle crash increases on the weekend (Schwing and Kamerud, 1988).

Driving behaviour are influenced by many factors including the personal levels of knowledge, awareness, skills, experiences, the conditions found in the motor vehicle and the various conditions of the community in which drivers live. Individual characteristics that have been found to be related to motor vehicle morbidity and mortality among drivers include race, age, gender, cognition, driving experience and level of education. Other risk factors for motor vehicle crashes among drivers include current bio-physiological condition (for example motor skills, sleep deprivation and psychiatric/ neurological status), mental status (for example, mood and thoughts feelings) and behavioural disposition (for example, risk taking and impulsivity) that the individual brings to the situation. There is growing recognition that drivers who, engage in risk behaviours often participate in multiple types of risk behaviours, referred to as clustering or co-occurrence of risky behaviours, shares common underlying cause such as behavioural, biological, family and neighborhood factors.

Research indicates that drink drivers are less likely than other drivers to adopt safe driving behaviours, and are more likely to be risk taking drivers, even when sober than non-drink drivers. Higher levels of drink drivers are associated with other high-risk driving behaviors including speeding, riding with a drink driver and aggressive driving {Bingham and Shope 2004, Donovan 1993, Everetta et al 1999, McMillen et al 1992, Patil et al 2006}.

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In road traffic, risk is a function of four elements the first is the exposure – the amount of movement, or travel within the system by different users or a given population density. The second is the underlying probability of a crash, given a particular exposure. The third is the probability of injury given a crash. The fourth element is the outcome of the injury. Risk can be explained by human error, kinetic energy, tolerance of the human body and post-crash care. Road traffic injury should be considered alongside heart disease, cancer and stroke as a public health problem that responds well to intervention and much of it can be prevented from occurring.

Talking on a cell phone while driving - It seems as if this practice has become epidemic. People are using their driving time as an opportunity to carry on completely unnecessary conversations with family and friends. When engaged in cell phone conversation, it has been shown that drivers have slower reaction times and are more likely to miss seeing important obstacles in their rural ahead. It appears that the simple act of carrying on a distracting conversation is enough to increase the risk of an accident. The following are usually noted in drivers: applying make-up, eating lunch behind the wheel, reading while driving' there are people who actually read when driving.

Trying To Be A Tough Guy: There are people in this world who quite convivial until they get behind the wheel of a car. Shielded by that tinted glass, they feel invincible and imperious. When someone inadvertently pulls in front of them, their ego takes over and emit a barrage of verbal abuse and hand gesture directed through the car window.

Among human factors in accident causation are broad factors leading to error, they include the following; overload and inappropriate activities

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Overloading: Worker's capacity/natural ability, training, state of mind, fatigue, stress, physical condition .Environmental factor: noise, climate, lighting, destructions .Internal factor: personal problem, emotional stress, worries .Situational factors: level of risk, unclear instructions, novelty

Inappropriate Activities: Ignores a suspected hazard, disregards established safety device, performing tasks without requisite training, misjudging the degree of risk.

Human factors appear in the literature as being the most prevalent contributing factors of road traffic crashes. This includes both driving behaviours (for example speeding, drinking and driving, traffic law violations) and impaired skill (for example inattention, fatigue, physical disabilities, impaired sensory perception and so on (Bingham and Shope 2004, Donovan 1993, Everetta et al 1999, McMillen et al 1992, Patil et al 2006

2.5.2 Cost of Risky Driving Behaviour : Most traffic fatalities are caused by risky traffic behaviour, such as drunk driving, non-use of safety belts or child occupant restraints (Satcher, 2001), speeding (Shinar et al, 2001, Golias and Karlaftis 2002, Mesken et al, 2002), not making oneself visible at night and in poor visibility (European Transport Safety Council, 2006), reckless riding on bicycles (Wesson et al, 2000) or motorbike (Busters et al 2005, Lace and Godldstein, 2005), and unsafe crossing of roads (Tabibi and Pfeffer, 2003). Although drunk driving has decreased in many countries during the past twenty years, alcohol consumption is still one of the main factors in road traffic accidents (European Transport Safety Council, 2001)

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In United States approximately 40% of all traffic fatalities in 2001-2002 (Chou et al, 2006) and in Estonia one fifty of all traffic fatalities in 2001-2005 (Maanteeamet, 2006a; and 2006 b) were alcohol related.

Road Traffic crash is a sad and unfortunate event it is sad because of the human and material losses and unfortunate because it is preventable. The worry here is that while the pains of accident are known, nobody has accurately estimated its cost or fashioned a means of arresting and reversing the ugly trend. The ever-increasing pressure on the road transport mode is a mind-bugging source of sudden death, which throws a number of families into grief in our country .Statistics from World Health Organization (WHO) shows that an estimated 1.18million people were killed by road crashes in 2002 while about 20 to 50 million were injured and about 5million were disabled for life ,if the current trend continues by 2020, the annual number of deaths and disabilities from road traffic injuries would have risen by more than 60% to make road death come third on WHO' list of contributors to the global burden of diseases and injury.

The global cost of road accidents and resultant from injuries amounted to $518billion, developing countries accounted for $65billon of that amount, which was more than what they receive in official development assistance ,The majority of motor vehicles were operated in the developed world, and it might be expected that most fatalities would occur .The statistics from WHO however showed that low and middle – income countries accounted for about 85% of deaths and disproportionate high percentage of disability globally. Around the world, injuries were among the leading causes of death of people aged 15-44 .The social cost is incalculable the loss of

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breadwinners and the long –term care for people disable in road traffic accident has driven many families into poverty, particularly in developing countries.

Nigeria, according to WHO has a total population of 135.3 million and a GNP per capital of $1, 085, has a life expectancy of 45 and 46 years for male female respectively .Out of these few years ,the citizen can at best hope to live healthy life for 41.3 and 41.8 years for male and female respectively,197 out of every 1000 children born can die during childhood while the adult mortality rate per 1000 average 496 .The income per capital is $51 and the total health expenditure as percentage of GDP is 5.0 percent. Clearly Nigeria is not so healthy.

The contribution of road crash to this statistics in Nigeria is startling .Between year 2000 and 2005, a total of 65,248 vehicles were involved in road traffic accidents, with buses and other mini transport means accounting for 51.6% and articulated vehicles accounting for 16.8% while the remaining 31.6 % are attributed to cars.

2.5.3 Concept of Accident Proneness : Historically, the concept of accident proneness originated in the work of Greenwood and Woods (1919).They investigated accidents among workers in a Munitions factory in Britain during the First World War .These early investigators examined and compared the distribution of accidents with alternate hypothetical distributions which were based on different assumptions about the causes of accidents .If the chance of having an accident is the same for each individual, then the distribution produced would be a Poisson distribution. However, if the accident probability was unequal for different individuals, then another distribution such as the negative binomial could be expected (McKenna, 1983). Accidents were found to be unevenly distributed with a relatively small proportion of the workers having most of the

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accidents. They went on to hypotheses that personality differences could account for this distorted distribution. However, such a conclusion was not justified on the basis of the evidence presented (Henderson, 1971). For instance no personality tests had been performed. The term accident proneness appears to have been coined by Farmer and Chambers (1939, cited in Henderson, 1971).who used the term to refer only to personal factors. Farmer and Chambers (1939) also found an uneven distribution of accidents with the use of psychological testing they claimed that had established the existence of accident proneness.

Henderson (1971) reports, however that these tests were of doubtful validity. Only one proved to be significantly related to accidents. This was not a test of personality differences between crash repeaters and non-crash involved drivers. A consistent definition of accident proneness has not been employed by many researchers in the area (McKenna, 1983, Shaw and Sicheal, 1971).Thus; it is not surprising that several approaches to accident proneness have been developed. The first treats accident proneness as a single personality trait or type, while another considers it as a multiple series of characteristics (McKenna, 1983) .Other researchers have described accident proneness very broadly as a "tendency to have accidents" (Shaw and Sichel, 1971). This tendency is regarded as a global characteristic, generalizing across different environments. If a person is to be considered accident prone "he must be susceptible to accidents under all circumstances" or at all times" (Shaw and Sichel, 1971).Wong and Hobbs (1949 cited in McKenna, 1983) concluded that "accident tendency was a lifelong characteristic and that it appears to invade all aspects of life". Finally, several authors have postulated that accident proneness refers to innate, unchanging characteristics of the individual (Hale and

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Hale, 1972, cited in McKenna, 1983). However, this latter view must be considered as an extremely controversial position.

Shaw and Sichel (1971) contend that whatever the definition ascribed to accident proneness the basic underlying principle which all interpretations hold in common is that ",even when exposed to the same conditions some people are inherently more likely to have accidents than others. People differ in their propensity for accidents"

In general the concept of accident proneness has fallen from favour and the concept has been criticized on statistical grounds (McKenna,1982;1983) McKenna(1983) reports that the negative binomial fit may be derived from assumptions which do not involve risk of having an accident. Some individuals in any given group would be expected to have more accidents purely by chance (Joseph and Schwartz, 1975, cited in Noyes, 1985).The interpretation of negative binomial fit as evidence for accident proneness requires the absolute control of non-personal factors such as exposure to accident risk and bias in accident reporting. Such a distribution could also be obtained if some people are more exposed to risk than others (McKenna, 1983).

However, the concept of accident proneness (or its equivalent injury proneness, liability to accidents and injuries) remains subject of much controversy, debate and conceptual confusion (Mckenna, 1983). An often mentioned problem is that instead of attributing accident proneness to certain individual, it would be better to blame consider a shortcoming in the health and safety regulations in the workplace (Green, 1991). In this respect it has acted as a barrier in the development of preventive occupational health and safety principles and practices (Sass and Crook, 1981). Still, the concept of a personal liability to accidents has remained an active component of medical knowledge although a

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large variety of definition of accident proneness was used in the past. It is striking that since a discussion about the concept in 1992 in the Journal of the Royal Society of Medicine (Engel, 1991; Green, 1991; Hindmarch, 1991) the term accident proneness was found in the title of only one article with empirically data (Baker et al., 1995). Instead, words like repetitive injuries, recurrent injuries or injury liability are used. In this respect, a clear distinction can be made between accident liabilities, which refers to both personal and environmental factors determining accident rate, and accident proneness, which refers to personal factors only (Beracki, 1976).

2.5.4 Socio-Economic Status, Location and Risky Driving Behaviour

Several studies have shown that people from less-privileged socioeconomic groups are at greater risk of injury from all causes, including road crashes. In the case of road crashes, the explanation may lie in their greater exposure to risk. In a study by John (2002) found that 27% of commuters with no formal education travelled on foot, 55% used buses or minibuses and only 8% used private cars. By contrast, 81% of people with a secondary-level education travelled in private cars, 19% used buses and none walked.

In general people living in urban areas are at greater risk of being involved in road crashes, but people living in rural areas are more likely to be killed or seriously injured if they are involved in crashes. One reason is that motor vehicles tend to travel faster in rural areas. In many low-income and middle-income countries, many people are exposed to new risks when new highways are built through their communities.

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2.5.5 Review of Personality and Risk-Taking in Traffic

Amongst the personality traits, risky behaviour is most consistently associated with impulsivity. The relationship between impulsivity and traffic behaviour has been studied since the late 1980s (Jonah, 1997) but not all of the accumulated evidence is consistent. Impulsivity is defined as a scope of various tendencies including rapid and thoughtless action (Dickman, 1993, Barratt, 1993), risk-taking (Eysenck, 1993), low self-control and inability to hold back one's desires (Buss et al., 1973 Costa and McCrae, 1989).

In the context of everyday life, the approach of Discman (1990), which differentiates dysfunctional impulsivity (tendency to act with less fore thought than most people which leads the subject to difficulties) and functional impulsivity (tendency to act with little forethought when such a style is optional), may bear particular significance. Jonah (1997) reviewed studies done in the late 1980s and the early 1990s on the relationship between sensation seeking and risky driving (for example, driving while impaired, speeding, following too closely, not wearing a seat belt), as well as its consequences (for example, collisions and violations).

Risk-taking in driving habits has shown a positive correlation with the Aggression-Hostility trait according to the Zuckerman-Kuhlman personality questionnaire (Zuckerman and Kuhlman, 2000) and with Anger (Parker et. al. 2002; Deffenbacher et al, 2003)

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2.5.6 Alcohol Use and Accident Proneness

Although drinking would appear to increase the risk of being involved in a crash, it is not a guarantee that a crash will take place (Gusfield, 1985). Gusfied argues that by "singling out alcohol involvement as the cause of crashes, we leave unstated and untested hypothesis that without the presence of alcohol the crash would not have occurred and that alcohol is the only element in the causal process that is capable of being changed' .While the fundamental conclusion of the overwhelming majority of research is not being challenged that for every group or set of conditions increased alcohol use increases the risk of crashes (Gusfield, 1985), A number of studies have investigated the contention that it is not alcohol alone which necessarily causes crashes, but alcohol in combination with other factors such as personality and social background.

Zylman (1975) in a literature review the influence of alcohol in traffic crashes argues that only 30 percent rather than 50 percent of all crashes involve alcohol and that relatively few alcoholics are high risk drivers. He argues that it is not alcohol alone that leads to crashes but a combination of personality characteristics (alienation, hospitality, aggression, and /or transient traumatic experiences) and alcohol .Zylman (1974, cited in Zylman, 1975) suggests that 70 percent of crash cases, personality, situational, or environmental factors are more important than alcohol, even though they may have been drinking . It should be noted at this point that while this conclusion and those to follow may have some intuitive appeal, they are not based on sound conclusive evidence.

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2.6 EMPIRICAL REVIEW OF RELEVANT LITERATURE

2.6.1. Gender and Risky Driving Behaviour

Gender significantly influences risky driving behavior among the drivers, especially males, often use vehicles to show-off, to attract attention or impress members of the opposite sex, to obtain excitement and to display competitive courage among young women (Iram and Taubman, Arnett et al., 1997; Jonah, 1997; Kohler, 1996). Male participants in these studies significantly reported higher risky driving behaviour than the female counterpart. These findings is similar to that of Özkan and Lajunen (2006) that revealed being male is significantly associated with more Highway Code violations. Moreover, men report more aggressive driving behavior (Deffenbacher et al., 2003). According to Barros and Loureiro (1997), infringements of road traffic laws are usually committed by male individuals who have had a driving license for more than two years or less than six months; drive an average of 200 km a week and who have not been fined for road traffic offenses in the last five years. Males behave in a riskier manner than females and these risky types of behaviour tend to decrease with age (Peck, 1993). Moreover, the meta-analytical by Bogg and Roberts (2004) showed that male drivers under 30 years of age exhibited lower self-control levels (r =-.27) than older male drivers (r =-.13). It seems that deviant driving styles are associated with being male and young (Elander et al., 1993).

Males consistently exhibit greater risky driving, and road trauma involvement, compared with females (Job, 1990b; Prabhakar et al., 1996). For example, Harre, Field & Kirkwood (1996) found that males were significantly more likely than females to report engaging in speeding, drink-driving, and breaking rules associated with being on a

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restricted licence. Male drivers have also been observed to engage in greater speeding behaviour (Wasielewski, 1984), and greater tailgating behaviour (Evans and Wasielewski, 1983), compared to female drivers. Nonetheless, some researchers suggest that the risky driving behavior of females is becoming increasingly similar to that of male drivers (Moore, 1994). Sensation seeking and trait aggressiveness were found to be strongly related to risk taking in general and to reckless driving in particular among young men and less among young women (Arnett et al., 1997; Jonah, 1997; Kohler, 1996).

2.6.2 Age and Risky Driving Behaviour

The driving literature reveals that motivations like competitiveness, sense of power and control, or just pursuing sensual pleasure may impinge on the way one drives and may influence a person's decision to drive recklessly (Evans, 1991). Vehicles are often used as an outlet for independence, emotional expression, rebelliousness, and to satisfy peer-acceptance needs of young drivers (Jessor, 1987).

In particular, young drivers are more likely to engage in risky driving compared with older drivers (Jonah, 1986; Job, 1999; Williams, 1998; Cameron, 1985; Prabhakar et al, 1996). These are the same driving errors commonly identified for young drivers of cars (McKnight and McKnight, 2000, 2003). Thus, with respect to demographic and employment status, accident incidence has been found to decline with a bus driver's age (Dorn and afWåhlberg, 2008; Greiner, Krause, Ragland, & Fisher, 1998; Jovanis et al., 1991; Zegeer et al., 1993) and driving experience (Blom, Pokorny, & van Leeuwen, 1987).

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2.6.3 Education and Risky Driving Behaviour

Professional driving is an occupation that traditionally attracted a greater proportion of males (Tse et al. 2006), while some previous studies concerning car driving concluded that a driver's educational levels are associated with accident risk (Hemenway Solnick, 1993; Shinar, 1993; Shinar, Schechtman, Compton, 2001). Begg, Langley, Stephenson (2003) investigated factors that predicted persistent driving after drinking, persistent unsafe driving after drinking, and persistent cannabis use and driving among young adults. They found that mental health measures (substance use, cannabis dependence, alcohol dependence, depression); anti-social behavior (juvenile arrest, aggressive behaviour, court convictions); early driving behaviour and experiences (car and motorcycle licences, traffic crashes) and gender predicted risky driving behaviour. The results showed that males who persisted in driving after drinking were more likely than the other males to have some school academic qualifications and to be employed at age 26.

The study of Rowe, Maugham, Gregory and Eley (2013) who found that attitudes became riskier more accidents proneness obtained the more training and/or driving experience was acquired between these two time points. Drivers who received certificate in driving were more likely to endorse risky driving behaviours than either non-drivers or learner drivers in 2004. Riskier attitudes were associated with having held a full licence for longer, having clocked up more driving miles, and having committed more speeding violations.

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2.6.4 Gender and accident Proneness

Kennard (2014) reviewed studies that showed that most men know that on average, will live shorter lives than women. What is less well known is the fact that accidents and violence are one of the major contributors to early deaths and disabilities. Young men in particular are over represented in the deaths and accidents statistics, probably because they are most likely to participate in risky behaviours. Boys are twice as likely to die as girls in play-related accidents or by falling out of windows. As adults men are three times as likely to die from injuries as women evidence from several countries have shown that men are between two and five times as likely to be admitted to hospital as a result of injuries. Young men are more likely to have serious accidents than women of the same age because they are more prone to sudden breaking and driving for extended periods without taking a rest. When it comes to young drivers, risky and aggressive driving appears to be the dominant human factor that places them at risk (Reason et al., 1990). Additional variables include the fact that they are inexperienced but tend to over-estimate their driving skills while underestimating danger (Fisher et al., 2002) and that they tend to drive lower quality vehicles (Williams et al., 2006).

It has been found that young drivers believe they are at lower risk to become involved in an accident compared to older adults and age-mates, when in fact their chances are much higher compared to older drivers. At the same time, they overestimate their driving ability compared to what is actually found to be the case in laboratory driving simulations (for example, McKenna and Crick, 1991; Finn and Bragg, 1986; Brown, 1982).

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Studies comparing men and women in general tend to support this since they usually fail to find a difference (Joint, 1995; Lajunen, et al., 1998; McGarva and Steiner, 2000). The same applied to research looking at mild aggression such as horn honking and fist shaking (Hennessy and Wiesenthal, 1999, 2001). This would be consistent with other studies looking at general anger, which have shown that women tend to experience anger as frequently as men (Kassinove and Sukhodolsky, 1995) The same applies to studies looking at anger expression which have failed to distinguish between the two groups (Thomas, 1989; Campbell, 1997). Although the frequency of both anger and aggression is very similar the reasons and the manner in which it is expressed is not (Kring, 2000). For instance several studies have found that women reported more anger than men following condescending remarks and that men are more likely to get into physical fights, damage property and verbally assault people than women (Kring, 2000). The greater involvement of men in accidents is in accord with previous studies (for example, Al-Balbiss, 2003; Zuckerman, 2008). Men are more impulsive than women (Zuckerman, 2008), impulsivity being the main personality predictor of accidents among men in this study Men tend to take risks more than women (Bell et al., 2000). Previous studies show that men are less conscientious than women (Rubinstein, 2005, 2007; Rubinstein and Strul, 2007), a trait which might be considered as cautiousness and the opposite of impulsivity.

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2.6.5 Age and accident proneness

Age has been found to have direct influence on accident proneness among young drivers. Age was suggested to be predictive of accident involvement or accident propensity of young people, especially males. Close parental supervision and gradual expansion of driving rights are protective factors against accident involvement (Hartos et al., 2000). Young drivers tend to drive in more risky and aggressive ways when they are around other male peers, perhaps as a way to demonstrate their manhood, fearlessness and competence (Jonah, 1986).

According to Nell (2002) young males in all species operate in ways to attract females. They act fearlessly to demonstrate their ability to offer protection and compete with other males to gain access to mates. Driving may be one of the few socially sanctioned ways to demonstrate masculinity and aggression in contemporary societies. This may partially explain the higher fatal accident rates when young males drive with male peers as companions (Chen et al., 2000). The social context may also promote this evolutionarily based behavior. Movies and the mass media glamorize fast cars and dangerous driving maneuvers and associate them with masculinity, as in most contemporary action films (Shope, 2006; Arnett, 2002). Bruckner et al. (2011) noted the linear relationship among educational achievement, increased money, vehicle ownership, and accident proneness.

Individuals differ in their propensity toward aggression and young males, in particular, have been noted for their high level of aggression. The same seem to apply to aggressive drivers who are typically young and male (Marsch and Collett, 1986; Lajunen, Parker and Stradling, 1998). In the study by Marsch and Collett (1986) 25 % of the young drivers

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aged 17 – 25 would chase another driver if they had been offended. In a study by Krahe and Fenske (2002) another dimension was added namely macho personality. The results showed that young macho men assigned greater importance to speed and sportiness of a car and reported significantly more driving aggression than young non-macho men. The negative association between age and accidents is in accord with many previous studies (for example, Lourens et al., 1999; Zuckerman, 2008). The relative low relation found in our study is a result of the fact that most previous studies investigated much younger drivers (mainly adolescents).

A study by Schlag (1994) found highly significant differences between people under the age of 70 and those over 70 (N=110) on a driving test and in testing using a precursor version of the ATAVT (TAVTMB: Biehl, 1996). Older people were slower to merge on motorway access slip roads, chose a tighter turning radius when turning into a minor road, and in general tried harder to drive in the right-hand lane. They ignored priority rules and red lights significantly more often. Older people more frequently ignored other drivers who had priority, and they crossed a level crossing without barriers without reducing their speed.

2.6.6 Education and accidents proneness

Barribeau (2012) reported that overqualified recent immigrants are three times more likely to be injured on the job than their local, less-educated peers. Looking at 63,462 responses to the 2003 and 2005 Canadian Community Health Surveys, the researchers found that both new immigrants and those who were overqualified for their job were more likely to get injured and when you combine both factors, it's particularly

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dangerous combination. By adjusting for other variables, this increase in danger eventually lowered to a threefold more likely chance of being hurt. Sahaand (2014) carried out a study in stone quarries and included 147 children and adolescent workers (81 males and 66 females). They found that Age, nature of work, work hours per day, musculoskeletal complaint and education showed significant effects on workplace injuries proneness.

Pless, Verreault, and Tenina (1989) considered cases of 400 uninjured children seen in the same hospitals for non-traumatic reasons. After adjustment for age, gender and socioeconomic area of residence, logistic regression analyses showed higher risks of injury to be related to fewer years of parents' education, a history of accident to a family member, an environment judged as unsafe, and poor parental supervision. Absence of physical health problems, fewer family preventive behaviours and reported lack of r32106cautiousness were also related to a higher risk, whereas neither aggressively nor behavioural disturbance, whether internalizing or externalizing, showed any such relation.

2.6.7 Personality Traits and Risky Driving Behaviours

Krahe and Fenske (2002) focused on a specific personality trait and risky driving behaviour; the researchers studied the relationship between “macho personality” and aggressive driving. Krahé and Fenske (2002) surveyed 154 men who completed two questionnaires (the Aggressive Driving Scale, and a Violence and Danger Scale) about their personal background and details about the cars they owned. Their findings support

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the notion that "individual characteristics of the driver, such as macho personality and age, can predict risky driving behaviour.

Similar to the macho personality just described, another personality trait having a self-concept component is narcissism. Schreer (2002) examined the relationship between this trait and aggressive driving behaviour and found that inflated self-esteem predicted aggressive driving behaviour better than low self-esteem. Furthermore, individuals who scored higher on the Exhibitionism component of the NPI reported higher levels of risky driving behaviour, while Entitlement predicted such behaviour for males only.

Krahé (2005) studied another personality dimension that has a self-concept component, namely, sex role orientation. Specifically, this researcher investigated the relationship between sex role orientation, dispositional aggressiveness, age, and annual mileage using a sample of 256 female drivers. Krahé (2005) found that aggressive behaviour among women decreased as a function of age, but increased as function of annual mileage. Additionally, dispositional aggressiveness was a significant predictor of driving aggression. Specifically, it is the physical aggression component of dispositional aggressiveness that links trait aggressiveness to aggressive driving. As for the effect of sex role orientation on aggressive driving, Krahé (2005) did not show a link between masculinity and driving aggression, but there was evidence in support of a buffering effect of femininity on driving aggression. Finally, contrary to Lajunen and Parker (2001), this study showed a positive correlation between annual mileage and driving aggression. Ellison-Potter, Bell and Deffenbacher (2001) designed one of a few studies using a simulation to study aggressive driving. These researchers examined the effects of traits, driving anger, aggressive stimuli, and anonymity on aggressive driving behaviour

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in a simulated driving task. Using a computer-based driving simulation, these researchers found that situational variables such as anonymity and aggressive stimuli were better predictors of aggressive driving than dispositional variables such as trait anger (for example, a predisposition to experience more frequent and intense state anger across a variety of driving situations).

Miles and Johnson (2003) studied the relationship between a wide range of personality dimensions and aggressive driving. Specifically, they investigated the relationship between personality, attitudes, beliefs, and aggressive driving. Specifically, these researchers attempted to identify personality characteristics, attitudes, and belief of people who drive aggressively. Drivers belonging to two groups were surveyed: a group of drivers with multiple traffic citations and a control group of undergraduate psychology students at a large south -eastern university a total of 48 participants out of the former group while 93 participants were included in the latter. Results showed that the two groups differed significantly in terms of driving behaviours, attitudes and belief, and type-A behaviour pattern.

There were no significant differences, however, in the personality characteristics of conscientiousness, agreeableness, and neuroticism. Dahlen and associates conducted two studies that combined several personality dimensions in the study of aggressive driving. Dahlen and White (2006) studied the utility of combining trait driving anger (i.e., the tendency to become angry when encountering frustration and provocation on the road), sensation seeking, and the Big Five personality factors in predicting driving anger expression, and frequency of aggressive and risky driving behaviour. In general, Dahlen and White (2006) found that openness, emotional stability, agreeableness, trait driving

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anger, and sensation seeking predicted driving behaviour and outcomes independent of gender, age, and miles/week. More specifically, aggressive driving was predicted by lower scores in emotional stability (for example, higher scores in neuroticism), and increased DAS and scores. Dahlen, Martin, Ragan, and Kuhlman (2005) investigated the combined effect of trait driving anger, sensation seeking, impulsiveness, and boredom proneness on driving behaviour.

These researchers surveyed 224 undergraduate students, found a moderate relationship between aggressive driving and both impulsiveness and external boredom (for example. 11 boredom due to the lack of external stimulation). It also found that sensation seeking predicted aggressive driving. Similar to Dahlen and, Harris and Houston (2010) studied the combined effect of several personality dimensions on aggressive driving, but they also added situational variables to their analyses. These researchers investigated personality variables that included hostility, sensation seeking, and competitiveness. Results showed a positive correlation between horn honking and hostility, boredom susceptibility, competitiveness, and being male, with only hostility and boredom susceptibility remaining as significant predictors in the multiple regression analysis. As for tailgating, the results showed a positive correlation with hostility, thrill and adventure seeking, boredom susceptibility, and competitiveness, with only the first three remaining significant predictors in the multiple regression analysis.

Finally, Harris and Houston (2010) found a significant main effect for time pressure on horn honking with a marginal interaction effect (for example, although both men and women admitted to more honking when pressed for time, this situation was

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more pronounced among women). Similarly, for tailgating in both males and females reported that they were more likely to tailgate when pressed for time.

Schwebel, Severson, Ball, and Rizzo (2006) studied both the independent and combined effects of three personality traits (namely, sensation-seeking, conscientiousness, and anger/hostility) on risky driving behaviour. These researchers collected data from 73 (41% male, 55% female, and 4% unknown sex, and ranging in age from 21 to 51) college students from introductory psychology courses at the University of Alabama at Birmingham. Schwebel et al. (2006) found that sensation-seeking, conscientiousness, and angry/hostile behaviour patterns each predicted risky driving on self-reports, and, like Dahlen et al. (2005), that these personality traits contribute incrementally to explain risky driving. However, no personality trait predicted risky driving in the simulator.

Arthur and Day (2009), investigate whether reported risky driving behaviors measured by driver violations, error and lapse (items of the Driver Behavior Questionnaire (DBQ) will differ across the Big Five personality traits (openness, conscientiousness, extraversion, agreeableness and neuroticism). They found that Drivers who reported low driver violation scored higher on conscientiousness and agreeableness. Drivers who reported high violations were more extraverted. Conscientious drivers also reported low driver error and lapse. Drivers high on driver lapse scored higher on neuroticism. There was no difference in DBQ items across openness. The study concluded that there are different elements of risky driving which differ across some of the Big Five personality traits.

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On the five personality factors the study showed that low emotional stability generally predicts aggressive behaviour as well as its factors except negativism. Numerous studies have investigated the relation between emotional stability and driving style. Taubman - Ben Ari and Yehiel (2011) found that people with low scores on emotional stability practice an anxious driving style. Also, Dahlen, et al. (2011) demonstrated that emotional stability relates negatively with aggressive driving, road accidents and traffic violation while Dahlen and White (2006) show that there is a negative relation between emotional stability and anger behind the wheel. Jovanovic et.al (2010) highlights that people with high scores on the emotional stability factor show a high level of physical and verbal aggression in traffic.

Extraversion, which means the pleasure of interacting with others, the tendency to be assertive, sociable, energetic, outward (John and Srivastrava, 1999) was studied in relation to aggressive driving behavior, some studies finding a positive relation between extraversion and reckless driving (Renner and Ander, 2000). The study by Benfield, Szle ko and Bell (2006) shows that there is a positive correlation only between extraversion and physical aggression in traffic and other traffic subscales of aggression such as verbal aggression, adaptive and constructive behavior or traffic challenges, do not correlate significantly with extraversion . Martin and Boosma (1989) have shown that people with high scores on the scale of extraversion under the influence of alcohol show a high level of aggressiveness while driving. Dahlen and White (2006) showed that extraversion predicts reckless driving and traffic accidents, the high level of extraversion being one of the causes of road accidents.

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People with high scores on the openness factor tend to be characterized by aesthetic appreciation, values, idea acceptance, self-actualization, personal growth and development (McCrae and Costa, 2006). Unlike other factors of the Big Five model, few studies have found significant relation between openness and aggressive driving behaviour (Jovanovic et al 2010). Taubman - Ben-Ari and Yehiel (2011) studied the openness factor in the context of driving styles, finding a positive relation between openness and careful driving style while between styles characterized by aggressive, anxious and hostile behaviour, there was no significant association with openness.

Among the few studies that have found the openness factor associated with aggressive driving behavior is that of Dahlen and White (2006), the authors showing a negative link between openness and reckless driving, individuals with high scores on openness factor being less prone to engage in risky traffic than those with a low score.

People with a high score on agreeableness practice careful driving style, and those with a low score drive in a angry, reckless, anxious and desolate way (Taubman - Ben - Ari and Yehiel, 2011). Also, people with a high score on agreeableness are characterized by adaptive behaviours in traffic while people with low scores show a high level of verbal aggressiveness when driving (Benfield et.al, 2006). Dahlen& White (2006) found that people with high levels of agreeableness do not practice reckless driving, and have a low level of aggressive behaviour in traffic. In addition Dahlen et.al (2011) negative relationship have been found between agreeableness and violation of traffic rules, people with low scores on agreeableness factor, often violating traffic rules. Also, a negative association was found by Jovanovicet.al (2010) between agreeableness and manifested

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anger while driving, traffic participants with low scores on agreeableness behaved more hostile and more furious than those high on agreeableness.

Arthur and Graziano Jr. (1996) have demonstrated the existence of a negative relation between conscientiousness and involvement in accidents. Thus, those with a high score on this factor, being characterized by organization and self-discipline, are rarely involved in traffic accidents than those with low conscientiousness scores. Jovanovic et.al (2010) show that physical aggression and verbal aggression manifested while driving relate negatively with conscientiousness, those with high scores on this factor manifesting a reduced physical and verbal aggressive behavior when driving, than those with small scores. Moreover, Benfield et.al (2006) show that a high score on this trait relates positively with constructive and adaptive behaviours in traffic and relates negatively with verbal aggression behind the wheel. It should be noted that even though the foregoing review of the literature exemplifies several ways of defining "aggressive driving" (some focusing on emotional while others on cognitive aspects), the present research adopts Harris and Houston's (2003) approach of measuring aggressive driving in a way that is void of any reference to emotional or motivational states, and in which consideration is given only to the frequency of specific driving behaviours. Thus, in light of this previous work on aggressive driving, and in attempt to furthering our understanding of aggressive driving behaviour,

Personality traits can be defined as dimensions of individual differences in the tendency to show consistent patterns of thoughts, feelings and behaviour (McCrae and Costa, 1995; Tellegen1991). Personality traits are thought to influence behaviour. Cattell (1950) has stated one of the most deterministic views pertaining to the influence of personality traits

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on behaviour. Although traits have low predictive value of single situations, Epstein (1977) has shown that traits show high correspondence with aggregate measures of behavior. The role of personality traits in traffic accidents has been central in explanations emphasizing accident proneness (Farmer and Chambers, 1939; Tillman and Hobbs1949).

The notion that *one* general personality trait is the cause of drivers' accident involvement has, however, been rejected. Still, the influence of personality on driving behaviour and accident involvement is not totally abandoned. A range of studies have found personality traits to be weak, but consistently associated with accident involvement in traffic. There is, however, reason to believe that the role of personality traits pertaining to accident involvement in traffic may be underestimated. As implied by Everitt (1977), general measures such as personality traits are assumed to be weak predictors of a single event measure such as a traffic accident. This difficulty is further augmented due to the fact that traffic accidents are relatively rare, and influenced by numerous other factors than the driver's behaviour in traffic (Fridstrøm, Ifver, Ingebrigtsen, Kulmala and Thomsen, 1995).

Sensation seeking can be said to be the personality trait most frequently studied in relation to driving behaviour and traffic accident involvement. Sensation seeking is defined as a need to experience novelty, excitement, and dangers (Zuckerman, 1979). Several researchers have suggested that risky driving is motivated on the basis of the sensation-seeking thrill this causes for some individuals (Arnett, 1990, 1991; Jonah, 1997).

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The motivational influence of sensation seeking on risky driving behaviour is further supported by findings demonstrating that sensation seeking explains a large part of the variation in the propensity to commit driving violations, but accounts for very little of the variance in the tendency to commit driving errors(Rimmö and Åberg, 1999).

A range of other personality factors are also related to risky driving and crash involvement. The most prominent ones are mild social deviance, hostility, Zuckerman (1979) has divided the trait sensation seeking into four dimensions: Thrill and adventure seeking (seeking dangers), excitement seeking (seeking unusual sensations),is inhibition (mild social deviance), and Boredom Susceptibility (intolerance for repetitive experiences).

Aggression, impulsiveness, emotional liability, locus of control, and antisocial motivation (Arthur, Barrett and Alexander, 1991; Hilakivi, Veilahti, Asplung, Sinivuo, Laitinen and Koskenvuo, 1987; One may, however, ask oneself what the point of studying the role of personality variables is since it is unrealistic to be able to change a driver's personality. Would it not be more meaningful to study only motivational beliefs that are more open to change, such as risk-taking attitudes? The reason for focusing on personality traits in the present thesis is because traits are thought to influence the individual's perception and appraisal of the environment (McCrae and Costa, 1995).

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2.6.8 Alcohol Use and Risk Driving Behaviour

Scott-Parker, Watson, King and Hyde (2014) explore the: (1) self-reported compliance of drivers with road rules regarding substance-impaired driving and other risky driving behaviors (e.g., speeding, driving while tired), one year after progression from a Learner to a Provisional (intermediate) licence; and (2) interrelationships between substance-impaired driving and other risky driving behaviors (e.g., crashes, offences, and Police avoidance).

A relatively small proportion of participants reported driving after taking drugs (6.3% of males, 1.3% of females) and drinking alcohol (18.5% of males, 11.8% of females). In comparison, a considerable proportion of participants reported at least occasionally exceeding speed limits (86.7% of novices), and risky behaviours like driving when tired (83.6% of novices). Substance-impaired driving was associated with avoiding Police, speeding, risky driving intentions, and self-reported crashes and offences. Forty-three percent of respondents who drove after taking drugs also reported alcohol-impaired driving. Substance-impaired driving is problematic for young, inexperienced drivers; other risky driving behaviours such as speeding, carrying passengers, and driving tired are also of concern. Young drivers who crashed whilst under the influence of alcohol in the United States between 2005 and 2009 were more likely to be males who were speeding, not wearing a seatbelt, and carrying passengers on a weekend night (Williams et al., 2011). Substance-impairment may reduce wearing of seatbelts and increase the number of passengers carried; young drivers occasionally are found to carry more passengers within the cabin of passenger vehicles than there are seats (and therefore seatbelts) (e.g., see Calligeros, 2009). Young drivers also drive at times which are in

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conflict with circadian rhythms and which may also involve alcohol and carrying peers who may be a negative influence upon their behaviour (Papadakaki et al., 2008). Further, regular mobile phone users report frequent speeding, crashes and driving violations (Schlehofer et al., 2010).

2.6.8a Personality Traits and Accident Proneness

The driving literature have revealed that motivations like competitiveness, sense of power and control, or just pursuing sensual pleasure may impinge on the way one drives and may influence a person's being prone to accidents (Evans, 1991). Also, vehicles are often used as an outlet for independence, emotional expression, rebelliousness, and to satisfy peer-acceptance needs of young drivers (Jessor, 1987). Based on these drivers high on neuroticism are more likely to drive dangerously and be involved in accident situations frequently. Also Aworeni et al., (2011) concluded that there is relationship between human characteristics, vehicular characteristics, roadway characteristics, environmental characteristics.

Liao et al. (2001) have found that fire-fighters who were introverts were less likely to call for assistance, and as fire-fighting requires a high degree of teamwork, it might be that the less integrated and sociable members of the team exposed themselves to greater personal risks. Extroversion is associated with being impulsive and this has been found to be a feature in people who have car accidents and accidents at work (Furnham and Heaven, 1999). Other equally important variables were included in the first factor: driving during bad weather conditions, driving while using mobile phone and overtaking in dangerous situations. Secondly, the factor "distraction" is associated to the distractive

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behavior. A study conducted by Deffenbacher et al. (2003) lead to the conclusion that lapses of concentration are associated with risky driving behavior. Finally, a third dimension -labeled "driving errors of omission"- is associated to little or no signaling light use. Social, cognitive and personality variables influence the driving process and, consequently, the absence or existence of accidents. In line with previous studies (Arthur and Graziano, 1996; Blanchard, Barton & Malta, 2000; Dahlen and White, 2006; Jonah, 1997; Lajunen and Parker, 2001; Schwebel et al., 2006) driver's personality is a good predictor of dangerous driving behaviour Iversen, and Rundmo 2002, Furnham and Heaven 1994. This corroborates the results from previous studies that show that personality characteristics is significantly relating to driving. Fergusson, Swain-Campbell, and Horwood (2003) who examined the prevalence of risky driving behavior among young people, the characteristics of those who engage in risky behaviours driving behaviour and the association between risky driving and accident risk. More than 90% of drivers engaged in some form of risky driving behaviour.

Those most likely to engage in frequent risky driving behaviours were: males who exhibited alcohol or cannabis abuse use. There was a strong association between the extent of risky driving behaviour and traffic accident risk. This result is similar to that of Iversen,; Rundmo,-Torbjoern (2000) who found that drivers involved in risk taking-behaviour experienced near-accidents and crashes leading to both injuries and material damage more often than other drivers. Similar results were found by Buss et al., 1993; Huebner,and Porter-Marshall 2006,and Judges (1993). In the same vein, Begg and Langley (2004) found that personality trait of low constraint (for example, low scores for control, harm avoidance, and traditionalism), aggressive behaviour, and cannabis

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dependence predicted risky driving behaviour. These are characteristics to be borne in mind when developing programmers for young drivers that aim to deter the development of persistent risky driving behaviour. Schell and colleagues explored the role of attitudes, behavior and personality variables in driving under influence of alcohol (DUI) (Schell et al., 2006).

They found a near zero correlation between DUI and Impulsivity and Hostility when they controlled for socially desirable responding bias, and no relation at all between Sensation seeking and DUI when this relationship was adjusted for behavior factors such as drinking frequency and high risk driving style. Ulleberg and Rundmo (2003) also found that the effect of person

2.6.9 Alcohol use and accident proneness

The role of alcohol according to Cameron (1982) indicates that a large proportion of alcohol and non -alcohol involved crashes involve drivers under the age of twenty-five. This is the case even when differential exposure to traffic crashes has been controlled for. In a recent review, Mayhew, Donelson, Bierness and Simpson (1986) concluded that young drivers who drive after drinking had a greater risk of crash involvement than older drinking drivers, although the young drivers were less likely to drink and drive. Mayhew et al make the suggestion that the higher crash risk of young drivers may be due to inexperience with drinking and/or driving. In an interesting study, Donovan and Marlatt (1982) attempted to identify through the use of cluster analysis personality sub-types of drivers who drive while under the influence of alcohol.

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Rubinstein (2013) investigated the relation between the NEO-PI, ImpSS, and involvement in car accidents among 1,500 participants, who comprises a representative sample of the adult Jewish population in Israel during 2009-2011.The results shows car accident proneness: Drivers who had been involved in accidents prior to the study were involved in accidents during the study more than those who had not been involved in accidents prior to the study. However, not a single pedestrian, who had perceived himself or herself responsible for accidents prior to the study was involved in accidents during the study, but no significant accident rate differences have been found between drivers who had perceived themselves responsible and irresponsible in causing pre-study accidents. In line with previous studies, men were significantly more involved than women in car accidents and a negative association was found between age and involvement in car accidents was the main personality predictor of accident involvement among male drivers, while the authoritarianism factor of the openness to experience scale served as an additional predictor among female drivers

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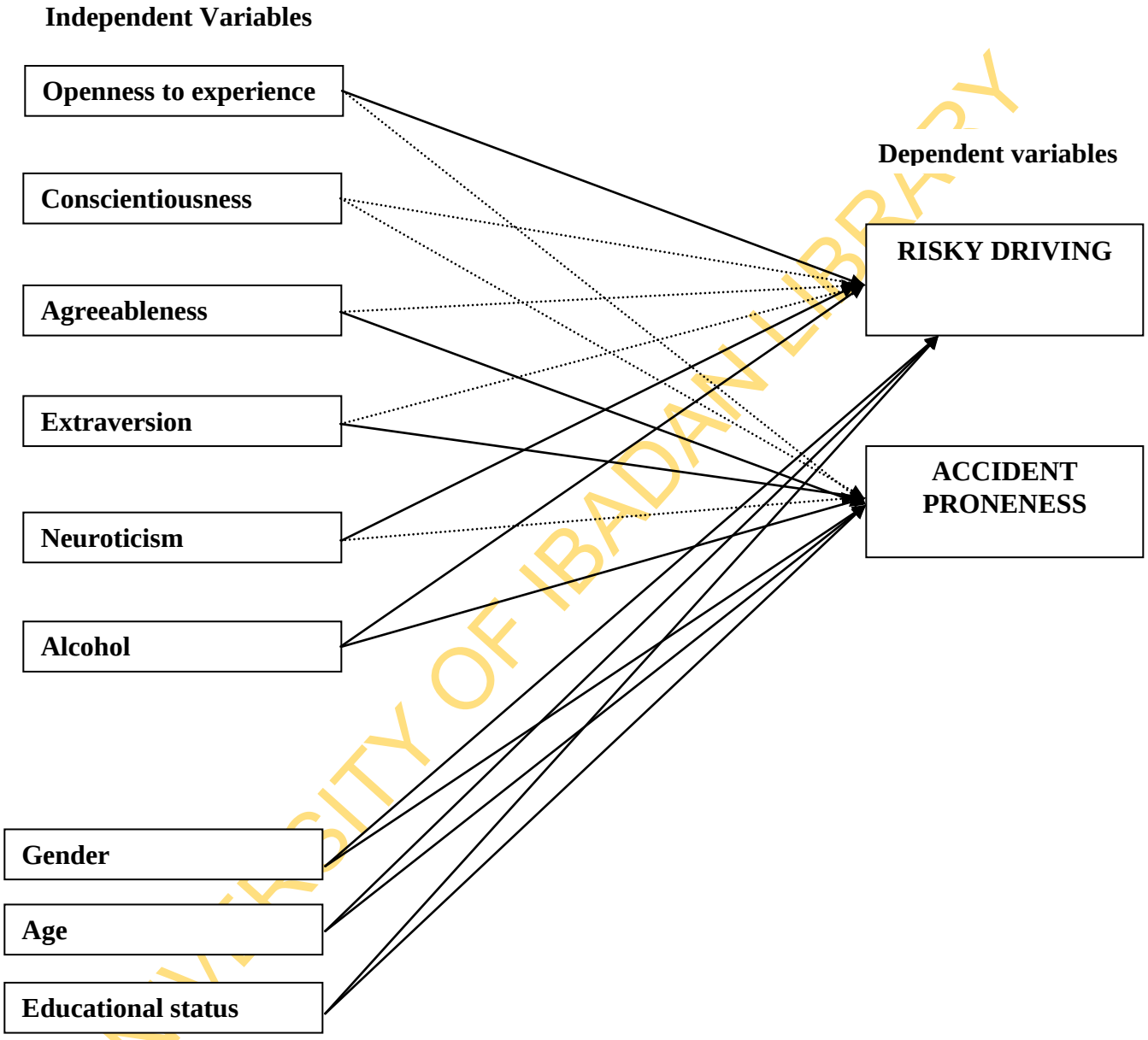
2.6.9a. Conceptual Framework

2.6.9b. Psycho-social model of accident proneness and risky driving behaviour



Source: Researcher (2014)

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Prediction of accident occurrence and assessment of risky driving behaviour is based on the premise that accidents in general are not due to chance alone and the study focuses on the role of dispositional and risk factors. This study proposed a direct link personality's trait as a dispositional factor responsible for risky driving behaviour and accident proneness among the present sample. In addition the study also holds alcohol use as factors contributing to the risky driving and accident proneness. In order to control for the influence of socialization factor in the study age, gender and education were included in the model towards explaining the psycho-social model risky driving and accident proneness models.

The path proposed is that high concentration of alcohol in the blood stream is that the victims' reactions are slower with contribution of low conscientiousness, high neuroticism and extraversion traits to risky driving and crash involvement. All these factors are assumed to represent the basic structure behind all personality traits. These models will be tested not neglecting the contribution younger age, being a male and low educational attainment in risky driving behavior and accident proneness. This study also expects a positive relationship between the risky driving behaviour and accident proneness among the present sample. The conceptual model path is broken into the hypotheses in section 2.6.

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2.7 HYPOTHESES

1. Male drivers will be more significantly prone to risky driving behaviour than female drivers.
2. Male drivers will be more significantly accident prone than female drivers
3. Educational qualification will significantly influence the level of risky driving behaviour among injured drivers.
4. Education level will significantly influence accident proneness among injured drivers.
5. Younger drivers will significantly engage in high level of risky driving behaviour than older drivers among injured drivers.
6. Younger drivers will significantly be more accident prone than older drivers among injured drivers.
7. Personality factors and alcohol use will independently and jointly predict risky driving behaviour.
8. Personality factors and alcohol use will independently and jointly predict accident proneness.
9. All the Psychological and social variables will significantly independently and jointly predict risky driving behaviour among injured drivers
10. Psychological and social variables will significantly independently and jointly predict accident proneness among injured drivers.

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2.8 OPERATIONAL DEFINITION OF TERMS

Risky driving behaviour: -This refers to drivers' driving behaviour that puts the occupant of the vehicle and the vehicle at the risk of accidents. Such behaviour include over speeding, making phone calls while driving. They can range from being mild to dangerous driving .This was measured in this study using a 10-item driving behaviour scale developed by the researcher. The mean score is 23.01. High scores above the mean score on the scale indicate higher aggressive driving behaviour, while low score below the mean on the scale indicates lower Aggressive driving behaviour.

Accident proneness: Certain numbers of accidents over a period of time. These include individual who experience accidents due to more than mere bad luck. This behaviour was measured in this study using a 10-item adapted from Sicco Van As (2006). The mean score is 27.21. High scores above the mean score on the scale indicate higher accident proneness, while low score below the mean on the scale indicates lower accident proneness.

Alcohol use: Is a chemical substance capable of altering the physical, biological, or psychological functions of the body. Alcohol use could be used in form of local cocktails like; Hot (Ogogoro), opa-eyin, Ogun Jedi. Drug use was captured using Alcohol disorder identifications tests (AUDIT) developed by Saunders, Aasland,Babor, de le Fuente, and Grant (2006). High score on the scale indicates frequent drug use behaviour, while low score on the scale indicates lower drug use behaviour.

Personality : personality is the individual characteristics of a person that which for us means exactly the same as developing *personality traits* was measured in this study using

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the "Big Five" factors of personality which is a five broad domains or dimensions of personality described below:

Extroversion traits: refers to trait characterized by a keen interest in other people and external events, and venturing forth with confidence into the unknown. This was measured using the 16 – item big five personality scale developed by Buchanam, Coldberg and Johnson (1999)

Neuroticism trait: is the other trait that is "a dimension of personality defined by stability and low anxiety at one end as opposed to instability and high anxiety at the other end". This was measured using the 7 – item big five personality scale developed by Buchanam, Coldberg and Johnson (1999)

Openness to experience trait: refers to how willing people are to make adjustments in notions and activities in accordance with new ideas or situations. This was measured using the 7 – item big five personality scale developed by Buchanam, Coldberg and Johnson (1999)

Agreeableness traits; refers to how compatible people are with other people, or basically how able they are to get along with others. This was measured using the 7 – item big five personality scale developed by Buchanam, Coldberg and Johnson (1999)

Conscientiousness traits: refers to how much a person is organized and considers others when making decisions. This was measured using the 7 – item big five personality scale developed by Buchanam, Coldberg and Johnson (1999)

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Educational Level – refers to the level of educational qualification of patients.This is groupped into low and higher . Patients that pocess OND /NCE certificate and above are regarded as higher educational status while patients with SSCE and below are regarded as lower educational status.

Age: This refers to the number of years a person has lived. This was captured by asking for the age of the patients as at last birthday of the patients. In his study age was categorized into two levels (young and old)

Gender: refers to the biological differences between men and women. This was captured by asking whether the patient is a male or female.

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CHAPTER THREE

METHOD

3.1 RESEARCH DESIGN

The study adopted cross sectional survey design because the respondents were from different towns and cities, they were studied simultaneously and their behaviour were compared. The independent variables are personality traits and alcohol use while the dependent variables are risky driving behaviour and accident proneness. The socio-demographic variables are age, marital status, education and Socio-economic status.

3.2 RESEARCH SETTING

The setting is Ladoke Akintola University of Technology Teaching Hospital .This tertiary hospital has about 500 beds and 3000 workers. Ladoke Akintola University of Teaching Hospital's workforce includes Consultant Family Physicians, Nurses, Physiotherapists, Optometrists, General Surgeons, and Orthopedic surgeons. Services provided at this hospital include: outpatient, admissions, laboratory, minor and major surgeries, ultrasound scanning, pharmaceutical service and ambulance services. The location of the study was the Accident and Emergency Unit, Orthopedics Wards, Physiotherapy Unit, and Clinics of the Hospital. The hospital provides diagnostic and treatment services for people in Osun state, Oyo state and neighbouring states in south west zone of Nigeria. The accident and emergency department comprises of Consultants, Resident doctors, Nurses while the Physiotherapy unit also has similar compositions, Apart from this, the hospital is centrally located in the state capital which is easily accessible by all motorist and the general public.

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3.3 SAMPLING PROCEDURE

The study was conducted in a Teaching Hospital at Osogbo, the Osun state capital, from this hospital a total of one hundred and twenty respondents were consecutively selected, Respondents were sampled using consecutive sampling from the admitted or hospitalized patients.

Consecutive sampling is very similar to convenience sampling except that it seeks to include ALL accessible subjects as part of the sample. This sampling technique can be considered as the best of all non-probability/non-random samples because it includes all subjects that are available that makes the sample a better representation of the entire population. Thus, patients willing to participate in the study were interviewed and between five to ten patients were sampled daily. The study took place between 1st July and 31st August, 2012. Consecutively sampling does not require sample size calculations since it is a non-probabilistic sampling procedure. Non-probability sample is not a product of a randomized selection processes. Subjects in a non-probability sample are usually selected on the basis of their accessibility or by the purposive personal judgment of the researcher.

Consecutively is used when; demonstrating that a particular trait exists in the population, the researcher aims to do a qualitative, pilot or exploratory study, randomization is impossible like when the population is almost limitless etc (Explorable.com, 2015)

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3.4 INCLUSION AND EXCLUSION CRITERIA

Inclusion criteria: the respondents that were eligible in the study fell into the following categories:

(a). A driver that was involved in an accident

(b). A driver that was licensed or not

(c). A driver receiving medical care either in or outpatient basis.

Exclusion criteria: Patients who were excluded from the study include patients who were in the wards diagnosed with problems other than those resulting from car or vehicular accidents. Also excluded were accidents victims who were non- drivers or accidents victims not driving during the period.

3.5 RESEARCH INSTRUMENT

The instrument that was used in this study is questionnaire for both independent and dependent variables .Three existing scales were used while one scale was developed by the researcher .The questionnaire were divided into five sections with each section measuring different aspects.

Section A: Social demographic variable tapped information such as age, gender, marital status, educational level, socio-economic status and, religion. Age was measured using the real age given by the drivers. Gender was coded as 1= male and 2=female. Marital status was coded as married =1 and single = 2; Education level was coded as all drivers with SSCE and below were regarded as having low education and those with OND and above were regarded as having higher level education. Religion was coded as Christianity = 1, and Islam = 2.

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SECTION B : Risky Driving Behaviour Scale (RDBS)

Scale Development and Pilot Study: The risky driving behaviour scale was developed by the researcher. The researcher first tried to identify various activities of the people regarding risky driving behaviour of drivers. The researcher then interviewed 30 people to give reasons for motor accidents. The items included what they experience driving after drinking alcohol, breaking speed limits, driving during bad weather, overtaking in dangerous situations, destructive behaviour and little or no signal light use in the past. A pilot study was embarked on to generate items for the construction of questionnaire to tap people's perception of risky driving behaviours among key officers of drivers. This was done through some open ended questionnaire which gives opportunity for respondent to express their thought about the factors influencing their decision in driving in risky manner. The questionnaire administration was done directly and this procedure resulted in a pool of 15 items. A pilot study of the 15 items generated using a sample of thirty drivers from major motor parks (chairmen, secretaries and other key officers) whose age range from 20 to 55 years.

ITEMS GENERATED
I drive when I am angry
I lose my temper when driving
I consider the actions of other drivers to be inappropriate or stupid
When I get struck in a traffic Jam I get irritated
I feel that passive drivers should learn how to drive or stay home
I flash my headlights when I am annoyed by another driver
I make rude gestures (For example giving "the finger", yelling curse words) toward drivers who annoy me
I verbally insult drivers who annoy me
I deliberately use my car/truck to block drivers who tailgate me

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I would tailgate a driver who annoys me

I will illegally pass a car/truck that is going too slowly

I will drive if I am only mildly intoxicated or buzzed

I will cross double yellow lines to see if I can pass a slow moving car

I will drive when I am drunk

I consider myself to be a risk taker

An item-total correlation analysis was carried out and only items that met the coefficient of 0.42 and above were included for use in this study. Content analysis using with total item correlations was then carried out to extract the significant items and discard items which did not have baseline item loading of 0.42.

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Cronbach's Alpha	N of Items
.82	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I make rude gestures (For example giving "the finger", yelling curse words) toward drivers who annoy me	16.58	62.347	.650	.789
I verbally insult drivers who annoy me	17.19	69.201	.545	.803
I deliberately use my car/truck to block drivers who tailgate me	16.73	70.849	.528	.805
I would tailgate a driver who annoys me	16.82	68.455	.604	.798
I will illegally pass a car/truck that is going too slowly	16.63	66.458	.531	.804
I will drive if I am only mildly intoxicated or buzzed	16.37	71.774	.430	.814
I will cross double yellow lines to see if I can pass a slow moving car	16.36	67.088	.433	.818
I will drive when I am drunk	17.30	66.518	.633	.793
I consider myself to be a risk taker	17.11	66.868	.592	.797
I make rude gestures (For example giving "the finger", yelling curse words) toward drivers who annoy me	17.76	78.712	.345	.837

The reliability was derived from the result of the analysis which revealed that the cronbach's alpha for the initial analysis was $\alpha = 0.72$, after which 5 items were deleted from the total number of 15 items for weak performance using the .3 criterion set for corrected item total The cronbach's alpha rose to 0.82. The scale also reported a split half reliability of .83, spearman brown prophecy co-efficient. Thus the remaining 10 items was used in this study.

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RISKY DRIVING BEHAVIOUR

This section measured risky driving behaviour of drivers; the participants answered structured questions that were developed by the researcher; items were selected from interview guide and an in-depth interview guide schedule. The questionnaire were rated on a 5 point frequency scale ranging from 0 (never) to 4 (frequency). Reliability test was done on the items and it has Cronbach's Alpha of .87 the reliability for the main study was 0.81 cronbach's alpha.

The instrument were used to assess risky driving behaviours and considered the following seven variables: driving after drinking alcohol, breaking speed limits, driving during bad weather, overtaking in dangerous situations, destructive behaviour and little or no signal light use.

Section C: Accident proneness questionnaire is a 10-item scale designed by Sicco Van As (2006), the ten items together has a Cronbach's Alpha = .75 , Four items in the scale measure near accident and drivers' general opinion about their safety, the remaining six items measured mistakes and risk taking behaviour. Before the main study commenced the scale was revalidated and the reliability checked. The reliability of 0.84 Cronbach alphas was recorded. The split- half reliability was 0.88 Spearman- Brown co-efficient. The reliability for this study is 0.79 Cronbach's alpha.

Section D: This section consisted of Alcohol Use Disorder Identifications Tests (AUDIT) developed by Saunders, Aasland, Babor, de le Fuente, and Grant (2006) The AUDIT is a 10-item screening instrument developed by a WHO collaborative study conducted in six countries: Australia, Kenya, Bulgaria, Norway, Mexico and the USA. It was designed to screen for a range of drinking problems and in particular for hazardous and harmful

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consumption of alcohol. The psychometric properties of the AUDIT have been assessed across a range of populations, including university students, women, psychiatric patients, geriatric population and unemployed people. The final 10 items from the AUDIT were selected from a 15-item interview schedule. The basis of selection was determined both through statistical analysis and face validity.

The question were selected from four conceptual domains: alcohol consumption (items 1-3), drinking behaviors related to dependence (item 4-6), adverse psychological reactions (items 7-8) and alcohol- related problems (items 9and10)A score of eight is associated with harmful or hazardous drinking. As a general guide, a score of 13 or more is likely to indicate alcohol dependence. Overall the AUDIT is a comprehensive brief screening device providing information on hazardous harmful use, abuse and dependence. Authors have reported varying alpha levels for this instrument ranging from (α = 0.77 to 0.89 this scale was also revalidated and the reliability checked. The reliability of 0.98 cronbach alpha was recorded, the split half reliability was 0.93 Spearman Brown co-efficient.

Section E: This is the Big Five (BFI) inventory measuring the big five personality factors jointly developed by Buchanam, Coldberg and Johnson (1999). The inventory contains 36 item measuring extroversion, neuroticism, agreeableness, openness to experience and conscientiousness. On the scale, extroversion was measured with items 3, 10, 13, 15, 19, 24, 29, 35, 36, and 37; Neuroticism was assessed with items 1, 2 6, 9, 25, and 31.Agreeableness was measured with items 7, 8, 16, 21, 27, 32, and 33; openness to experience item was measured with 12, 14, 20 and 22.Conscientiousness item were 4, 5,11,17,18,23,25,30 and 31. The reversed scored items were 1, 6, 8, 9, 10, 12, 18, 20, 22,

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26, 31, 37 that is reverse scoring). Cronbach's alpha for each dimension of the inventory are as follows: openness 0.74, conscientiousness 0.84, extroversion 0.88, agreeableness 0.76 and neuroticism 0.83. The scales were scored on a 5 – point Likert-type response format ranging from strongly agree (SA) to strongly disagree (SD) in its scoring . Before the main study commenced the scale was revalidated and the reliability checked. The reliability reported shows that Neuroticism have reliability alpha of 0.79, agreeableness = 0.64 cronbach's alpha, openness to experience = 0.67 cronbach's alpha, conscientiousness = 0.80 and extraversion was 0.78 cronbach's alpha. The reliability reported for the main study shows that Neuroticism have reliability alpha of 0.76, agreeableness = 0.74 cronbach's alpha, openness to experience = 0.87 cronbach's alpha, conscientiousness = 0.82 and extraversion was 0.68 cronbach's alpha.

3.6 PROCEDURE

Ethical clearance to conduct the study was obtained from LAUTECH Teaching Hospital Ethical Ethics Committee. Permission was also obtained from the consultants and matrons' in-charge of the clinics, while a written informed consent was obtained from each selected patient. The first phase of the main study was re-evaluation of the standardized scales that was used for the study. Reliability of the measure needed to be demonstrated by confirming the internal consistency of the constructs (for example, by use of Cronbach's α) and by confirming dimensionality (for example, by using factor analysis).

In the pilot study all 77 items from the original questionnaire were used. Both the current and authors reported validity of the scales were all confirmed and considered to be

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good. Items with low total item correlation and low factor loading of 0.3 were deleted from the study.

For the main study the researcher employed the consecutive sampling procedure to sample one hundred and twenty injured drivers. The respondents were selected at accident and emergency unit, orthopedic unit, and physiotherapy unit. The data collection exercise was preceded with advocacy visits to various units' area of the site study; in each unit the staff and heads of the unit received the researcher warmly. The first stage questionnaires were given to drivers at all chosen motor parks. This was done through the executive officers of each park and an allowance of two weeks was given before the retrieval of the questionnaire.

This questionnaire was first translated from English language version into Yoruba version, so that those who were not literate amidst the respondents would have opportunity to participate in the study. The questionnaire was translated to Yoruba the native language to ensure clarity and non-ambiguity as well as to reduce inter-observer variation interpretation during the interview. The study recorded a hundred percent response rate for the study. All the questionnaires were adequately filled and completed.

3.7 STATISTICAL ANALYSIS

The data was coded and analysed using Statistical Package for the Social science (SPSS) version 20 software (IBM, 2012).The socio-demographic characteristics were analysed using frequency count and simple percentage. The item analysis and validity test were carried out using cronbach alpha and factor analysis. Cronbach alpha was used to estimate the reliability of all the scales and factor analysis was used to get a small set of

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uncorrelated dimensions from the large set of items generated for newly developed scale. The study ustilised the exploratory factor analysis; this is utilised when the researcher do not have a pre-defined idea of the structure or how many dimensions are in a set of variables.

The inferential statistics utilised in this study include t-test for independent samples, Multiple regression, and hierarchal multiple regression analyses to test the ten hypotheses in the study.

Hypotheses 1- 6 were tested using the independent samples t-test, also called the two samples t-test or student's t-test. This was used to determine whether statistically significant differences exist between two unrelated groups looking at their mean scores on the dependent variable.

Hypotheses 7 and 8 were tested using multiple regression analysis. Multiple regression analysis is used when one is interested in predicting a continuous dependent variable from a number of independent variables.

Hypotheses 9 and 10 were tested using Hierarchical multiple regression. This is to establish how each group of socio-demographic characteristics, personality traits and alcohol incrementally contributed in the building successive linear regression models or incrementally contributed to the prediction of the dependent variables.

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CHAPTER FOUR

RESULTS

This chapter deals with data analysis and interpretation of result of the study The statistical tests used include multiple regression analysis for testing composite relationship of the independent variables and t-test for independence to ascertain the level of differences between different levels of independent variables on the two dimension of the dependent variable in the study.

4.1 SOCIO DEMOGRAPHIC INFORMATION ON PARTICIPANTS IN THE STUDY

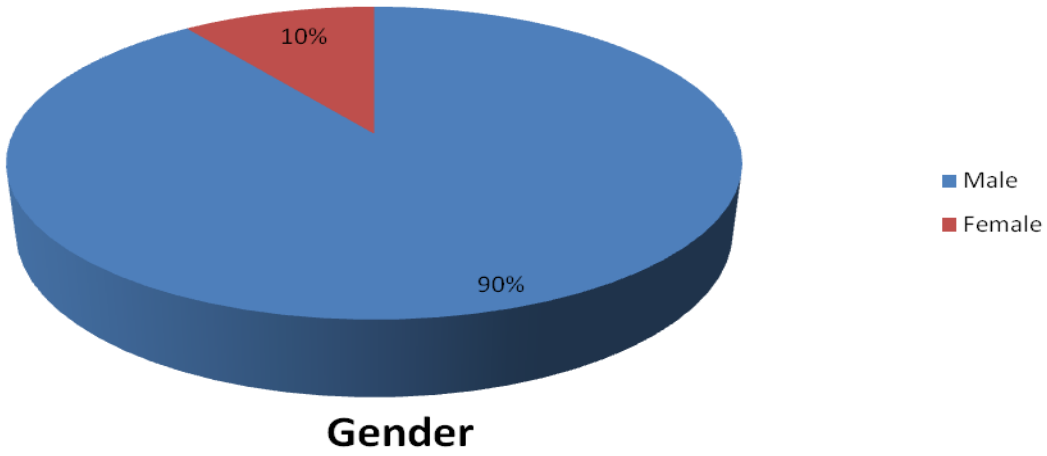

Fig.4.1: Gender proportions of Male and Female participants in the study.

Larger proportions 90% of the respondents are male while 10% are female, this may be because driving is predominantly male business.

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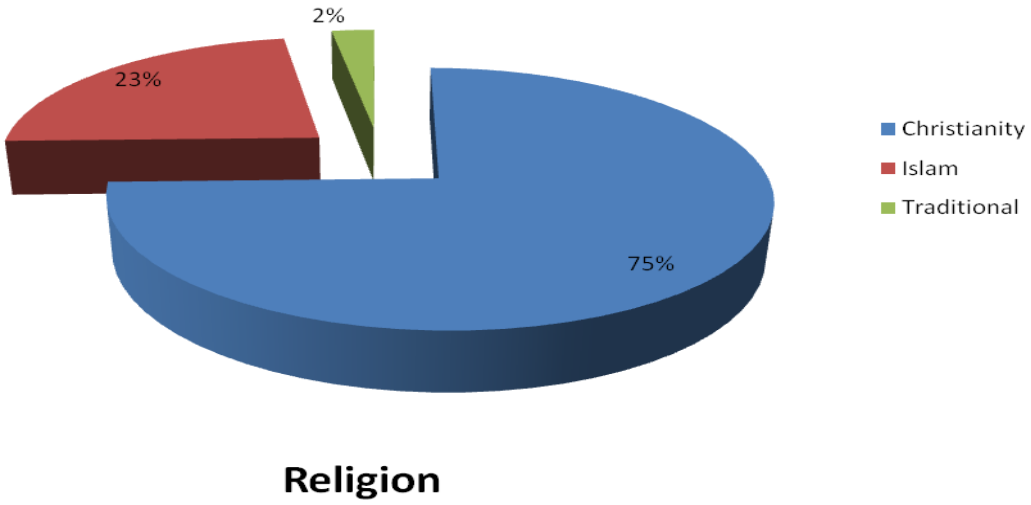

Fig: 4.2: Religion Larger proportions 75% are Christians, 23% are Muslims and 2% are traditionalist

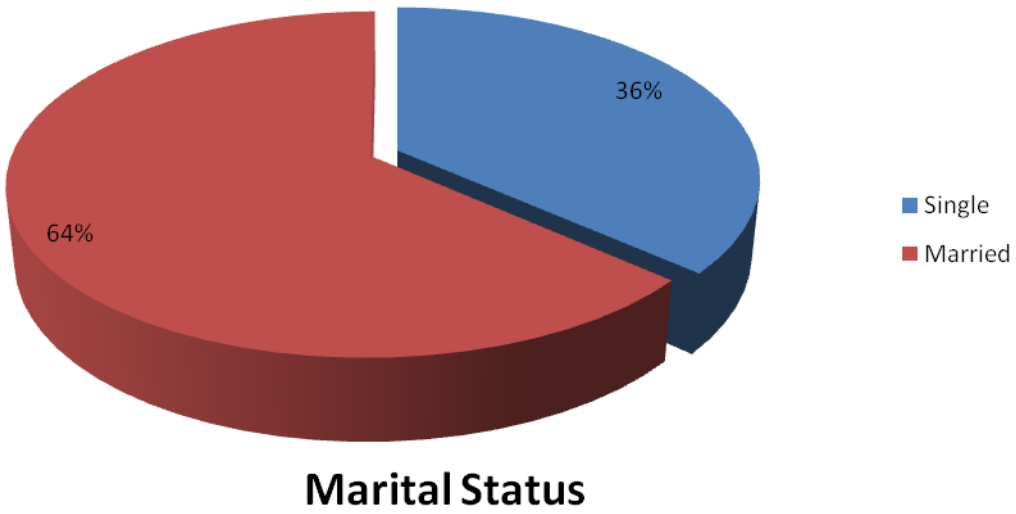

Fig. 4.3; Marital status Majority 64% of the respondents are married while 36% are single

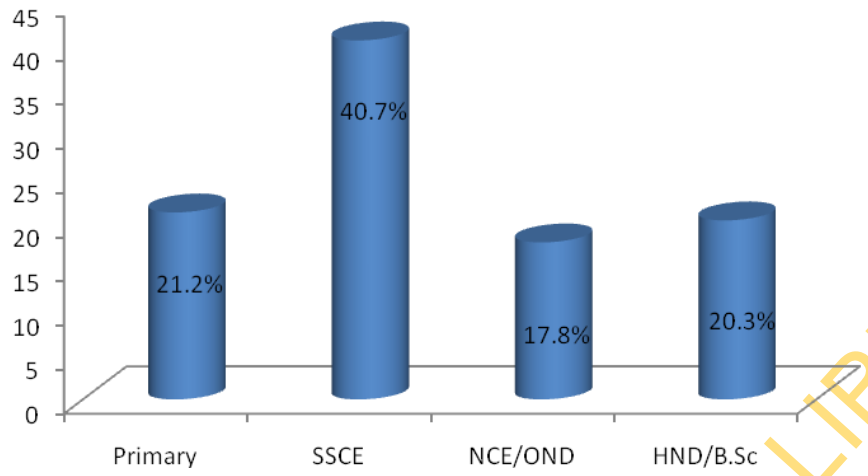

Fig.4.4: Educational Qualification 21.2% of the respondents acquired primary school certificate, larger proportion 40.7% possesses secondary school certificate, 17.8% are NCE/OND holder and 20.3% acquired HND/B.Sc certificate.

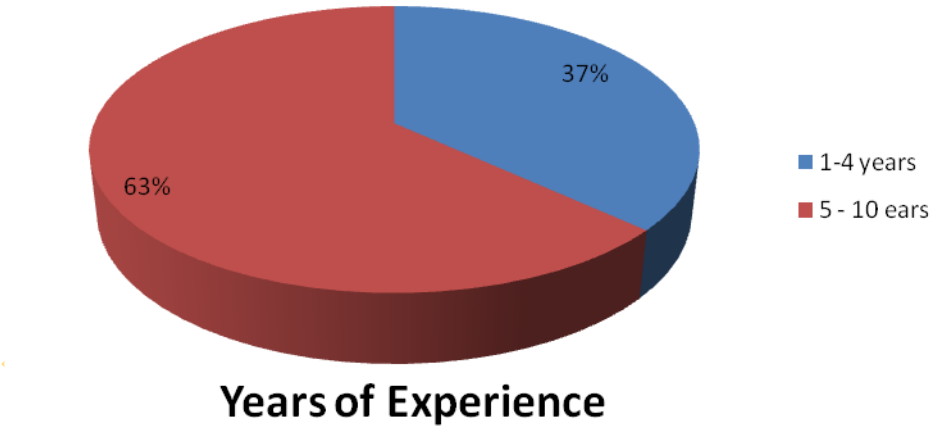

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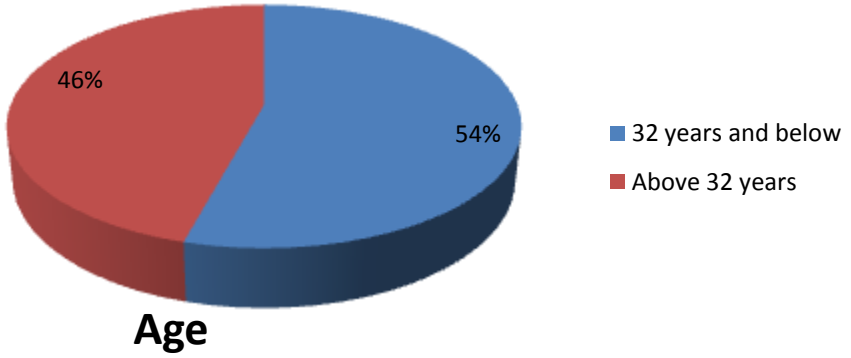
Fig 4.5: Training years 68% of the respondents reported that they spent between 1-4 years for training, 21% spent between 5-10 years and 10% reported spending above 10 years.



4.6:F20% of the respondents belong to age bracket between 20- 25 years, the larger proportion of 48% falls between the age group of 26-30 years and 32% are above 31 years of age.

Hypothesis one stated that male drivers will be significantly more prone to risky driving behaviour than female drivers among injured drivers. This hypothesis was analyzed using the t-test for independent sample and results are presented in Table 4.1.

Table 4.1: Summary table of independent sample t-test showing gender difference in risky driving behaviour among vehicle drivers

DV	Gender	N	Mean	SD	df	t-value	Sig
Risky driving	Male	106	19.94	6.03	118	-5.52	<.001
	Female	14	9.50	7.80			

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The results indicated that male participants significantly reported higher risky driving behaviour than their female counterparts t(116)=-5.52, p<.001. Table 4.1 also shows that male participants scored a mean of 19.94 on risky driving behaviour while the female scored a mean of 9.50 with a mean difference of 10.44. This implies that gender there is a significant difference in the risky driving behaviour among the drivers sampled. Thus, the hypothesis that stated that there would be a significant difference in the risky driving behaviour based on drivers' gender is accepted

Table 4.2: x^2 Test of Association on Risky Driving Behaviour by Gender

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				Total
		Low	**High**	
Gender	Male	45	61	106
		38.1%	51.7%	89.8%
	Female	10	2	12
		8.5%	1.7%	10.2%
Total		55	63	118
		46.6%	53.4%	100.0%

(X^2= 7.24, df= 1, p<.05)

Analysis of the relationship between gender and risky driving behaviour displayed in the Table 4.2 which reveals that a greater proportion (51.7%) of the respondents who are males reported higher risky driving behaviour compared to female respondents. This indicates that there was significant association between age and risky driving behaviour (X^2= 7.24, df= 1, p<.05)

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Hypothesis two stated that the male driver will be more prone to accidents than female drivers. This hypothesis was analyzed using the t-test for independent samples and the results of the analyses are presented in Table 4.3.

Table 4.3: Summary table of independent sample t-test showing difference gender in accident proneness among vehicle drivers

DV	Gender	N	Mean	Std	Df	t-value	Sig
Accident proneness	Male	106	17.76	8.74	118	-4.03	<.001
	Female	14	27.58	7.90			

Table 4.3 shows that female participants significantly reported higher accident proneness than the male counterpart [t(116)=-4.03, p<.001. The table shows that male participants scored 17.76 on accident proneness, while the female scored 27.56 with a mean difference of 9.82. This implies that there is a significant in accident proneness among the drivers sampled. Based on this finding, hypothesis two that stated that there would be significant differences in the male and female drivers' level of accident proneness is thus accepted

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Table 4.4: x^2 Test of association on Accident Proneness by Gender

		Accident Proneness		Total
		Low	High	
Gender	Male	81	25	106
		68.6%	21.2%	89.8%
	Female	4	8	12
		3.4%	6.8%	10.2%
Total		**85**	**33**	**118**
			28.0%	**100.0%**

(X^2= 9.93, df= 1, p<.05)

Analysis of the relationship between gender and accident proneness displayed in the Table 4.4 reveal that greater proportion (68.6%) of the respondents who were male reported low accident proneness compare to female. This indicates that there was significant association between gender and accident proneness (X^2= 9.93, df= 1, p<.05).

Hypothesis three stated that educational qualification will significantly influence the level of risky driving behavior among injured drivers. This hypothesis was tested using the t-test for independent samples and the summary of the result is presented in Table 4.5

Table 4.5: Summary table of independent sample t-test showing educational status differences in risky driving behaviour among vehicle drivers

DV	Educational status	N	Mean	S.D	Df	t-value	Sig
Risky driving behaviour	Low education	75	20.16	6.77	118	2.62	<.05
	High education	45	16.80	6.82			

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Table 4.5, shows that participants with high educational status significantly reported higher risky driving behaviour than participants with low educational status [t(118)=2.617, p<.05]. The Table also shows that participants with low educational status scored 20.16 on accident proneness, while those with high educational status scored 16.80 with a mean difference of 3.36. This result demonstrates that there is an educational qualification difference in risky driving behaviour. Based on this, hypothesis 3 stated that educational qualification will significantly influence the level of risky driving behavior among injured drivers was also confirmed.

Table 4.6:x^2 Test of Association on Risky Driving Behaviour by Educational Status

		Risky driving behavior		**Total**
		Low	**High**	
Education	Primary	14	11	25
		11.9%	9.3%	21.2%
	SSCE	16	32	48
		13.6%	27.1%	40.7%
	NCE/OND	12	9	21
		10.2%	7.6%	17.8%
	HND/B.Sc	13	11	24
		11.0%	9.3%	20.3%
Total		**55**	**63**	**118**
		46.6%	**53.4%**	**100.0%**

(X^2= 5.77, df= 1, p>.05)

Analysis of the relationship between educational status and risky driving behavior displayed in Table 4.6 reveal that greater proportion (27.1%) of the respondents who acquired SSCE certificate reported high risky driving behaviour compared to respondents with other qualifications. This indicates that there was no significant association between educational qualification and risky driving behaviour (X^2= 5.77, df= 1, p>.05 **)**

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Hypothesis four stated that Individuals with low level education will significantly have higher accident proneness than drivers with high level of education among injured drivers. This hypothesis was tested using the t-test for independent samples and the results of the analysis presented in Table 4.7

Table 4.7: Summary table of independent sample t-test showing educational status differences in accident proneness among vehicle drivers

DV	Educational status	N	Mean	Std	df	t-value	Sig
Accident proneness	Low education	75	17.38	8.46	118	-2.05	<.05
	High education	45	21.00	9.81			

Table 4.7 shows that participants with high educational status significantly reported proneness higher accident than participants with low educational status t(118)=-2.05, p<.05. The Table also shows that participants with low educational status score a mean of 17.38 on accident proneness, while those with high educational status scored a mean of 21.00 with a mean difference of 3.82. This suggests that respondents with higher educational qualification exhibited more risky driving behaviour among the drivers sampled.

Hypothesis five stated that younger driver will significantly influence the level of risky driving behaviour among injured drivers. This hypothesis was tested using the t-test for independence and the result presented in Table 4.8

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Table 4.8: t-test summary table showing age differences in risky driving behaviour

	Age	N	$\overline{X}$	SD	DF	T	Sig
Risky driving	Young	38	18.18	6.35			
behavior	Old	80	19.21	7.24	116	-.75	>.05

The result reveals that respondents who are younger (M=18.18, S.D= 6.34) are not significantly different on risky driving behaviour compare to older respondents (M=19.21, S.D =7.24). The result indicates that there was no significant difference in risky driving behaviour reported by older and younger respondents (t (116) = -.75, p>.05). This demonstrates that there are no significant in the risky driving behaviour of the drivers sampled.

Table 4.9:x^2 Test of Association on Risky Driving Behaviour by Age

		Driving behavior		Total
		Low	High	
Age	20-25 years	14	10	24
		11.9%	8.5%	20.3%
	26-30 years	29	27	56
		24.6%	22.9%	47.5%
	31 years and above	12	26	38
		10.2%	22.0%	32.2%
Total		**55**	**63**	**118**
		46.6%	**53.4%**	**100.0%**

(X^2= 5.38, df= 2, p>.05)

Analysis of the relationship between age and risky driving behaviour displayed in the table 4.9 reveal that greater proportion 24.6% of the respondents who fall between the age group 26-30 years reported low risky driving behaviour compare to other age groups. This indicates that there was no significant association between age and risky driving behaviour (X^2= 5.38, df= 2, p>.05)

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Analysis of the relationship between age and risky driving behaviour displayed in the table 4.9 reveal that greater proportion 24.6% of the respondents who fall between the age group 26-30 years reported low risky driving behaviour compare to other age groups. This indicates that there was no significant association between age and risky driving behaviour (X^2= 5.38, df= 2, p>.05)

Hypothesis six stated that younger drivers will significantly more accident prone among injured drivers. This hypothesis was tested using the t-test for independence and the result presented in Table 4.10

Table 4.10: t-test summary table showing the influence of age on accident proneness

	Age	N	$\overline{X}$	SD	DF	t	Sig
Accident proneness	Young	38	16.24	5.273			
	Old	80	19.96	10.289	116	-2.10	<.01

The result from the Table 4.10, also reveals that younger respondents (M=16.24, S.D= 5.27) significantly reported lower scores on accident proneness than older respondents with high accident proneness (M=19.98, S.D =10.29) Older respondents significantly reported more accident proneness than younger respondents t (116) = -2.10, p<.01). This implies that gender significantly influence accident proneness among the drivers sampled.

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Table 4.11: Test of Association on Accident Proneness by Age

		Accident proneness		Total
		Low	**High**	
Age	20-25 years	24	0	24
		20.3%	0.0%	20.3%
	26-30 years	34	22	56
		28.8%	18.6%	47.5%
	31 years and above	27	11	38
		22.9%	9.3%	32.2%
Total		**85**	**33**	**118**
		72.0%	**28.0%**	**100.0%**

(X^2= 12.89, df= 2, p<.05)

Analysis of the relationship between age and accident proneness displayed in the table 4.11 reveal that greater proportion 28.8% of the respondents who fall between the age group 26-30 years reported low accident proneness compare to other age group. This indicates that there was significant association between age and accident proneness (X^2= 12.89, df= 2, p<.05)

Hypothesis seven States that personality factors and alcohol use will independently and jointly predict risky driving behaviour. This hypothesis was analysed using multiple regression analysis and the summary is presented in Table 4.12

Table 4.12: Multiple Regression Table Showing Predictors of Risky Driving Behaviour among Drivers

Predictor variables	B	T	P	R	R^2	F	P
Neuroticism	.29	3.19	<.05				
Extraversion	-.18	-1.01	>.05				
Conscientiousness	.18	1.39	>.05				
Agreeableness	.25	1.33	>.05				
Openness to experience	-.52	-4.11	<.05				
Alcohol use	.40	4.849	<.05	.57	.29	8.80	<.05

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From Table 4.12, the result of the multiple regression shows that all the predictor variables jointly predict risky driving behaviour of injured drivers (F (6,111) = 8.80; p<.05 with R = .57 and R^2 (adjusted) = 0.29. This indicates that all the predictor variables jointly account for 29% of the variation in driving behavior of injured drivers. In terms of independent contribution of neuroticism, (β = .29, t = 3.19; p<.05); openness to experience (β =-52, t =0 -4.11, P <.05) and alcohol use (β =.40, t =4.85, p <0.5) independently predict driving behaviour of injured drive. However, the contributions of extraversion (β = -.18, t = -1.01; p>.05), conscientiousness (β = .18, t = 1.39; p>.05) and agreeableness (β = .25, t = 1.33; p>.05) were not significant. Based on this result, the hypothesis 7 stated above is confirmed partially.

Hypothesis eight states that personality factors and alcohol use will independently and jointly predict accident proneness. This hypothesis was analyzed using multiple regression analysis and the summary is presented in table 4.13:

Table 4.13: Multiple Regression Table Showing Predictors of Accident Proneness among Drivers

Predictor variables	β	T	P	R	R^2	F	P
Neuroticism	.04	.39	>.05				
Extraversion	-.59	-2.83	<.05				
Conscientiousness	-.06	-.38	>.05				
Agreeableness	.59	2.75	<.05				
Openness to experience	.22	1.52	>.05				
Alcohol use	-.08	-.83	>.05	.33	.060	2.24	<.05

From Table 4.13, the result of the multiple regression indicates that all the predictor variables jointly predict accident proneness of injured divers (F (6,111) = 2.24; p<.05) with R =0 .33 and R^2 (adjusted) =0 .060 This shows that all the predictor variables could

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jointly account for 6% variance observed in the reported accident proneness among injured drivers: Concerning independent contribution, extraversion and agreeableness independently predict accident proneness of injured drivers (β = -0.59; t= -2.83; p<.05 and β =0.59; t = 2.75; p<.05) respectively. However, neuroticism, (β = .04, t = .39; *p*>.05); conscientiousness (β = -.06, t = -.38; *p*>.05) openness to experience (β = .22, t = 1.52, *p* >.05) and alcohol use (β =.40, t =4.85, *p* <0.5) were found not to independently predict accident proneness of injured drivers. Judging by this result, hypothesis eight is confirmed and supported partially.

Hypothesis 9 stated that all psychological and social variables will significantly predict risky driving behaviour better than personality and alcohol use variables among drivers. The hypotheses were tested using hierarchical regression analysis the results and are presented in Table 4.14.

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Table 4.14: Summary of hierarchical regression analysis showing the influence of neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use gender, age and education level on risky driving behaviour.

	MODEL 1			*MODEL II*			*MODEL III*		
PREDICTORS	**B**	**T**	***P***	**B**	**T**	***P***	**B**	**T**	***P***
Neuroticism	.20	2.08	<.01	.29	3.19	<.01	.29	3.63	<.01
Extraversion	-.37	-1.93	>.05	-.18	-1.01	>.05	-.29	-1.83	>.05
Conscientiousness	.13	.92	>.05	.18	1.39	>.05	.14	1.32	>.05
Agreeableness	.44	2.20	<.01	.25	1.33	>.05	.25	1.59	>.05
Openness to experience	-.43	-3.14	>.05	-.52	-4.11	<.01	-.38	-3.43	<.01
Alcohol use				.40	4.85	<.01	.39	5.42	<.01
Gender							-.42	-6.09	<.01
Age							-.05	-.67	
Education							-.10	-1.38	
R		.42			.57		.70		
R^2		.18			.32		.49		
ΔR^2		.142			.286		.461		
Df		5,112			6,111		7,110		
F		4.88			8.80		15.31		

The result of the hierarchical regression analysis tested if personality traits incrementally contributed to risky driving behaviour compared to alcohol and demographic variables. First the result in Table 4.16 revealed that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level significantly predicted risky driving behaviour among drivers (R^2= 0.42, F = 4.88, df = 5,112, p<.001). Neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and

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education level were found to predict 18% of the variance observed in the risky driving behaviour among drivers. The result further reveals that neuroticism (β = .20, t= 2.08, p<.001) and agreeableness (β = .44, t= 2.20, p<.001) were significant independent predictors of risky driving behavior among drivers.

The introduction of the "alcohol use" into the model revealed that personality factor explained an incremental 14% of the variance observed in risky driving behavior (R^2= 0.57, Δ R^2= 0.14, F = 8.80, df = 6,112, *p*<.001). Results revealed that the addition of alcohol use revealed that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, gender, age and education level contributed significantly to the change observed in the prediction of risky driving behavior (R^2= 0.32, ΔR^2 = 0.27, F = 8.80, df =4,112, p<.001). Neuroticism (β = .29, t= 3.19, p<.001), openness to experience (β = -.52, t= -4.11, p<.001) and alcohol use (β = .40, t= 4.85, p<.001).

The result also revealed that the addition of the present demographic variables contributed about 17% to the variance observed in the level of risky driving behavior among drivers. The result revealed that the addition of present demographic factors revealed that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level contributed significantly to the change observed in the prediction of risky driving behavior among drivers (R^2= 0.49, ΔR^2 = 0.66, F = 15.31, df =7,110, p<.001). Neuroticism (β = .29, t= 3.69, p<.001), openness to experience (β = -.38, t= -3.43, p<.001), alcohol use (β = .39, t= 5.42, p<.001), gender (β = -.42, t= -6.09, p<.001) remained significant independent predictors of risky driving behavior, while the influence of Age, educational level were negligible in the model.

Hypothesis ten stated that psychological and social variables will significantly

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predict accident proneness better than personality and alcohol use variables among drivers. The hypothesis was tested using hierarchical regression the result presented in table 4.15.

Table 4.15: Summary of hierarchical regression analysis showing the influence of neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and educational level on accident proneness.

	MODEL 1			*MODEL II*			*MODEL III*		
PREDICTORS	**β**	**T**	***P***	**β**	**t**	***p***	**B**	**T**	***P***
Neuroticism	.06	.56	>.05	.04	.39	>.05	.11	1.18	>.05
Extraversion	-.55	-2.72	<.01	-.59	-2.83	<.01	-.52	-2.83	<.01
Conscientiousness	-.05	-.314	>.05	-.06	-.38	>.05	-.07	-.53	>.05
Agreeableness	.55	2.64	<.01	.59	2.75	<.01	.52	2.75	<.01
Openness to experience	.20	1.41	>.05	.22	1.52	>.05	.03	.20	>.05
Alcohol use				-.08	-.83	>.05	-.04	-.47	>.05
Education							.39	4.42	<.01
Gender							.35	4.33	<.01
Age							.10	1.46	>.05
R		.320			.329		.566		
R^2		.103			.108		.321		
ΔR^2		.063			.060		.271		
Df		5,112			6,111		7,110		
F		2.56			2.41		6.43		

The result of the hierarchical regression analysis showing the incremental contribution of personality factors to risky driving behaviour compared to the contribution of alcohol and demographic variables. First the result in Table 4.15 revealed

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that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level significantly predicted accident proneness among drivers (R^2= 0.10, F = 2.56, df = 5,112, *p*<.001). Neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level were found to significantly predict 10.3% of variance observed in the accident proneness among drivers. The result further reveals that extraversion (β = -.55, t= -2.72, p<.001) and agreeableness (β = .55, t= 2.64, p<.001) were significant independent predictors of accident proneness among drivers.

The introduction of the alcohol use revealed that personality factor explained an incremental 5% of the variance in accident proneness (R^2= 0.11, F = 2.41, df = 6,112, *p*<.001). Results revealed that the addition of alcohol use revealed that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level contributed significantly to the change observed in the prediction of accident proneness (R^2= 0.11, ΔR^2 = 0.06, F = 2.41, df =6,112, p<.001). Extraversion (β = -.59, t= -2.83, p<.001), and agreeableness (β = .59, t= 2.75, p<.001) were significant independent predictors of accident proneness among drivers.

The result also revealed that the addition of the present demographic variables contributed about 22% to the variance in the level of accident proneness among drivers. The result revealed that the addition of present demographic factors revealed that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level contributed significantly to the change observed in the prediction of accident proneness among drivers (R^2= 0.32, ΔR^2 = 0.27, F = 6.43, df =7,110, p<.001). Extraversion (β = -.52, t= -2.83, p<.001), agreeableness (β =

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.52, t= 2.75, p<.001) educational level (β = .39, t= 4.42, p<.001) and gender (β = .35, t= 4.33, p<.001) remained significant independent predictors of risky driving behaviour, while the influence of Age is negligible in the model.

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CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 DISCUSSION

The major purpose of this study is to contribute to the prevention of untimely death caused by road traffic accident. This contributes to the literature on personality factors and alcohol use,risky driving behaviour and accident proneness. Besides, it is the aim of this study to examine the role played by these variables. The study reveals a wide range of causes of road traffic accident, over speeding, drunkenness, lack of experience and risky driving behaviour.

In chapter four, ten hypotheses were proposed on the relationship between the personality factors and risky driving behaviour, personality factors and accident proneness, alcohol use and risky driving behaviour, alcohol use and accident proneness. Likewise, socio-demographic factors were hypothesized to play role in risky driving behaviour and accident proneness. Among the ten hypotheses tested, seven hypotheses out of the ten were fully supported.

Hypothesis one which stated that male driver will be more prone to risky driving behaviour than female drivers among injured drivers was confirmed. Male participants significantly reported higher risky driving behavior than the female counterpart. This finding is similar to that of Özkan and Lajunen (2006) who found that being male is significantly associated with more Highway Code violations. Moreover, in another study by Deffenbacher et al., (2003) they found that men scored higher on aggressive driving behaviour than their female counterparts.

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Bogg and Roberts (2004) in meta-analysis review of 21 studies that revealed that males behave in a risker manner than females while driving thou this behavior tend to decrease with age revealed that conscientiousness traits were negatively related to all risky health-related behaviors. Males behave in a riskier manner than females and these risky types of behaviour tend to decrease with age. Risky driving styles were associated with being male and young (Elander et al., 1993). Drivers especially males, often use vehicles to show-off, to attract attention or impress members of the opposite sex, to obtain excitement and to display competitive courage among young women (Arnett et al., 1997; Jonah, 1997; Kohler, 1996; Iram & Taubman, 1994).

The study found significant differences in the male and female drivers' level of accident proneness was confirmed. Female participants significantly reported higher accident proneness than the male counterpart. This finding is in line with Chen and Zhou (2014) who demonstrated that guardian's gender and gender of child were among the salient factors influencing accident proneness in rural children. Women to be too critical and in some cases unconsciously negligent of safety rules and procedure especially

The study result implicated education level in risky driving behaviour. The study found the significant influence of educational qualification on risky driving behaviour among injured drivers. Participants with higher educational status significantly reported more risky driving behaviour than participants with low educational status. This finding is also in consonance with the study of Rowe, Maugham, Gregory and Eley (2013) who found that attitudes became riskier more accidents proneness obtained the more training and driving experience was acquired between these two time points. Drivers who received certificate in driving were more likely to endorse risky driving behaviours than either non-

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drivers or learner drivers. Riskier attitudes were associated with having held a full license for longer, having clocked up more driving miles, and having committed more speeding violations.

This study also demonstrated that individuals with low level of educational qualification will significantly reported higher accident proneness than drivers with high level of education among injured drivers was supported. Participants with high educational status significantly reported higher accident proneness than participants with low educational status. This suggests that respondents with higher educational qualification exhibited more risky driving behaviour among the drivers sampled.

This finding is similar to Begg, Langley, Stephenson (2003) they investigated factors that predicted persistent driving after drinking, persistent unsafe driving after drinking and persistent cannabis use and driving among young adults. They found that mental health measures (substance use, cannabis dependence, alcohol dependence, depression); anti-social behaviour (juvenile arrest, aggressive behavior, court convictions); early driving behaviour and experiences (car and motorcycle licences, traffic crashes) and gender predicted risky driving behaviour. The results showed that males who persisted in driving after drinking were more likely than the other males to have some school academic qualifications and to be employed at age 26.

This study did not confirm the influence the age significantly influence the level of risky driving behaviour among injured drivers. The result demonstrated that age did not play a major role in risky driving behaviour among the drivers sampled. This finding is in contrast to the studies that have established that being young have significant effect on risky driving among young drivers (McKnight & McKnight, 2000, 2003). The study

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also contrasted studies which found that accident incidence decline with a bus driver's age (Dorn & afWåhlberg, 2008).

The result of the study found that the age of drivers significantly influence their level of accident proneness. Respondents above 35years of age reported more accident proneness than younger respondents. The finding is similar to a study which found that accident incidence decline with a bus driver's age (Dorn & afWåhlberg, 2008). The negative association between age and accidents is in accord with some studies (Lourens et al., 1999; Zuckerman, 2008). The findings supports that of Schlag (1994) who found that Older people were slower to merge on motorway access slip roads, chose a tighter turning radius when turning into a minor road and in general tried harder to drive in the right-hand lane. They ignored priority rules and red lights significantly more often. Older people frequently ignored other drivers who had priority, and they crossed a level crossing without barriers without reducing their speed.

A major finding in this study is that personality factors and alcohol use independently and jointly predict risky driving behaviour among injured drivers. Openness to experience, conscientiousness, extraversion, agreeableness, neuroticism personality traits and alcohol use jointly predicted the level of accident proneness among the injured drivers. Neuroticism, openness to experience personality traits and alcohol use were independent predictors of accident proneness. Respondents who were high on neuroticism personality trait and alcohol use but low on extraversion and openness to experience traits were more prone to being in accidents situations compared to those low on neuroticism personality trait and alcohol use but high on extraversion and openness to experience traits. Neuroticism emerged as the significant predictor of group assignment

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when we controlled for antisocial attitudes, although there was no significant difference in the scores between both groups. Many authors have also found a positive relation between neuroticism and aggressive driving, as a particular risky driving behaviour. With regard to criminality, Ozer and Benet-Martínez (2006) reported a positive relation between neuroticism and antisocial behavior in general. Ozer and Benet-Martínez (2006) reported a negative relation between conscientiousness and antisocial behavior in general and criminal behaviour. These findings are similar to findings from past studies. Neuroticism is a fundamental personality trait characterized by anxiety, moodiness, worry, envy, and jealousy. They respond more poorly to stressors, they are more likely to interpret ordinary situations as threatening and minor frustrations as hopelessly difficulty. They are often self-conscious and shy, and they may have trouble controlling urges and delaying gratification.

The literature on driving has revealed that motivations like competitiveness, sense of power and control, or just pursuing sensual pleasure may impinge on the way one drives and may influence a person's decision to drive recklessly The study also supports the findings of Aworeni et al., (2011) that there is relationship between human characteristics, vehicular characteristics, roadway characteristics, environmental characteristics. The findings also demonstrated support for a study that found the significance relationship between extraversion or introversion traits and accident proneness.

This finding is similar to Liao et al. (2001) who found that fire-fighters who were introverts were less likely to call for assistance and as fire-fighting requires a high degree of teamwork; it might be that the less integrated and sociable members of the team

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exposed themselves to greater personal risks. Extroversion is associated with being impulsive and this has been found to be a feature in people who have car accidents and accidents at work (Furnham and Heaven, 1999). These apparently contradictory findings how personality characteristics can interact with the situation someone is in and the type of task they are asked to carry out so as to produce an unsafe environment. Another dimension included in "driving errors of commission" deals with the fact of driving after drinking alcohol which is also a crucial risky driving dimension (Curry, Ludman, Grothaus, Donovan & Kim, 2003). Other equally important variables were included in the first factor: driving during bad weather conditions, driving while using mobile phone and overtaking in dangerous situations. Secondly, the factor "distraction" is associated to the distractive behavior. A study conducted by Deffenbacher et al. (2003) leads to the conclusion that lapses of concentration are associated with risky driving behaviour.

In line with previous studies (Blanchard, Barton & Malta, 2000; Dahlen& White, 2006; Lajunen& Parker, 2001; Schwebel et al., 2006) driver's personality is a good predictor of dangerous driving behavior. Conscientiousness was also found to be a good predictor of group assignment, and negatively related to DUI. Some authors have also reported the importance of conscientiousness in distinguishing between DUI offender and the normal population (Hubicka et al., 2010), but no relation was found between this personality trait and other unsafe driving behaviours (Dahlen and White, 2006).

The findings on alcohol use which demonstrated that drivers crashed whilst under the influence of alcohol in the United States (Williams et al., 2011). In the same vein studies which demonstrated that substance-impairment may reduce wearing of seatbelt and increase the number of passengers (Calligeros, 2009).

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The study also identified that personality factors and alcohol were independent and joint predictors of accident proneness, The findings in the hypothesis suggest that extrovert are prone to frequent accident, similar result were found in the work of Iversen, and Rundmo(2002) this corroborates the results from previous studies that show that personality characteristics is significantly relating to driving. Fergusson, Swain-Campbell, and Horwood (2003) who examined the prevalence of risky driving behaviour among young people, the characteristics of those who engage in risky driving behavior and the association between risky driving behaviors and accident risk. More than 90% of drivers engaged in some form of risky driving behaviour.

Those who are likely to engage in frequent risky driving behaviors were: males who exhibited alcohol or cannabis abuse use. There was a strong association between the extent of risky driving behaviour and traffic accident risk. This result is similar to that of Iversen,-Hilde; Rundmo,-Torbjoern(2000) who found that drivers involved in risk taking-behavior experienced near-accidents and crashes leading to both injuries and material damage more often than other drivers. A Similar result was found by Huebner, Porter-Marshall (2006). In the same vein, Begg and Langley (2004) found that personality trait of low constraint (i.e. low scores for control, harm avoidance, and traditionalism), aggressive behavior, and cannabis dependence predicted risky driving behaviour. Schell and colleagues also found correlation between driving under influence of alcohol (DUI) and Impulsivity and Hostility. Ulleberg and Rundmo (2003) also found that the effect of personality on risky driving in young drivers was mediated by traffic safety attitudes.

The findings also supports Scott-Parker, Watson, King and Hyde (2014) who demonstrated that substance-impaired driving was associated with avoiding Police,

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speeding, risky driving intentions, and self-reported crashes and offences. Forty-three percent of respondents who drove after taking drugs also reported alcohol-impaired driving.Risky behaviour of concern include drink driving, speeding, novice driving errors such as misjudging the speed of oncoming vehicles, violations of graduated driver licensing passenger restrictions, driving tired, driving faster if in a bad mood, and active punishment avoidance. Given the interrelationships between the risky driving behaviours, a deeper understanding of influential factors is required to inform targeted and general countermeasure implementation and evaluation during this critical driving period.

The results on the study combination of all psychological and social variables whether they significantly predict risky driving behaviour better than personality and alcohol use variables among drivers was supported. The addition of demographic factors and personality traits to experience, alcohol use and gender, age and education level contributed significantly to the change observed in the prediction of risky driving behaviour among drivers. Neuroticism, openness to experience, alcohol use, and gender were the important independent predictors of risky driving behaviour, while the influence of age, educational level were negligible in the model. This finding is synonymous with studies that have been documented that personality traits and demographic characteristics predicting risky behaviours.

The findings also support Iversen and Rundmo (2002) they examined relationships between personality, risky driving and involvement in accidents and who found the prediction of recklessness, sensation seeking, and locus of control and driver anger on risky driving, accident involvement. The findings also support the study of YILMAZ and ÇELİK (2006) whose study focused on driver factors in traffic accidents and was carried

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out in order to show risky drivers' attitudes tendency, especially. The study found that inclusion of sex, education level; age and driving experience have an incremental prediction of risky drivers reported while the remaining two were partially supported based on the results analyzed.

Lastly the study demonstrated the combined effect of psychological and social variables to the prediction of accident proneness among drivers. The result revealed that psycho-social model predicted accident proneness better than personality and alcohol use among injured drivers independently. The result revealed that the addition of present demographic factors revealed that neuroticism, extraversion, conscientiousness, agreeableness, openness to experience, alcohol use, gender, age and education level contributed significantly to the change observed in the prediction of accident proneness among drivers. Extraversion, agreeableness, educational level and gender remained significant independent predictors of risky driving behaviour, while the influence of Age is negligible in the model. This also similar to Chen and Zhou (2014) who found that that gender, academic record, left-behind status family type, family economic status, guardian's gender, guardian's marital status, guardian's occupation, and family educational mode were influencing factors for accident proneness in rural children. Low grade and very low grade in academic record, poverty in family economic status and indulgence or indifference and fickleness in guardian's educational mode were risk factors for accident proneness in rural children, while female gender was a protective of the young children.

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5.2 CONCLUSION

A) This study has examined personality factors (agreeableness, conscientiousness, extraversion, openness and neuroticism) and alcohol use as predictors of risky driving behavior (speed, reckless driving, overtaking) and accident proneness. The researcher developed a scale which measure risky driving behaviour. This contributes a tool for screening drivers for risky driving behavior. Drivers found to score high could be counseled about safe driving behavior, deconditioning them so that they can adopt a safer and better driving behaviour

B) The result of the study demonstrated that personality factors (openness, conscientiousness, extraversion, agreeableness and neuroticism) jointly predicted risky driving behaviour with personality traits contributing 29% of the variations. Independently, neuroticism, openness and alcohol use significantly predicted risky driving behaviour. Moreover, openness, conscientiousness, extraversion, agreeableness, neuroticism and alcohol-use jointly accounted for 6% variation in accident proneness. However only extraversion and agreeableness significantly independently predicted accident proneness. It was concluded that alcohol and personality factors influenced the prevalence of accidents proneness on Nigeria roads.

C) The result has demonstrated that demographic factors influenced the level of risky driving behaviour and accident proneness with gender and education playing dramatic role. The result demonstrated that female participants were more prone to accident than their male counterpart. In addition, those who had higher education qualification were more frequently involved in accident situations compared to

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those with lower education. Male drivers exhibited higher risky driving behaviours than female drivers.

D) Those with lower educational qualification exhibited higher risky driving behaviour than those with higher education. This suggests on the road assessment and psychological assessment should be conducted for both commercial and non-commercial drivers to identify the risky drivers before issuance of driver's license and periodic re-evaluation with psycho-education be adopted .This findings suggest that present practice of clinical health psychology there is need to include psychologists especially the clinical health psychologist to work as members of multidisciplinary teams in the public health sectors to provide psycho-education and cognitive behavior therapy for those who engage in risky driving behaviour.

5.3 RECOMMENDATIONS FOR FUTURE RESEARCH

A single study cannot examine all the relevant issues to the accident prevention. With the shortcomings already identified therefore, prospective researchers are advised to involve in other areas like Climate, Road infrastructure, safety officers, and Personality factors of offending drivers. Interventions to prevent alcohol impaired driving may need to influence the factors that mediate the link between driving behaviour and accident proneness.

Based on the above discussion, it would be recommend that reference to the special on-road dynamics would be included in driver training for both drivers and private car drivers. An emphasis that drivers must cope with other road users and attempt to better understand and anticipate their on-road decisions may be appropriate. Identification of

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anxious driving behaviors and recognition of factors contributing to their development may be useful in guiding intervention for those seeking assistance with travel-related anxiety. Relationships observed in the current study identify personality as a common vulnerability factor for risky driving among individuals with a history of traffic collisions. There is however a critical need to establish a formal Program on Anger Management, with a focus on mitigating those factors already highlighted as provoking driver anger, leading in most cases to aggressive driving. It is therefore implicit that an anger management program is as well an aggressive driving management program in practice.

Anger management programs are usually based on the assumption that angry and aggressive drivers are unable to identify and manage their anger; this is understandable because many drivers may have the comforting feeling that it is the other drivers who make all the errors and violations in traffic situations involving road crashes. To be sure, as it is the case with other anger problems, aggressive drivers do not seek help because of their limited self-awareness and a tendency to see the other driver as the problem. Self-referral to anger management programs is thus rare. Almost always, participants enter anger management programs at court mandates or at the request of lawyers, or family members.

The results of the assessments are then discussed with the client and an individual intervention plan is developed. On the whole, the object of the therapy is to moderate attitudes and perceptual styles that increase the risk of anger and aggressive driving, to desensitize and improve regulation of mood and state of arousal, and to develop healthier coping strategies and safer driving behavior.

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Impulsive behavior can also be moderated by a spirit of forgiveness and consideration of future consequences as proposed by Moore and Dahlen (2008). A driver who tends to consider future behavioural consequences may drive less aggressively because the consequences of aggressive driving would be more pronounced, thereby increasing the chances of driver awareness in that direction. The implication is that Driver Education programs which include supplementary defensive driver curricula with strategies to control anger and promote forgiveness may be useful for safer road usage even in the Nigerian environment.

Without doubt, enforcement efforts in Nigeria have improved considerably in many facets. The Federal Road Safety Corps has also made commendable improvements in the standardization of driver training and education in Nigeria. These efforts should now be accompanied by public information campaigns aimed at influencing driver behavior with regard to the traffic states unraveled in the study described. Beyond these efforts, however, there is an urgent need to widen the scope of education for transport use in Nigeria. Such a program is currently being considered, in the context of formal education, but it should include virtually all road user groups.

Ignorance about elementary and basic facts regarding traffic safety is widespread even among educated Nigerian transport users and it is more so among illiterate road users. There is, therefore, the need to embark on an effective program of training and retaining of transport users. For such a training program to arrest the increase in road crash as well as 'near crash' or Conflict situations, it must be directed towards the enhancement of the road user behaviour and the improvement of his skills to make the correct decisions in traffic situations. In fact, the role of transport user education is so vital

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that road safety training should be included in the elementary and secondary schools curricula. The objectives of education for transport use must be fully spelled out. It should be clear that the aim is to enable every Nigerian citizen to acquire accurate perceptions of risks together with appropriate norms for taking them.

The introduction of transport user education in elementary and post-primary schools curricula will ensure that, in the long term, every Nigerian citizen would have acquired the appropriate transport user skills. Immediate road safety education is needed for every social group, including those who are beyond schooling age. This may be provided through an outreach program of the FRSC Training School/Academy in collaboration with existing Zonal Commands. The training media could be through the organization of regular teaching clinics, instruction programs in the television networks, and instruction manuals in English as well as in local languages.

It means that the target group to educate consists of every social group, including children, teenagers, pedestrians, all. It is no longer enough to assume that it would be well with every user group, once drivers and motorists mastered the traffic codes and acquired an attitude of safe driving and consideration for other road users. Children and pedestrians are indeed the most vulnerable among the groups of transport users.

5.4 SUGGESTIONS FOR FURTHER STUDY

Based on the enumerated limitations of the study, any investigator who wants to replicate this study should endeavour to increase the sample size and involve more states. The effects of cultural differences and dangerous driving should also be studied so that

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there would be comparison among the different parts of the country on the variables of issues.

5.5 LIMITATIONS OF THE STUDY

Several features of the present study limit the conclusions that could be drawn and suggest directions for future research. The limitation of the current study needs to be addressed.

The study population, consisting of respondents that were victims of trauma associated with severe pain, grief was limited to Teaching Hospital in Osun State, hence data gathering was limited to one health facility in the state, and respondents were predominantly people from that state. One significant impediment in the study's design was that respondents had limited time available to complete the questionnaire because the ward routine prevents them to give full attention to extra engagement. Another impediment was that the state ministry of health has no standard provision for traumatized patients.

Lastly, there was no proper police accident data to compare with that of Federal Road Safety Corps (FRSC).

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APPENDIX

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Dear Respondent,

This questionnaire before you is just a tool to tap information purely for academic purposes and any information provided will be treated with utmost confidentially. Your cooperation is therefore required in making this work a success.

SECTION A: Demographic Information

Please describe the following characteristics about yourself as much as possible.

1. Age: ……

2. Gender: Male……..Female……..

3. Religion: Christianity……..Islam……..Traditional……..None……

4. Years/ Length of training…….

5. Marital Status: Single……..Married……..

6. Educational qualifications: Primary……..SSCE……

   NCE/OND……..HND/B.Sc……..

6b. Occupation……..

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SECTION B: Accident Proneness Questionnaire:- This section is to measure occurrence of accident that you might have involved in. Please tick the answer appropriate to you.

S/N	Accident Proneness	Nearly	Almost Near	Often	Sometimes often	Some what all the time often	Nearly all the time
7	Many drivers don't have enough skills of driving safely on the road						
8	Many drivers don't have enough knowledge about highway code						
9	It happens regularly that drivers make mistakes						
10	It happens regularly that driver don't follow the safety regulations						
11	Many drivers believe too much on luck						
12	Regularly other road users do things that cause accident						
13	Generally speaking driving on our roads is not safe						
14	Did you witness a serious car accident on the roads in the last 3 years						
15	Did you witness one or more accidents on the roads during the last three years?						
16	If yes, were you involved in the accident yourself						

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SECTION C: This section is to measure driving behaviour. Please answer each of the following question as honest as possible.

S/N	Driving Behaviour	Never	Rarely	Sometimes	Often	Always
17	I drive when I am angry					
18	I lose my temper when driving					
19	I consider the actions of other drivers to be inappropriate or stupid					
20	When I get struck in a traffic Jam I get irritated					
21	I feel that passive drivers should learn how to drive or stay home					
22	I flash my headlights when I am annoyed by another driver					
23	I make rude gestures (For example giving "the finger", yelling curse words) toward drivers who annoy me					
24	I verbally insult drivers who annoy me					
25	I deliberately use my car/truck to block drivers who tailgate me					
26	I would tailgate a driver who annoys me					
27	I will illegally pass a car/truck that is going too slowly					
28	I will drive if I am only mildly intoxicated or buzzed					
29	I will cross double yellow lines to see if I can pass a slow moving car/buzzed					
30	I will drive when I am drunk					
31	I consider myself to be a risk taker					

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SECTION D: This section is to measure substance use (ALCOHOL USE)

Instruction: Read the following item below and tick as they apply to you

0 - Not Applicable
1 - A long time after a month
2 - Occasionally
3 - Everyday

S/No	Item	0	1	2	3	4
32	How often do you have a drink containing alcohol					
33	How much drink containing alcohol do you have on a typical day when you are drinking?					
34	How often do you have five or more drink on any occasion?					
35	How often during the last years have you found that you were not able to stop drinking ones you started?					
36	How often during the last year you have found that you failed to do what was normally expected from you because of drinking?					
37	How often during the last year have you found that you needed a first drinking in the morning to get yourself going after a heavy drinking session?					
38	How often during the last year have you found that you had a feeling or guilt or remorse after drinking?					
39	How often during the last year have you found that you are unable to remember what happened the night before because you had been drinking?					
40	Have you or someone else got injured as a result of your drinking?					
41	Has a relative or friend or a doctor or health worker been concerned about your drinking or suggested you cut down?					

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SECTION E

Please read each statement carefully, and then tick the one that correspond to your reply

Strongly, Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD)

S/No	Items	SA	A	U	D	SD
42	I have frequent mood swings					
43	I am not easily bothered by things					
44	I am skilled in handling social issues					
45	I make plans and stick to them					
46	Sometimes I dislike myself					
47	I do respect other people so much					
48	I easily insult people so much					
49	I seldom feel blue (moody)					
50	I don't like to draw attention					
51	I do carryout my plans as scheduled					
52	I am interested in abstract ideas					
53	I make friend easily					
54	I tend to vote for liberal political candidate					
55	I know how to captivate people					
56	I believe that others have good intentions					
57	I do just enough work to get by					
58	I do find it difficult to get down to work					
59	I always carry conversation to a higher level					
60	I avoid philosophical discussion					
61	I accept people as they are					
62	I do not enjoy going to art museums/club					
63	I pay attention to details					
64	I kept in the background					
65	I feel comfortable with myself					
66	Often times, I waste my time					
67	I do get back at others					
68	I get chores done right away					
69	I don't talk a lot					
70	I sometimes shirk my duties					
71	I often feel blue (moody)					
72	I easily cut other to pieces					
73	I have a good word for everyone					
74	I don't see things through					
75	I feel comfortable around people					
76	I make people feel at ease					
77	I do have little to say when in a gathering					

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Ara,

Awonibeerewonyiiwa fun iseakadalasan, gbogboidahun yin siniaabo to peyewa fun.E jowoifowosowopo yin se Pataki fun aseyoriiseyii.

IPIN A: Demographic Information

E jowo e sapajuweara yin nipadidahunawonibeerewonyii bi o se ye.

Ojoori: ……

Ako ( ) tabi abo ( )

Esin: Igbagbo ( ) Musulumi ( ) ElesinAbalaye ( ) kosi ( )

Odunmeloo lo fi kose?

Apon ( ) Mo tigbeyawo ( )

ImoEko: Alakoobere ( ) girama ( ) ileekogiga NCE/OND ( )

Ile ekogiga HND/Yunifasiti ( )

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IPIN B: Awonibeere to jomoninuijamba.

Abalayiife se odi won iyeigbati o tinipinninuijambaboko. Jowo mu idahun to ba to.

S/NO	Awonibeere to je moniniijamba	O ku die	O sunmo	Nigbagbogbo	A maawayelemo	Lopolopoigba	O fere je gbogboigba
7	Opolopoawakonikoniimo to kun loribi a se nwakodaradaralojupopo						
8	Opoawakonikonimo to fun oriawonamiojupopo						
9	O maa n selewelewelepeawakonseasise						
10	O maa n selewelewelepekiteleofinarinyelojupopo						
11	Opoawonawako lo nigbagbakikulorioriire						
12	Lopolopoigbaniawonmiiranto n lo ojupopomaa n faijamba						
13	Ka so tooto, okowiwalojuawonpopomaa n faijambaoko						
14	Ni odunbu meta seyinnjeijambaoko to buru jai soju re?						
15	Njeijambaokokantabiju bee lo soju re laaarinodun meta seyin?						
16	To ba je pe bee ni, se iwoganannipinninuijambanaa?						

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IPIN C: Ipinyiiwalati se odiwoniwako

S/N				
17	Mo n waokonigbatimoba n binu, tabinigbatiinu mi kobadun			
18	Mo ma n re ibinu mi silenigbatimoba n wako			
19	Mo ma n kaisesiawonawako to kurolati je omugotabialaitona.			
20	Nigbatimo n ba sun ninusunkerefakereoko o ma n kominiirira.			
21	Mo ma n ro wipe awononireleawakogbodoko bi won se n wakotabiduronile			
22	Mo ma n tan inaorioko mi nigbatimonbabinusiawaokomiiran			
23	Mo ma n se isesitikoto fun apeere (bi kin ma yaikatabi kin soroepe) siawonawako to bnamumiti o ba n fi oju sun mi			
24	Mo ma n sorotiko to siawonawakomiran			
25	Mo ma n momo fi idioko mi digagaawonawakomiranti o ba n fi oju sun mi.			
26	Ma fioju sun awakomiranti o mu inubimi			
27	Mo gbaonatikotosaajuokotikoyararin			
28	Mo le waokoti mi o bati mu otiyopupo			
29	Mo le re ofin ma gba-ibekojanitoriatisaajuOkotikoyara			
30	ma waoko bi mo mu otiyo			
31	Mo riara mi bi alaibikitaewu			

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IPIN "D": Abalayiiwa fun odiwoniloegboigi (ilootinlile)

Akiyesi: Kaawonkokoisaleyiiki o si mu eyi to baba o mu

Kobamu

Leyinosukanseyin

Leekoookan

Ojoojumo

NO	Ibeere	0	1	2	3	4
32.	Bawo lo se n mu otinlilesi?					
33.	Igootimeloo lo n mu lojumo to je otinlile?					
34.	O to igbawotio n mu juigootinmarun lo leekansoso?					
35.	O to igbamelooniodun to kojati o je peketeti o batiberesinimuti, o nira fun o latisiwo?					
36.	O to igbamelooniodun to koja, ti o kunalati se ohun to boju mu latariotitio n mu?					
37.	Laarinodunkanseyin, igbameloo lo ma n dabienipekoomutilaarolati we otiamusunana?					
38.	Laarinodunkanseyin, igbameloo lo dabienipeonniidalebiokan tori pe o mutiyo?					
39.	Laarinodunkanseyin, igbameloo lo maa n dabienipeoorantiohunti o selesi o lanaa tori pe o mutiyo?					
40.	Njeiwotabielomiranti se o latariotimimu?					
41.	Njeara, ore tabidokitatabiosiseilera Kankan tiniikaanufunotitio n mu tabiki o tiro o peki o din nikutabiki o jawonibe?					

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IPIN E

Jowokaawonibeerewonyiiki o si mu idahun to baba a mu

Mi o faramogidi 2.Mo faramo 3. N komo

4. Mo tako o 5. Mo tako o gidigidi

Nomba	Ibeere	1	2	3	4	5
42	Ipotiokanmaariwakodurosojukan					
43	Nnkankiija mi laya					
44	Mo niimoninuki a sakosoohunariya					
45	Mo maa n durolorietoti					
46	Mo maa n koriraara mi lopoigba					
47	Mo maa n bowo fun awonelomiranpupo					
48	Mo ma n tabukueniyanpupo					
49	Sasaniigbatimomaa n daadi					
50	Mi o ki n fepeakiyesiawoneniyansiodoara mi					
51	Mo maa n telegbogboetotimoba la kale					
52	Mo nifeesiariyanjiyan					
53	Mo maa n teteni ore					
54	Mo le dibo fun oloselu to niokan to gbooro					
55	Mo mobi a se le koawoneniyanmora					
56	Mo gbagbopeawoneniyannierorere					
57	Mo maa n sise to le to mi latirona lo					
58	O maa n ni mi laralatidebiise					
59	Mo maa n gbeijiroro/apero lo siipelegiga					
60	Mo maa n sa fun ijroro to je moimoijinle					
61	Mo maa n gba bi eniyanba se ri					
62	N koferanki a maa lo siileiseohunisembayelojositabiibifaji					
63	Mo maa n fiyesigbogboalaye					
64	Mi o kifesaaju					
65	Okan mi maa n bale siara mi					
66	Opolopoigbanimomaa n fi asiko mi sofo					
67	Ma maa n kanramoawoneniyan					
68	Mo maa n se ohungbogbodaradara					
69	Mi o kiisoropupo					
70	Mo maa n fi ojuse mi silelaiseniopoigba					
71	Opolopoigbanimomaadaadi					
72	Mo maa n saataawoneniyan					
73	Mo maa n nioroitunu fun gbogboeniyan					
74	Mi o kiirigbogbonnkan					
75	Okan mi maa n bale timobawaniaarinawoneniyan.					
76	Mo maa n mu aye roawoneniyanlorun					
77	Mi o ki n fesorotimobawaniaarinawujo					

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RESEARCH ETHICS COMMITTEE

LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY TEACHING HOSPITAL

OSOGBO, OSUN STATE, NIGERIA.

Address:
P.M.B 5000, Osogbo
039-200309,
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PROF. OLUWADIYA K.S CHAIRMAN
MRS SAM-ASIEGBU Y.U SECRETARY

Our Ref: LTH/REC/2012/11/21/12

Your Ref:

Date: 21st November, 2012

CLEARANCE CERTIFICATE

PROTOCOL NUMBER	LTH/EC/2012/11/0123
PROJECT TITLE:	***Predictors of Accident Proneness among Injured Drivers in LAUTECH Teaching Hospital, Osogbo***
INVESTIGATOR(S):	Mr. Akinniyi, Rotimi Jacob
DEPARTMENT / INSTITUTION:	Department of Psychiatry, University of Ibadan, Oyo State, Nigeria
SUBMISSION OF PROTOCOL:	APRIL, 2012
FINAL CONSIDERATION:	OCTOBER , 2012
DECISION OF THE COMMITTEE:	**APPROVED**
CHAIRMAN:	**Prof. Oluwadiya K. S (FMCS)**
SIGNATURE & DATE:	.....

NOTE: THE COMMITTEE IS EXEMPTED FROM LIABILTY OF THE PROPOSAL AND THIS CERTIFICATE WILL BE REVOKED IF PROTOCOLS STATED IN THE PROPOSAL IS DEVIATED FROM.

DECLARATION BY INVESTIGATOR (S)

PROTOCOL NUMBER (Please quote in all enquiries): LTH/EC/2012/11/0123

To be completed in four and three copies returned to the secretary, Ethics and Research Committee, Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Osun State, Nigeria.

I/We fully understand the conditions under which I am/we are authorized to conduct the above – mentioned research and I/We will ensure compliance with these conditions. Should any departure be contemplated from the research procedure as approved, I/We undertake to resubmit the protocol to the Ethics and Research Committee.

Signature..... Date...Oct.2012.....

DR. ADENIJI A.O| DR. AYODELE E.O| DR. OLAITAN P.B| DR. EGUNRANTI B.A| DR. OPARINDE D.P| DR. ADEKANLE D.A| DR. OYEDEJI O.A| DR. AREMU A.A
BARR. AKINRINADE O.| MR. MUHIBI M.A| DR. OWOLADE O.A| MR. ADEYEYE A.D| MRS. OYEWOLE C.A| MRS. OYEDEJI O.| MRS. ADEYEYE O.O| MRS. LAWA

General Linear Model

[DataSet5] C:\Users\user\Desktop\office work\Accident proness.sav

Between-Subjects Factors

		Value Label	N
Alcohol use	1	Low	69
	2	High	49
Education	1	Low education	73
	2	High education	45

Descriptive Statistics

	Alcohol use	Education	Mean	Std. Deviation	N
Risky Driving behavior	Low	Low education	17.24	6.688	45
		High education	15.29	7.304	24
		Total	16.57	6.919	69
	High	Low education	24.86	3.493	28
		High education	18.52	5.904	21
		Total	22.14	5.605	49
	Total	Low education	20.16	6.768	73
		High education	16.80	6.811	45
		Total	18.88	6.952	118
Accident pronness	Low	Low education	17.71	9.433	45
		High education	22.83	11.653	24
		Total	19.49	10.467	69
	High	Low education	16.86	6.742	28
		High education	18.90	6.833	21
		Total	17.73	6.788	49
	Total	Low education	17.38	8.462	73
		High education	21.00	9.805	45
		Total	18.76	9.128	118

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.932	776.212[b]	2.000	113.000	.000
	Wilks' Lambda	.068	776.212[b]	2.000	113.000	.000
	Hotelling's Trace	13.738	776.212[b]	2.000	113.000	.000
	Roy's Largest Root	13.738	776.212[b]	2.000	113.000	.000
Alcohol	Pillai's Trace	.170	11.564[b]	2.000	113.000	.000
	Wilks' Lambda	.830	11.564[b]	2.000	113.000	.000
	Hotelling's Trace	.205	11.564[b]	2.000	113.000	.000
	Roy's Largest Root	.205	11.564[b]	2.000	113.000	.000
Education	Pillai's Trace	.128	8.292[b]	2.000	113.000	.000
	Wilks' Lambda	.872	8.292[b]	2.000	113.000	.000
	Hotelling's Trace	.147	8.292[b]	2.000	113.000	.000
	Roy's Largest Root	.147	8.292[b]	2.000	113.000	.000
Alcohol * Education	Pillai's Trace	.037	2.161[b]	2.000	113.000	.120
	Wilks' Lambda	.963	2.161[b]	2.000	113.000	.120
	Hotelling's Trace	.038	2.161[b]	2.000	113.000	.120

	Roy's Largest Root	.038	2.161[b]	2.000	113.000	.120

a. Design: Intercept + Alcohol + Education + Alcohol * Education
b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Risky Driving behavior	1432.403[a]	3	477.468	12.892	.000
	Accident proneness	549.540[b]	3	183.180	2.270	.084
Intercept	Risky Driving behavior	39147.626	1	39147.626	1057.058	.000
	Accident proneness	39550.136	1	39550.136	490.088	.000
Alcohol	Risky Driving behavior	798.864	1	798.864	21.571	.000
	Accident proneness	155.362	1	155.362	1.925	.168
Education	Risky Driving behavior	466.367	1	466.367	12.593	.001
	Accident proneness	349.177	1	349.177	4.327	.040
Alcohol * Education	Risky Driving behavior	130.342	1	130.342	3.519	.063
	Accident proneness	64.210	1	64.210	.796	.374
Error	Risky Driving behavior	4221.936	114	37.035		
	Accident proneness	9199.816	114	80.700		
Total	Risky Driving behavior	47722.000	118			
	Accident proneness	51290.000	118			
Corrected Total	Risky Driving behavior	5654.339	117			
	Accident proneness	9749.356	117			

a. R Squared = .253 (Adjusted R Squared = .234)
b. R Squared = .056 (Adjusted R Squared = .032)

Estimated Marginal Means

Grand Mean

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Risky Driving behavior	18.979	.584	17.823	20.136
Accident pronness	19.077	.862	17.370	20.784

Profile Plots

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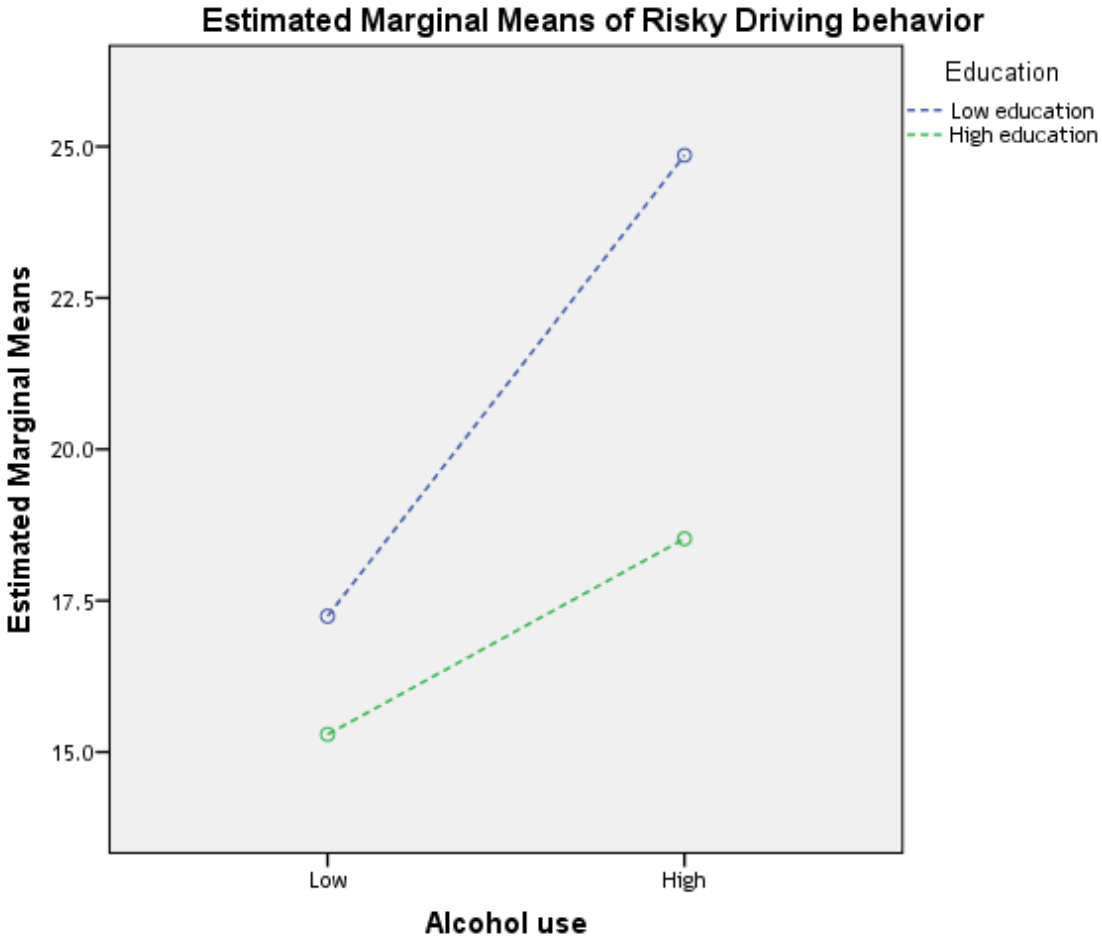
Risky Driving behavior



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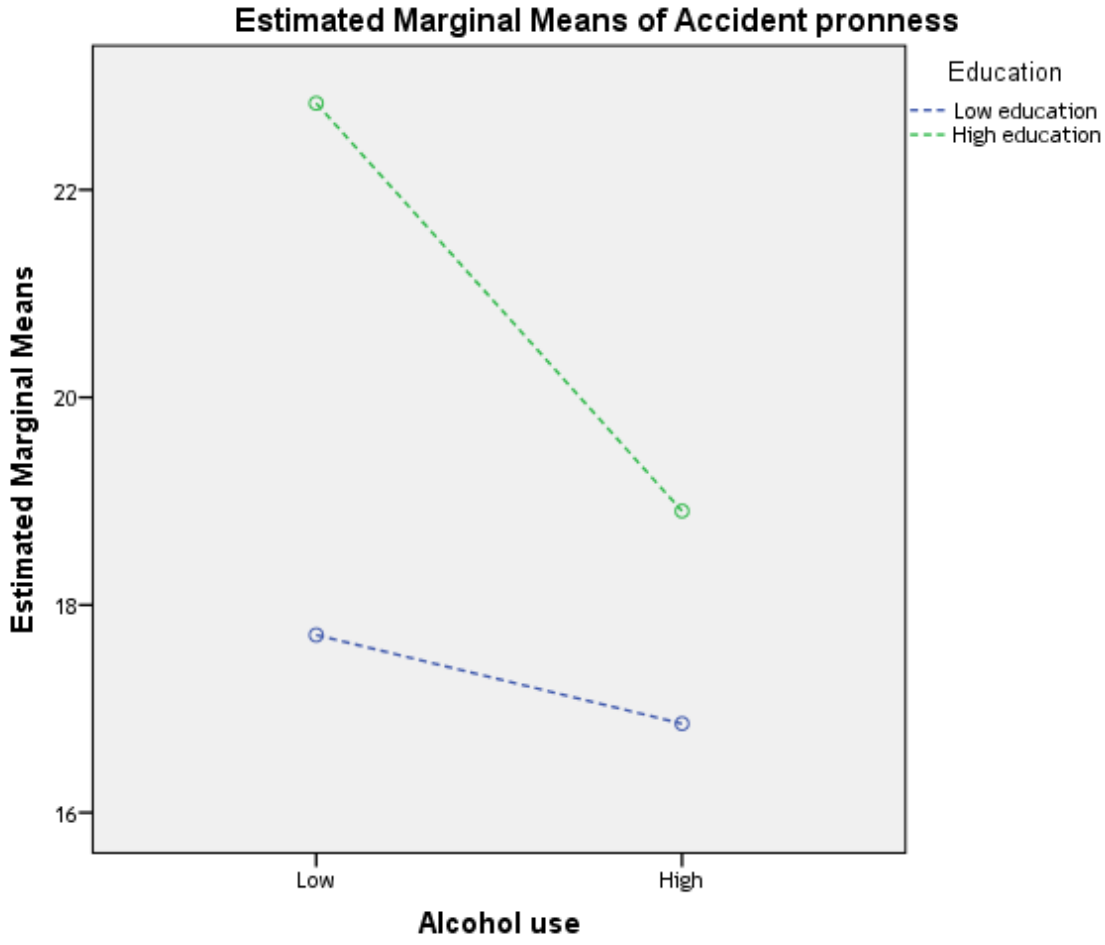
Accident pronness



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Group Statistics

	Neuroticism2	N	Mean	Std. Deviation	Std. Error Mean
Risky Driving behavior	Low	40	16.95	7.703	1.218
	High	78	19.87	6.360	.720
Accident pronness	Low	40	15.45	8.064	1.275
	High	78	19.04	9.908	1.122

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Risky Driving behavior	Equal variances assumed	3.785	.054	-2.196	116	.030	-2.922	1.330	-5.557	-.287
	Equal variances not assumed			-2.065	66.897	.043	-2.922	1.415	-5.746	-.098
Accident pronness	Equal variances assumed	6.427	.013	-1.978	116	.050	-3.588	1.814	-7.182	.005
	Equal variances not assumed			-2.113	94.175	.037	-3.588	1.698	-6.960	-.217

Group Statistics

	Extraversion2	N	Mean	Std. Deviation	Std. Error Mean
Risky Driving behavior	Low	52	20.38	6.675	.926
	High	66	17.70	6.986	.860
Accident pronness	Low	52	17.56	11.113	1.541
	High	66	18.03	7.971	.981

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Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Risky Driving behavior	Equal variances assumed	.264	.608	2.116	116	.037	2.688	1.270	.172	5.204
	Equal variances not assumed			2.127	111.721	.036	2.688	1.263	.184	5.191
Accident pronness	Equal variances assumed	3.105	.081	-.269	116	.789	-.473	1.758	-3.955	3.010
	Equal variances not assumed			-.259	89.221	.796	-.473	1.827	-4.103	3.157

Group Statistics

	Conscientiousness2	N	Mean	Std. Deviation	Std. Error Mean
Risky Driving behavior	Low	48	20.02	7.445	1.075
	High	70	18.10	6.532	.781
Accident pronness	Low	48	17.19	10.498	1.515
	High	70	18.26	8.701	1.040

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Risky Driving behavior	Equal variances assumed	.273	.602	1.482	116	.141	1.921	1.296	-.646	4.488
	Equal variances not assumed			1.446	92.217	.152	1.921	1.328	-.717	4.559
Accident pronness	Equal variances assumed	.949	.332	-.603	116	.548	-1.070	1.775	-4.585	2.445
	Equal variances not assumed			-.582	88.354	.562	-1.070	1.838	-4.722	2.582

Group Statistics

	Agreeableness2	N	Mean	Std. Deviation	Std. Error Mean
Risky Driving behavior	Low	46	20.11	6.627	.977
	High	72	18.10	7.085	.835
Accident pronness	Low	46	16.33	10.005	1.475
	High	72	18.78	9.009	1.062

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Risky Driving behavior	Equal variances assumed	.990	.322	1.542	116	.126	2.011	1.305	-.572	4.595
	Equal variances not assumed			1.565	100.688	.121	2.011	1.285	-.538	4.561
Accident pronness	Equal variances assumed	.083	.774	-1.381	116	.170	-2.452	1.776	-5.969	1.065
	Equal variances not assumed			-1.349	88.627	.181	-2.452	1.817	-6.063	1.160

Group Statistics

	Openness2	N	Mean	Std. Deviation	Std. Error Mean
Risky Driving behavior	Low	66	20.74	7.250	.892
	High	52	16.52	5.806	.805
Accident pronness	Low	66	17.44	9.999	1.231
	High	52	18.31	8.762	1.215

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Risky Driving behavior	Equal variances assumed	1.717	.193	3.423	116	.001	4.223	1.234	1.780	6.667
	Equal variances not assumed			3.514	115.962	.001	4.223	1.202	1.843	6.604
Accident pronness	Equal variances assumed	.717	.399	-.494	116	.622	-.868	1.757	-4.348	2.611
	Equal variances not assumed			-.502	114.647	.617	-.868	1.729	-4.294	2.558

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness[b]	.	Enter
2	Alcohol use[b]	.	Enter
3	Gender	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Risky Driving behavior
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.423[a]	.179	.142	6.438
2	.568[b]	.322	.286	5.875
3	.702[c]	.493	.461	5.103

a. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness

b. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use

c. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, gender

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1011.527	5	202.305	4.880	.000[b]
	Residual	4642.812	112	41.454		
	Total	5654.339	117			
2	Regression	1823.069	6	303.845	8.803	.000[c]
	Residual	3831.270	111	34.516		
	Total	5654.339	117			
3	Regression	2790.007	7	398.572	15.307	.000[d]
	Residual	2864.332	110	26.039		
	Total	5654.339	117			

a. Dependent Variable: Risky Driving behavior
b. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness
c. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use
d. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, gender

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Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Fraction Missing Info.	Relative Increase Variance	Relative Efficiency
		B	Std. Error	Beta					
1	(Constant)	**17.883**	**2.903**		**6.161**	**.000**			
	Neuroticism	**.387**	**.186**	**.204**	**2.083**	**.040**			
	Extraversion	**-.535**	**.277**	**-.373**	**-1.930**	**.056**			
	Conscientiousness	**.290**	**.317**	**.126**	**.917**	**.361**			
	Agreeableness	**.658**	**.299**	**.440**	**2.203**	**.030**			
	Openness to experience	**-.703**	**.224**	**-.426**	**-3.140**	**.002**			
	Alcohol use								
	Gender								
2	(Constant)	**14.068**	**2.763**		**5.092**	**.000**			
	Neuroticism	**.551**	**.173**	**.291**	**3.190**	**.002**			
	Extraversion	**-.261**	**.259**	**-.182**	**-1.006**	**.317**			
	Conscientiousness	**.404**	**.290**	**.176**	**1.394**	**.166**			
	Agreeableness	**.371**	**.279**	**.248**	**1.330**	**.186**			
	Openness to experience	**-.850**	**.207**	**-.515**	**-4.114**	**.000**			
	Alcohol use	**.400**	**.083**	**.400**	**4.849**	**.000**			
	Gender								
3	(Constant)	**25.063**	**3.002**		**8.347**	**.000**			
	Neuroticism	**.545**	**.150**	**.288**	**3.634**	**.000**			
	Extraversion	**-.415**	**.227**	**-.289**	**-1.831**	**.070**			
	Conscientiousness	**.332**	**.252**	**.144**	**1.317**	**.191**			
	Agreeableness	**.384**	**.242**	**.257**	**1.586**	**.116**			
	Openness to experience	**-.629**	**.183**	**-.381**	**-3.433**	**.001**			
	Alcohol use	**.389**	**.072**	**.389**	**5.424**	**.000**			
	Gender	**-9.711**	**1.594**	**-.424**	**-6.094**	**.000**			

a. Dependent Variable: Risky Driving behavior

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Excluded Variables[a]

Model		Beta In	T	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Alcohol use	.400[b]	4.849	.000	.418	.898
	age	-.042[b]	-.465	.643	-.044	.905
	gender	-.434[b]	-5.563	.000	-.467	.952
	Education	-.078[b]	-.828	.409	-.078	.827
2	Alcohol use					
	age	-.175[c]	-2.067	.041	-.193	.825
	gender	-.424[c]	-6.094	.000	-.502	.951
	Education	-.046[c]	-.531	.597	-.051	.822
3	Alcohol use					
	age	-.052[d]	-.670	.504	-.064	.761
	gender					
	Education	-.104[d]	-1.379	.171	-.131	.810

a. Dependent Variable: Risky Driving behavior
b. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness
c. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use
d. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, gender

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.320[a]	.103	.063	8.838
2	.329[b]	.108	.060	8.851
3	.451[c]	.204	.153	8.401
4	.566[d]	.321	.271	7.795

a. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness

b. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use

c. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, Education

d. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, Education, gender

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1000.180	5	200.036	2.561	.031[b]
	Residual	8749.176	112	78.118		
	Total	9749.356	117			
2	Regression	1053.471	6	175.579	2.241	.044[c]
	Residual	8695.885	111	78.341		
	Total	9749.356	117			
3	Regression	1986.625	7	283.804	4.022	.001[d]
	Residual	7762.731	110	70.570		
	Total	9749.356	117			
4	Regression	3126.704	8	390.838	6.433	.000[e]
	Residual	6622.652	109	60.758		
	Total	9749.356	117			

a. Dependent Variable: Accident proneness
b. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness
c. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use
d. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, Education
e. Predictors: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, Education, gender

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Fraction Missing Info.	Relative Increase Variance	Relative Efficiency
		B	Std. Error	Beta					
1	(Constant)	**11.313**	**3.985**		**2.839**	**.005**			
	Neuroticism	**.142**	**.255**	**.057**	**.558**	**.578**			
	Extraversion	**-1.037**	**.381**	**-.550**	**-2.723**	**.007**			
	Conscientiousness	**-.136**	**.435**	**-.045**	**-.314**	**.754**			
	Agreeableness	**1.081**	**.410**	**.551**	**2.637**	**.010**			
	Openness to experience	**.434**	**.307**	**.200**	**1.412**	**.161**			
	Alcohol use								
	Education								
	Gender								
2	(Constant)	**12.290**	**4.163**		**2.952**	**.004**			
	Neuroticism	**.100**	**.260**	**.040**	**.385**	**.701**			
	Extraversion	**-1.107**	**.391**	**-.587**	**-2.834**	**.005**			
	Conscientiousness	**-.165**	**.437**	**-.055**	**-.379**	**.705**			
	Agreeableness	**1.155**	**.420**	**.588**	**2.748**	**.007**			
	Openness to experience	**.472**	**.311**	**.218**	**1.515**	**.133**			
	Alcohol use	**-.103**	**.124**	**-.078**	**-.825**	**.411**			
	Education								
	Gender								
3	(Constant)	**8.587**	**4.080**		**2.105**	**.038**			
	Neuroticism	**.247**	**.250**	**.099**	**.987**	**.326**			
	Extraversion	**-1.144**	**.371**	**-.607**	**-3.085**	**.003**			
	Conscientiousness	**-.269**	**.415**	**-.089**	**-.647**	**.519**			
	Agreeableness	**1.050**	**.400**	**.535**	**2.625**	**.010**			
	Openness to experience	**.319**	**.298**	**.147**	**1.068**	**.288**			
	Alcohol use	**-.069**	**.118**	**-.053**	**-.583**	**.561**			
	Education	**3.006**	**.827**	**.341**	**3.636**	**.000**			
	Gender								
4	(Constant)	**-3.951**	**4.765**		**-.829**	**.409**			
	Neuroticism	**.273**	**.232**	**.110**	**1.177**	**.242**			
	Extraversion	**-.981**	**.346**	**-.520**	**-2.833**	**.005**			
	Conscientiousness	**-.204**	**.386**	**-.068**	**-.529**	**.598**			
	Agreeableness	**1.021**	**.371**	**.520**	**2.751**	**.007**			
	Openness to experience	**.056**	**.283**	**.026**	**.196**	**.845**			
	Alcohol use	**-.052**	**.110**	**-.040**	**-.474**	**.636**			
	Education	**3.418**	**.773**	**.388**	**4.422**	**.000**			
	Gender	**10.626**	**2.453**	**.353**	**4.332**	**.000**			

a. Dependent Variable: Accident proneness

Excluded Variables[a]

Model		Beta In	T	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Alcohol use	-.078[b]	-.825	.411	-.078	.898
	age	.089[b]	.950	.344	.090	.905
	gender	.311[b]	3.558	.001	.320	.952
	Education	.345[b]	3.704	.000	.332	.827
2	Alcohol use					
	age	.123[c]	1.253	.213	.119	.825
	gender	.309[c]	3.530	.001	.319	.951
	Education	.341[c]	3.636	.000	.328	.822
3	Alcohol use					
	age	.198[d]	2.109	.037	.198	.793
	gender	.353[d]	4.332	.000	.383	.937
	Education					
4	Alcohol use					
	age	.105[e]	1.146	.254	.110	.739
	gender					
	Education					

a. Dependent Variable: Accident proneness
b. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness
c. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use
d. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, Education
e. Predictors in the Model: (Constant), Openness to experience, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Alcohol use, Education, gender

Crosstabs

Age2 * Driving behavior

Crosstab

			Driving behavior		Total
			Low	High	
Age2	20-25 years	Count	14	10	24
		% of Total	11.9%	8.5%	20.3%
	26-30 years	Count	29	27	56
		% of Total	24.6%	22.9%	47.5%
	31 years and above	Count	12	26	38
		% of Total	10.2%	22.0%	32.2%
Total		Count	55	63	118
		% of Total	46.6%	53.4%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.378[a]	2	.068
Continuity Correction			
Likelihood Ratio	5.480	2	.065
Linear-by-Linear Association	4.800	1	.028
N of Valid Cases	118		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.19.

Age2 * Accidentproness2

Crosstab

			Accidentproness2		Total
			Low	High	
Age2	20-25 years	Count	24	0	24
		% of Total	20.3%	0.0%	20.3%
	26-30 years	Count	34	22	56
		% of Total	28.8%	18.6%	47.5%
	31 years and above	Count	27	11	38
		% of Total	22.9%	9.3%	32.2%
Total		Count	85	33	118
		% of Total	72.0%	28.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.898[a]	2	.002
Continuity Correction			
Likelihood Ratio	19.093	2	.000
Linear-by-Linear Association	4.094	1	.043
N of Valid Cases	118		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.71.

Gender * Driving behavior

Crosstab

			Driving behavior		Total
			Low	High	
Gender	Male	Count	45	61	106
		% of Total	38.1%	51.7%	89.8%
	Female	Count	10	2	12
		% of Total	8.5%	1.7%	10.2%
Total		Count	55	63	118
		% of Total	46.6%	53.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.239[a]	1	.007		
Continuity Correction[b]	5.690	1	.017		
Likelihood Ratio	7.704	1	.006		
Fisher's Exact Test				.012	.008
Linear-by-Linear Association	7.178	1	.007		
N of Valid Cases	118				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.59.
b. Computed only for a 2x2 table

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Gender * Accidentproness2

Crosstab

			Accidentproness2		Total
			Low	High	
Gender	Male	Count	81	25	106
		% of Total	68.6%	21.2%	89.8%
	Female	Count	4	8	12
		% of Total	3.4%	6.8%	10.2%
Total		Count	85	33	118
		% of Total	72.0%	28.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.932[a]	1	.002		
Continuity Correction[b]	7.908	1	.005		
Likelihood Ratio	8.780	1	.003		
Fisher's Exact Test				.004	.004
Linear-by-Linear Association	9.848	1	.002		
N of Valid Cases	118				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.36.
b. Computed only for a 2x2 table

Marital status * Driving behavior

Crosstab

			Driving behavior		Total
			Low	High	
Marital status	Single	Count	24	19	43
		% of Total	20.3%	16.1%	36.4%
	Married	Count	31	44	75
		% of Total	26.3%	37.3%	63.6%
Total		Count	55	63	118
		% of Total	46.6%	53.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.303[a]	1	.129		
Continuity Correction[b]	1.758	1	.185		
Likelihood Ratio	2.305	1	.129		
Fisher's Exact Test				.179	.092
Linear-by-Linear Association	2.283	1	.131		
N of Valid Cases	118				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.04.
b. Computed only for a 2x2 table

Marital status * Accidentproness2

Crosstab

			Accidentproness2		Total
			Low	High	
Marital status	Single	Count	27	16	43
		% of Total	22.9%	13.6%	36.4%
	Married	Count	58	17	75
		% of Total	49.2%	14.4%	63.6%
Total		Count	85	33	118
		% of Total	72.0%	28.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.869[a]	1	.090		
Continuity Correction[b]	2.193	1	.139		
Likelihood Ratio	2.814	1	.093		
Fisher's Exact Test				.135	.070
Linear-by-Linear Association	2.845	1	.092		
N of Valid Cases	118				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.03.
b. Computed only for a 2x2 table

Education * Driving behavior

Crosstab

			Driving behavior		Total
			Low	High	
Education	Primary	Count	14	11	25
		% of Total	11.9%	9.3%	21.2%
	SSCE	Count	16	32	48
		% of Total	13.6%	27.1%	40.7%
	NCE/OND	Count	12	9	21
		% of Total	10.2%	7.6%	17.8%
	HND/B.Sc	Count	13	11	24
		% of Total	11.0%	9.3%	20.3%
Total		Count	55	63	118
		% of Total	46.6%	53.4%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.773[a]	3	.123
Continuity Correction			
Likelihood Ratio	5.852	3	.119
Linear-by-Linear Association	.387	1	.534
N of Valid Cases	118		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.79.

Education * Accident proness2

Crosstab

			Accidentproness2		Total
			Low	High	
Education	Primary	Count	21	4	25
		% of Total	17.8%	3.4%	21.2%
	SSCE	Count	33	15	48
		% of Total	28.0%	12.7%	40.7%
	NCE/OND	Count	16	5	21
		% of Total	13.6%	4.2%	17.8%
	HND/B.Sc	Count	15	9	24
		% of Total	12.7%	7.6%	20.3%
Total		Count	85	33	118
		% of Total	72.0%	28.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.297[a]	3	.348
Continuity Correction			
Likelihood Ratio	3.446	3	.328
Linear-by-Linear Association	1.757	1	.185
N of Valid Cases	118		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.87.

General Linear Model

Between-Subjects Factors

		Value Label	N
MONTHS	1.00	JAN	5
	2.00	FEB	5
	3.00	MAR	5
	4.00	APR	5
	5.00	MAY	5
	6.00	JUNE	5
	7.00	JULY	5
	8.00	AUG	5
	9.00	SEP	5
	10.00	OCT	5
	11.00	NOV	5
	12.00	DEC	5
YEAR	1.00	2007	12
	2.00	2008	12
	3.00	2009	12
	4.00	2010	12
	5.00	2011	12

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Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.
VAR00001	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.
VAR00009	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.
VAR00001 * VAR00009	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.

a. Design: Intercept + VAR00001 + VAR00009 + VAR00001 * VAR00009
b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	NO OF CASES REPORTED	2496.600[a]	59	42.315	.	.
	NO OF FATAL CASES	540.733[a]	59	9.165	.	.
	NO OF SERIOUS CASES	1532.333[a]	59	25.972	.	.
	NO OF MINOR CASES	143.600[a]	59	2.434	.	.
	NO OF PERSONS INVOLVED	273460.983[a]	59	4634.932	.	.
	NO OF PERSONS INJURED	95588.183[a]	59	1620.139	.	.
	NO OF PERSON KILLED	4248.400[a]	59	72.007	.	.
Intercept	NO OF CASES REPORTED	17957.400	1	17957.400	.	.
	NO OF FATAL CASES	1771.267	1	1771.267	.	.
	NO OF SERIOUS CASES	6201.667	1	6201.667	.	.
	NO OF MINOR CASES	194.400	1	194.400	.	.
	NO OF PERSONS INVOLVED	1227226.017	1	1227226.017	.	.
	NO OF PERSONS INJURED	348538.817	1	348538.817	.	.
	NO OF PERSON KILLED	7797.600	1	7797.600	.	.
VAR00001	NO OF CASES REPORTED	577.400	11	52.491	.	.
	NO OF FATAL CASES	95.133	11	8.648	.	.
	NO OF SERIOUS CASES	323.533	11	29.412	.	.
	NO OF MINOR CASES	16.400	11	1.491	.	.
	NO OF PERSONS INVOLVED	56776.583	11	5161.508	.	.
	NO OF PERSONS INJURED	10928.583	11	993.508	.	.
	NO OF PERSON KILLED	464.800	11	42.255	.	.
VAR00009	NO OF CASES REPORTED	741.600	4	185.400	.	.
	NO OF FATAL CASES	97.900	4	24.475	.	.
	NO OF SERIOUS CASES	419.833	4	104.958	.	.
	NO OF MINOR CASES	19.767	4	4.942	.	.
	NO OF PERSONS INVOLVED	65800.900	4	16450.225	.	.
	NO OF PERSONS INJURED	23543.767	4	5885.942	.	.
	NO OF PERSON KILLED	346.733	4	86.683	.	.
VAR00001 * VAR00009	NO OF CASES REPORTED	1177.600	44	26.764	.	.
	NO OF FATAL CASES	347.700	44	7.902	.	.
	NO OF SERIOUS CASES	788.967	44	17.931	.	.
	NO OF MINOR CASES	107.433	44	2.442	.	.
	NO OF PERSONS INVOLVED	150883.500	44	3429.170	.	.
	NO OF PERSONS INJURED	61115.833	44	1388.996	.	.

	NO OF PERSON KILLED	3436.867	44	78.111	.	.
Error	NO OF CASES REPORTED	.000	0	.		
	NO OF FATAL CASES	.000	0	.		
	NO OF SERIOUS CASES	.000	0	.		
	NO OF MINOR CASES	.000	0	.		
	NO OF PERSONS INVOLVED	.000	0	.		
	NO OF PERSONS INJURED	.000	0	.		
	NO OF PERSON KILLED	.000	0	.		
Total	NO OF CASES REPORTED	20454.000	60			
	NO OF FATAL CASES	2312.000	60			
	NO OF SERIOUS CASES	7734.000	60			
	NO OF MINOR CASES	338.000	60			
	NO OF PERSONS INVOLVED	1500687.000	60			
	NO OF PERSONS INJURED	444127.000	60			
	NO OF PERSON KILLED	12046.000	60			
Corrected Total	NO OF CASES REPORTED	2496.600	59			
	NO OF FATAL CASES	540.733	59			
	NO OF SERIOUS CASES	1532.333	59			
	NO OF MINOR CASES	143.600	59			
	NO OF PERSONS INVOLVED	273460.983	59			
	NO OF PERSONS INJURED	95588.183	59			
	NO OF PERSON KILLED	4248.400	59			

a. R Squared = 1.000 (Adjusted R Squared = .)

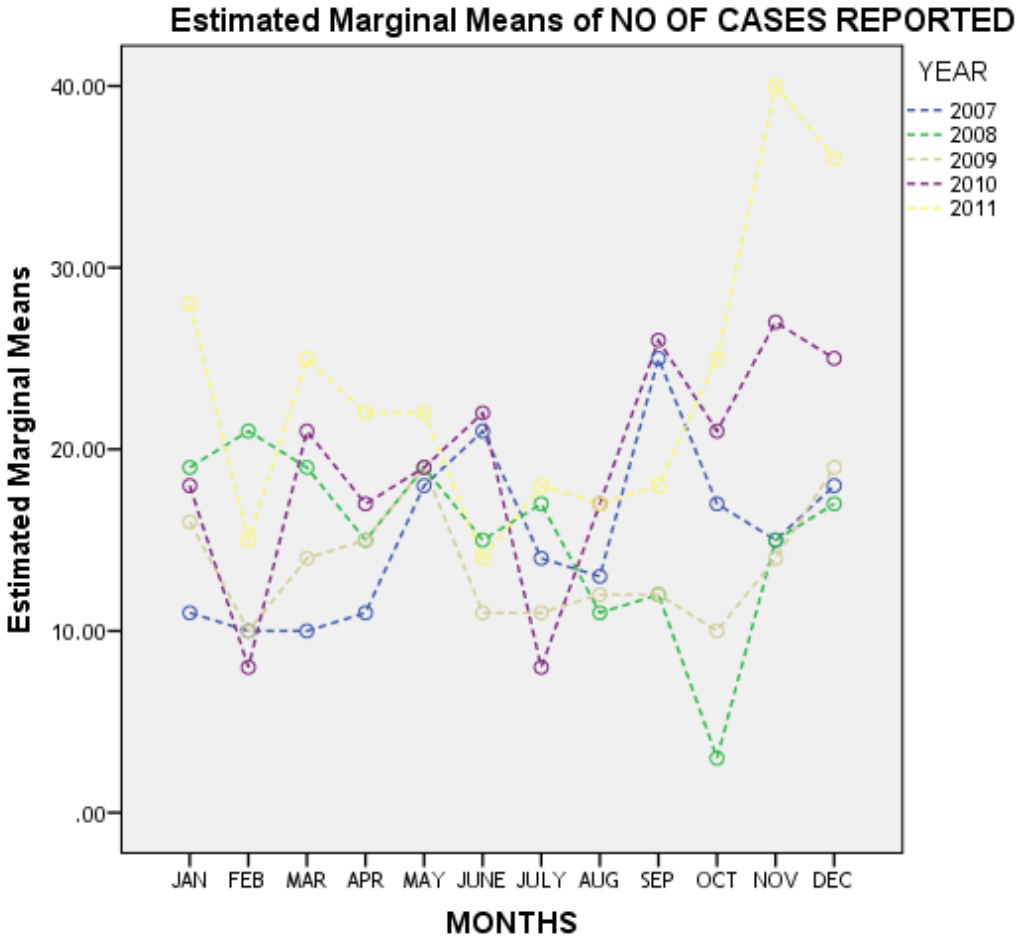
Estimated Marginal Means

Grand Mean

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
NO OF CASES REPORTED	17.300	.	.	.
NO OF FATAL CASES	5.433	.	.	.
NO OF SERIOUS CASES	10.167	.	.	.
NO OF MINOR CASES	1.800	.	.	.
NO OF PERSONS INVOLVED	143.017	.	.	.
NO OF PERSONS INJURED	76.217	.	.	.
NO OF PERSON KILLED	11.400	.	.	.

Profile Plots

NO OF CASES REPORTED



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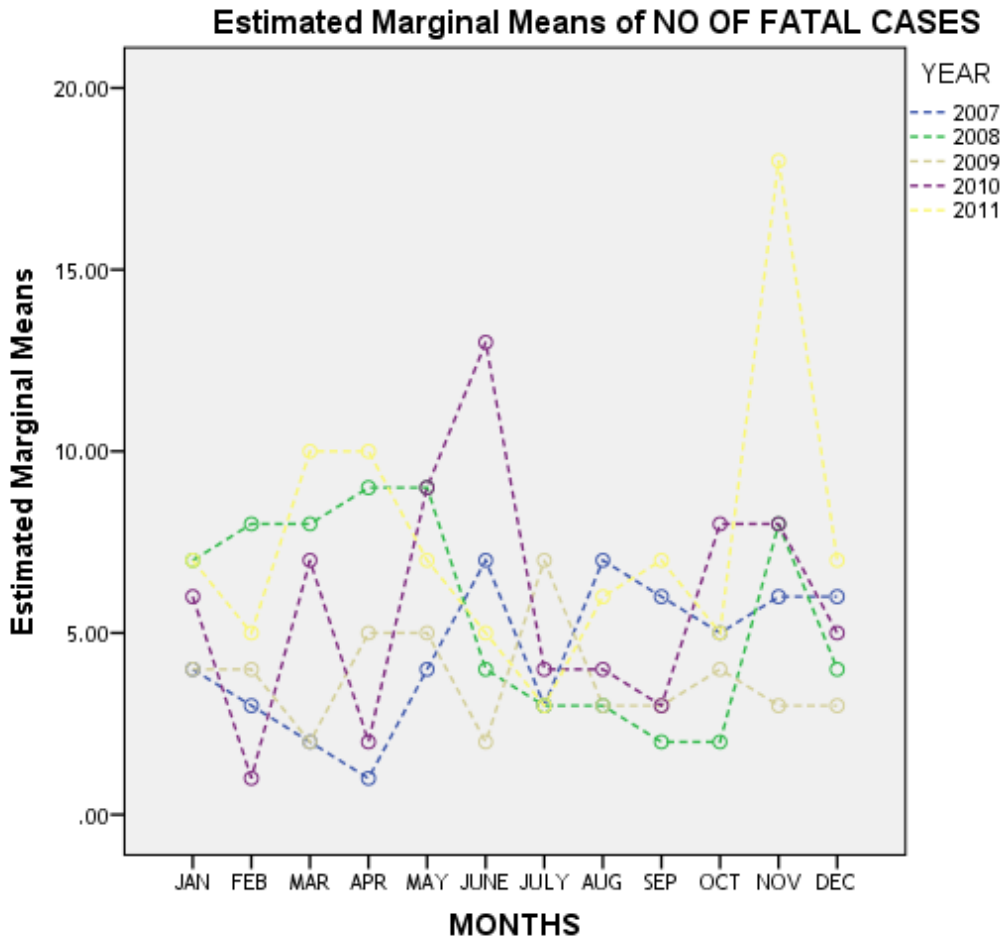
NO OF FATAL CASES



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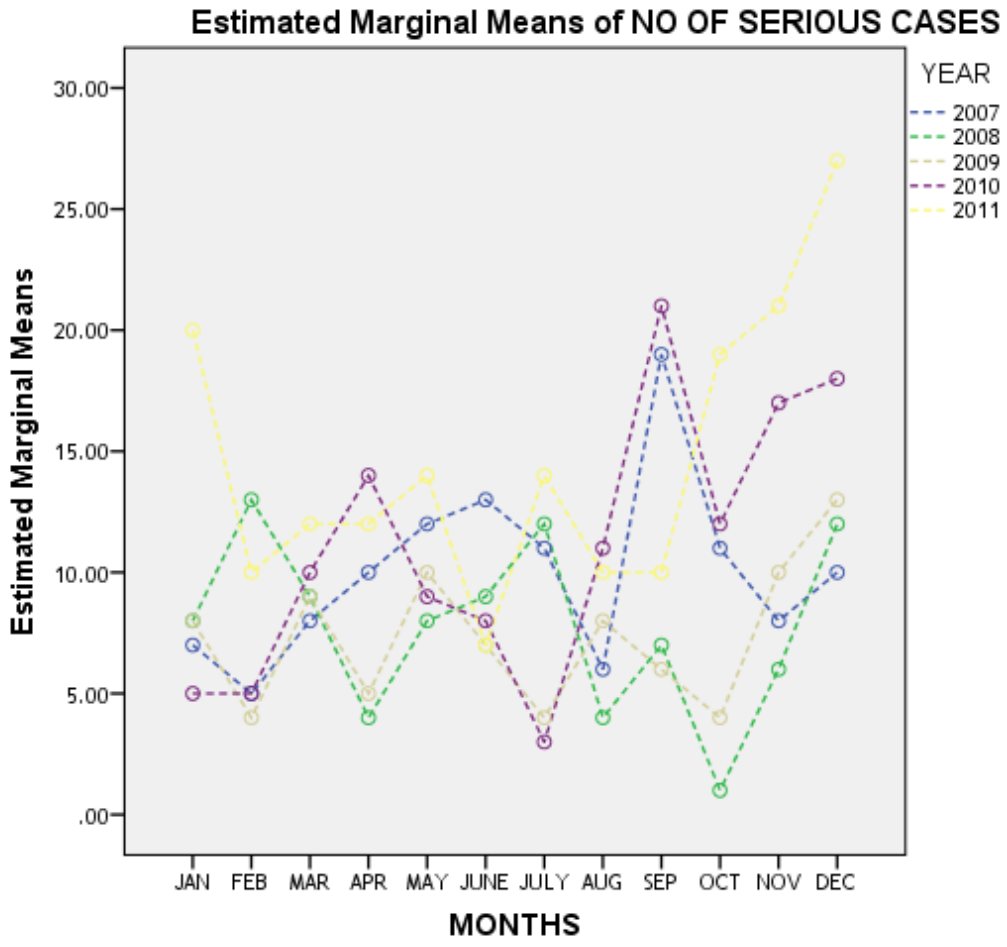
NO OF SERIOUS CASES



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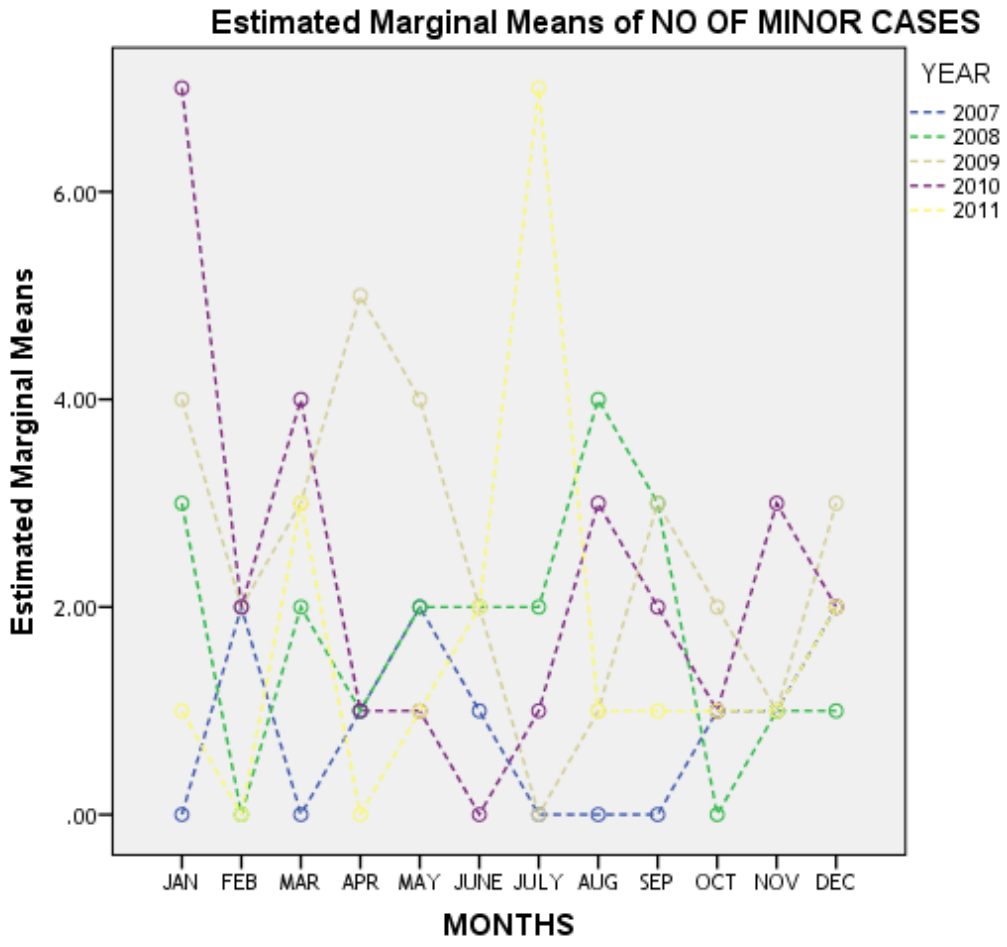
NO OF MINOR CASES



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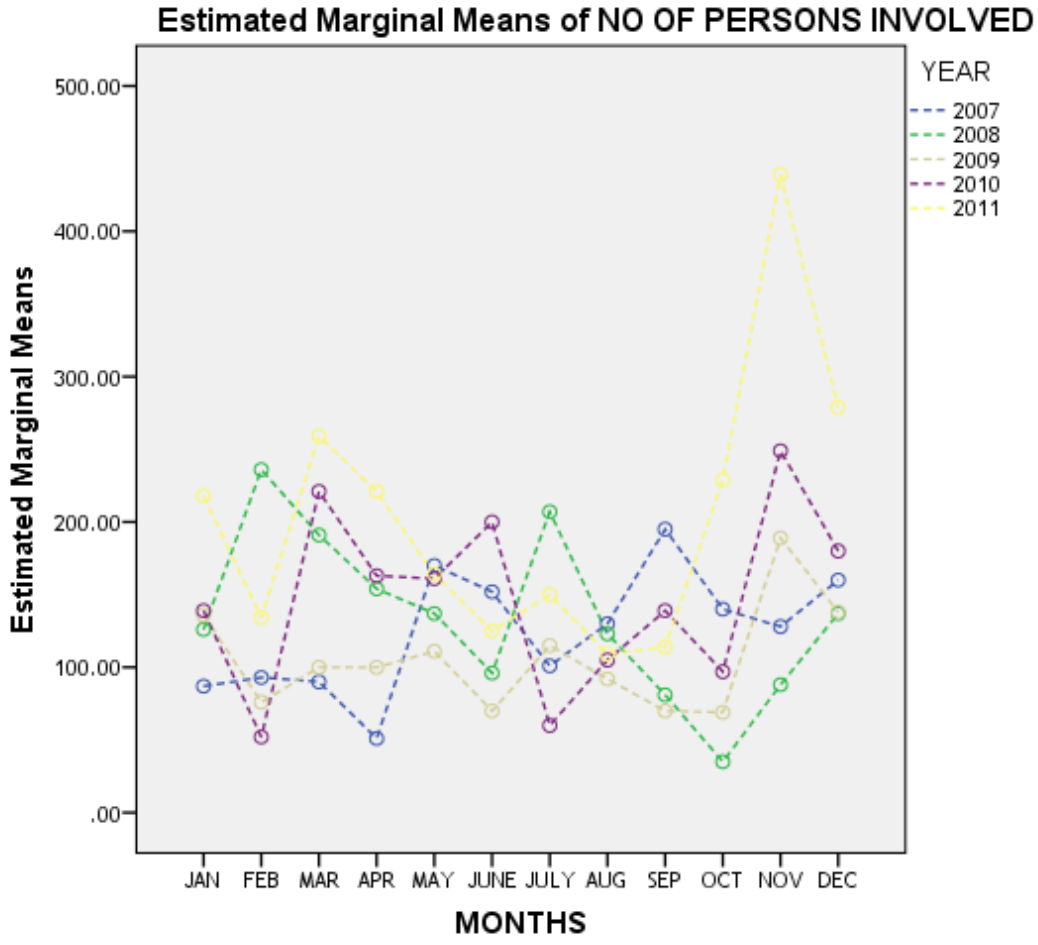
NO OF PERSONS INVOLVED



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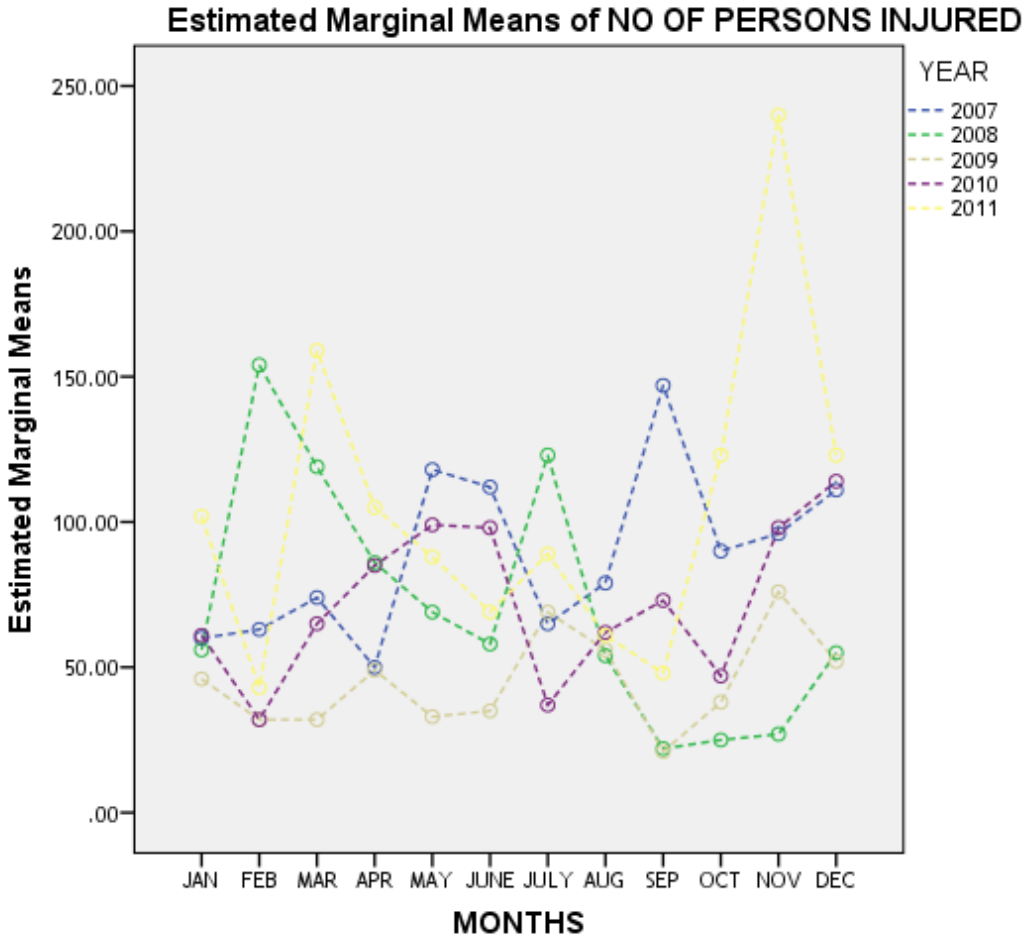
NO OF PERSONS INJURED



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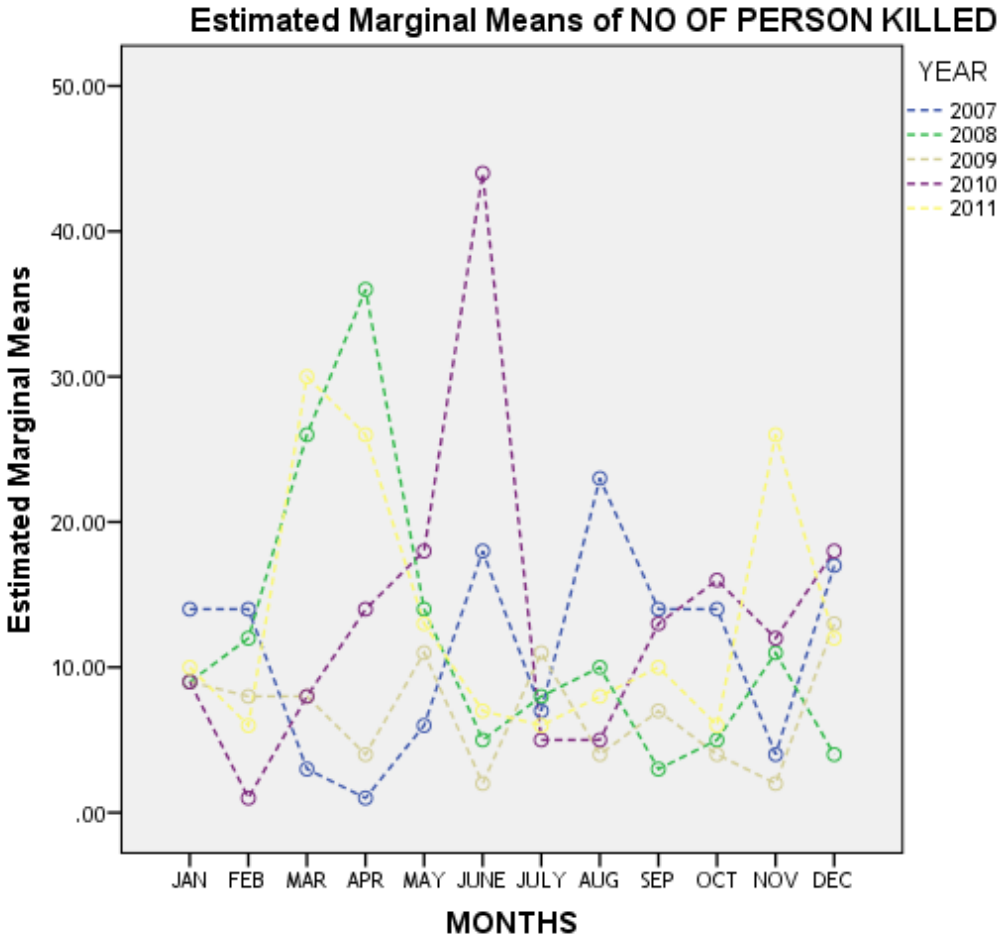
NO OF PERSON KILLED



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Descriptive Statistics

	MONTHS	YEAR	Mean	Std. Deviation	N
NO OF CASES REPORTED	JAN	2007	11.0000	.	1
		2008	19.0000	.	1
		2009	16.0000	.	1
		2010	18.0000	.	1
		2011	28.0000	.	1
		Total	18.4000	6.18870	5
	FEB	2007	10.0000	.	1
		2008	21.0000	.	1
		2009	10.0000	.	1
		2010	8.0000	.	1
		2011	15.0000	.	1
		Total	12.8000	5.26308	5
	MAR	2007	10.0000	.	1
		2008	19.0000	.	1
		2009	14.0000	.	1
		2010	21.0000	.	1
		2011	25.0000	.	1
		Total	17.8000	5.89067	5
	APR	2007	11.0000	.	1
		2008	15.0000	.	1
		2009	15.0000	.	1
		2010	17.0000	.	1
		2011	22.0000	.	1
		Total	16.0000	4.00000	5
	MAY	2007	18.0000	.	1
		2008	19.0000	.	1
		2009	19.0000	.	1
		2010	19.0000	.	1
		2011	22.0000	.	1
		Total	19.4000	1.51658	5
	JUNE	2007	21.0000	.	1
		2008	15.0000	.	1
		2009	11.0000	.	1
		2010	22.0000	.	1
		2011	14.0000	.	1
		Total	16.6000	4.72229	5
	JULY	2007	14.0000	.	1
		2008	17.0000	.	1
		2009	11.0000	.	1
		2010	8.0000	.	1
		2011	18.0000	.	1
		Total	13.6000	4.15933	5
	AUG	2007	13.0000	.	1
		2008	11.0000	.	1
		2009	12.0000	.	1
		2010	17.0000	.	1
		2011	17.0000	.	1
		Total	14.0000	2.82843	5
	SEP	2007	25.0000	.	1
		2008	12.0000	.	1
		2009	12.0000	.	1
		2010	26.0000	.	1
		2011	18.0000	.	1

		Total	**18.6000**	**6.76757**	**5**
	OCT	2007	**17.0000**	**.**	**1**
		2008	**3.0000**	**.**	**1**
		2009	**10.0000**	**.**	**1**
		2010	**21.0000**	**.**	**1**
		2011	**25.0000**	**.**	**1**
		Total	**15.2000**	**8.78635**	**5**
	NOV	2007	**15.0000**	**.**	**1**
		2008	**15.0000**	**.**	**1**
		2009	**14.0000**	**.**	**1**
		2010	**27.0000**	**.**	**1**
		2011	**40.0000**	**.**	**1**
		Total	**22.2000**	**11.30044**	**5**
	DEC	2007	**18.0000**	**.**	**1**
		2008	**17.0000**	**.**	**1**
		2009	**19.0000**	**.**	**1**
		2010	**25.0000**	**.**	**1**
		2011	**36.0000**	**.**	**1**
		Total	**23.0000**	**7.90569**	**5**
	Total	2007	**15.2500**	**4.71217**	**12**
		2008	**15.2500**	**4.86406**	**12**
		2009	**13.5833**	**3.17543**	**12**
		2010	**19.0833**	**6.15642**	**12**
		2011	**23.3333**	**8.10537**	**12**
		Total	**17.3000**	**6.50502**	**60**
NO OF FATAL CASES	JAN	2007	**4.0000**	**.**	**1**
		2008	**7.0000**	**.**	**1**
		2009	**4.0000**	**.**	**1**
		2010	**6.0000**	**.**	**1**
		2011	**7.0000**	**.**	**1**
		Total	**5.6000**	**1.51658**	**5**
	FEB	2007	**3.0000**	**.**	**1**
		2008	**8.0000**	**.**	**1**
		2009	**4.0000**	**.**	**1**
		2010	**1.0000**	**.**	**1**
		2011	**5.0000**	**.**	**1**
		Total	**4.2000**	**2.58844**	**5**
	MAR	2007	**2.0000**	**.**	**1**
		2008	**8.0000**	**.**	**1**
		2009	**2.0000**	**.**	**1**
		2010	**7.0000**	**.**	**1**
		2011	**10.0000**	**.**	**1**
		Total	**5.8000**	**3.63318**	**5**
	APR	2007	**1.0000**	**.**	**1**
		2008	**9.0000**	**.**	**1**
		2009	**5.0000**	**.**	**1**
		2010	**2.0000**	**.**	**1**
		2011	**10.0000**	**.**	**1**
		Total	**5.4000**	**4.03733**	**5**
	MAY	2007	**4.0000**	**.**	**1**
		2008	**9.0000**	**.**	**1**
		2009	**5.0000**	**.**	**1**
		2010	**9.0000**	**.**	**1**
		2011	**7.0000**	**.**	**1**
		Total	**6.8000**	**2.28035**	**5**
	JUNE	2007	**7.0000**	**.**	**1**
		2008	**4.0000**	**.**	**1**
		2009	**2.0000**	**.**	**1**
		2010	**13.0000**	**.**	**1**
		2011	**5.0000**	**.**	**1**

		Total	**6.2000**	**4.20714**	**5**
	JULY	2007	**3.0000**	**.**	**1**
		2008	**3.0000**	**.**	**1**
		2009	**7.0000**	**.**	**1**
		2010	**4.0000**	**.**	**1**
		2011	**3.0000**	**.**	**1**
		Total	**4.0000**	**1.73205**	**5**
	AUG	2007	**7.0000**	**.**	**1**
		2008	**3.0000**	**.**	**1**
		2009	**3.0000**	**.**	**1**
		2010	**4.0000**	**.**	**1**
		2011	**6.0000**	**.**	**1**
		Total	**4.6000**	**1.81659**	**5**
	SEP	2007	**6.0000**	**.**	**1**
		2008	**2.0000**	**.**	**1**
		2009	**3.0000**	**.**	**1**
		2010	**3.0000**	**.**	**1**
		2011	**7.0000**	**.**	**1**
		Total	**4.2000**	**2.16795**	**5**
	OCT	2007	**5.0000**	**.**	**1**
		2008	**2.0000**	**.**	**1**
		2009	**4.0000**	**.**	**1**
		2010	**8.0000**	**.**	**1**
		2011	**5.0000**	**.**	**1**
		Total	**4.8000**	**2.16795**	**5**
	NOV	2007	**6.0000**	**.**	**1**
		2008	**8.0000**	**.**	**1**
		2009	**3.0000**	**.**	**1**
		2010	**8.0000**	**.**	**1**
		2011	**18.0000**	**.**	**1**
		Total	**8.6000**	**5.63915**	**5**
	DEC	2007	**6.0000**	**.**	**1**
		2008	**4.0000**	**.**	**1**
		2009	**3.0000**	**.**	**1**
		2010	**5.0000**	**.**	**1**
		2011	**7.0000**	**.**	**1**
		Total	**5.0000**	**1.58114**	**5**
	Total	2007	**4.5000**	**1.97714**	**12**
		2008	**5.5833**	**2.81096**	**12**
		2009	**3.7500**	**1.42223**	**12**
		2010	**5.8333**	**3.37998**	**12**
		2011	**7.5000**	**3.87298**	**12**
		Total	**5.4333**	**3.02737**	**60**
NO OF SERIOUS CASES	JAN	2007	**7.0000**	**.**	**1**
		2008	**8.0000**	**.**	**1**
		2009	**8.0000**	**.**	**1**
		2010	**5.0000**	**.**	**1**
		2011	**20.0000**	**.**	**1**
		Total	**9.6000**	**5.94138**	**5**
	FEB	2007	**5.0000**	**.**	**1**
		2008	**13.0000**	**.**	**1**
		2009	**4.0000**	**.**	**1**
		2010	**5.0000**	**.**	**1**
		2011	**10.0000**	**.**	**1**
		Total	**7.4000**	**3.91152**	**5**
	MAR	2007	**8.0000**	**.**	**1**
		2008	**9.0000**	**.**	**1**
		2009	**9.0000**	**.**	**1**
		2010	**10.0000**	**.**	**1**
		2011	**12.0000**	**.**	**1**
		Total	**9.6000**	**1.51658**	**5**
	APR	2007	**10.0000**	**.**	**1**

		2008	4.0000	.	1
		2009	5.0000	.	1
		2010	14.0000	.	1
		2011	12.0000	.	1
		Total	9.0000	4.35890	5
	MAY	2007	12.0000	.	1
		2008	8.0000	.	1
		2009	10.0000	.	1
		2010	9.0000	.	1
		2011	14.0000	.	1
		Total	10.6000	2.40832	5
	JUNE	2007	13.0000	.	1
		2008	9.0000	.	1
		2009	7.0000	.	1
		2010	8.0000	.	1
		2011	7.0000	.	1
		Total	8.8000	2.48998	5
	JULY	2007	11.0000	.	1
		2008	12.0000	.	1
		2009	4.0000	.	1
		2010	3.0000	.	1
		2011	14.0000	.	1
		Total	8.8000	4.96991	5
	AUG	2007	6.0000	.	1
		2008	4.0000	.	1
		2009	8.0000	.	1
		2010	11.0000	.	1
		2011	10.0000	.	1
		Total	7.8000	2.86356	5
	SEP	2007	19.0000	.	1
		2008	7.0000	.	1
		2009	6.0000	.	1
		2010	21.0000	.	1
		2011	10.0000	.	1
		Total	12.6000	6.94982	5
	OCT	2007	11.0000	.	1
		2008	1.0000	.	1
		2009	4.0000	.	1
		2010	12.0000	.	1
		2011	19.0000	.	1
		Total	9.4000	7.09225	5
	NOV	2007	8.0000	.	1
		2008	6.0000	.	1
		2009	10.0000	.	1
		2010	17.0000	.	1
		2011	21.0000	.	1
		Total	12.4000	6.34823	5
	DEC	2007	10.0000	.	1
		2008	12.0000	.	1
		2009	13.0000	.	1
		2010	18.0000	.	1
		2011	27.0000	.	1
		Total	16.0000	6.81909	5
	Total	2007	10.0000	3.74166	12
		2008	7.7500	3.62128	12
		2009	7.3333	2.87096	12
		2010	11.0833	5.59965	12
		2011	14.6667	5.86722	12
		Total	10.1667	5.09625	60
NO OF MINOR CASES	JAN	2007	.0000	.	1
		2008	3.0000	.	1
		2009	4.0000	.	1

	2010	**7.0000**	**.**	**1**
	2011	**1.0000**	**.**	**1**
	Total	**3.0000**	**2.73861**	**5**
FEB	2007	**2.0000**	**.**	**1**
	2008	**.0000**	**.**	**1**
	2009	**2.0000**	**.**	**1**
	2010	**2.0000**	**.**	**1**
	2011	**.0000**	**.**	**1**
	Total	**1.2000**	**1.09545**	**5**
MAR	2007	**.0000**	**.**	**1**
	2008	**2.0000**	**.**	**1**
	2009	**3.0000**	**.**	**1**
	2010	**4.0000**	**.**	**1**
	2011	**3.0000**	**.**	**1**
	Total	**2.4000**	**1.51658**	**5**
APR	2007	**1.0000**	**.**	**1**
	2008	**1.0000**	**.**	**1**
	2009	**5.0000**	**.**	**1**
	2010	**1.0000**	**.**	**1**
	2011	**.0000**	**.**	**1**
	Total	**1.6000**	**1.94936**	**5**
MAY	2007	**2.0000**	**.**	**1**
	2008	**2.0000**	**.**	**1**
	2009	**4.0000**	**.**	**1**
	2010	**1.0000**	**.**	**1**
	2011	**1.0000**	**.**	**1**
	Total	**2.0000**	**1.22474**	**5**
JUNE	2007	**1.0000**	**.**	**1**
	2008	**2.0000**	**.**	**1**
	2009	**2.0000**	**.**	**1**
	2010	**.0000**	**.**	**1**
	2011	**2.0000**	**.**	**1**
	Total	**1.4000**	**.89443**	**5**
JULY	2007	**.0000**	**.**	**1**
	2008	**2.0000**	**.**	**1**
	2009	**.0000**	**.**	**1**
	2010	**1.0000**	**.**	**1**
	2011	**7.0000**	**.**	**1**
	Total	**2.0000**	**2.91548**	**5**
AUG	2007	**.0000**	**.**	**1**
	2008	**4.0000**	**.**	**1**
	2009	**1.0000**	**.**	**1**
	2010	**3.0000**	**.**	**1**
	2011	**1.0000**	**.**	**1**
	Total	**1.8000**	**1.64317**	**5**
SEP	2007	**.0000**	**.**	**1**
	2008	**3.0000**	**.**	**1**
	2009	**3.0000**	**.**	**1**
	2010	**2.0000**	**.**	**1**
	2011	**1.0000**	**.**	**1**
	Total	**1.8000**	**1.30384**	**5**
OCT	2007	**1.0000**	**.**	**1**
	2008	**.0000**	**.**	**1**
	2009	**2.0000**	**.**	**1**
	2010	**1.0000**	**.**	**1**
	2011	**1.0000**	**.**	**1**
	Total	**1.0000**	**.70711**	**5**
NOV	2007	**1.0000**	**.**	**1**
	2008	**1.0000**	**.**	**1**
	2009	**1.0000**	**.**	**1**
	2010	**3.0000**	**.**	**1**
	2011	**1.0000**	**.**	**1**

		Total	1.4000	.89443	5
	DEC	2007	2.0000	.	1
		2008	1.0000	.	1
		2009	3.0000	.	1
		2010	2.0000	.	1
		2011	2.0000	.	1
		Total	2.0000	.70711	5
	Total	2007	.8333	.83485	12
		2008	1.7500	1.21543	12
		2009	2.5000	1.44600	12
		2010	2.2500	1.86474	12
		2011	1.6667	1.87487	12
		Total	1.8000	1.56010	60
NO OF PERSONS INVOLVED	JAN	2007	87.0000	.	1
		2008	126.0000	.	1
		2009	136.0000	.	1
		2010	139.0000	.	1
		2011	218.0000	.	1
		Total	141.2000	47.69382	5
	FEB	2007	93.0000	.	1
		2008	236.0000	.	1
		2009	76.0000	.	1
		2010	52.0000	.	1
		2011	134.0000	.	1
		Total	118.2000	72.32704	5
	MAR	2007	90.0000	.	1
		2008	191.0000	.	1
		2009	100.0000	.	1
		2010	221.0000	.	1
		2011	259.0000	.	1
		Total	172.2000	74.56340	5
	APR	2007	51.0000	.	1
		2008	154.0000	.	1
		2009	100.0000	.	1
		2010	163.0000	.	1
		2011	221.0000	.	1
		Total	137.8000	64.77422	5
	MAY	2007	170.0000	.	1
		2008	137.0000	.	1
		2009	111.0000	.	1
		2010	161.0000	.	1
		2011	164.0000	.	1
		Total	148.6000	24.48060	5
	JUNE	2007	152.0000	.	1
		2008	96.0000	.	1
		2009	70.0000	.	1
		2010	200.0000	.	1
		2011	125.0000	.	1
		Total	128.6000	50.38651	5
	JULY	2007	101.0000	.	1
		2008	207.0000	.	1
		2009	115.0000	.	1
		2010	60.0000	.	1
		2011	150.0000	.	1
		Total	126.6000	55.31094	5
	AUG	2007	130.0000	.	1
		2008	123.0000	.	1
		2009	92.0000	.	1
		2010	105.0000	.	1
		2011	109.0000	.	1
		Total	111.8000	15.02332	5
	SEP	2007	195.0000	.	1

		2008	**81.0000**	**.**	**1**
		2009	**70.0000**	**.**	**1**
		2010	**139.0000**	**.**	**1**
		2011	**114.0000**	**.**	**1**
		Total	**119.8000**	**50.10689**	**5**
	OCT	2007	**140.0000**	**.**	**1**
		2008	**35.0000**	**.**	**1**
		2009	**69.0000**	**.**	**1**
		2010	**97.0000**	**.**	**1**
		2011	**229.0000**	**.**	**1**
		Total	**114.0000**	**74.92663**	**5**
	NOV	2007	**128.0000**	**.**	**1**
		2008	**88.0000**	**.**	**1**
		2009	**189.0000**	**.**	**1**
		2010	**249.0000**	**.**	**1**
		2011	**439.0000**	**.**	**1**
		Total	**218.6000**	**137.51473**	**5**
	DEC	2007	**160.0000**	**.**	**1**
		2008	**137.0000**	**.**	**1**
		2009	**138.0000**	**.**	**1**
		2010	**180.0000**	**.**	**1**
		2011	**279.0000**	**.**	**1**
		Total	**178.8000**	**58.75117**	**5**
	Total	2007	**124.7500**	**41.43149**	**12**
		2008	**134.2500**	**57.01216**	**12**
		2009	**105.5000**	**35.73259**	**12**
		2010	**147.1667**	**61.21175**	**12**
		2011	**203.4167**	**94.27374**	**12**
		Total	**143.0167**	**68.08033**	**60**
NO OF PERSONS INJURED	JAN	2007	**60.0000**	**.**	**1**
		2008	**56.0000**	**.**	**1**
		2009	**46.0000**	**.**	**1**
		2010	**61.0000**	**.**	**1**
		2011	**102.0000**	**.**	**1**
		Total	**65.0000**	**21.51743**	**5**
	FEB	2007	**63.0000**	**.**	**1**
		2008	**154.0000**	**.**	**1**
		2009	**32.0000**	**.**	**1**
		2010	**32.0000**	**.**	**1**
		2011	**43.0000**	**.**	**1**
		Total	**64.8000**	**51.44609**	**5**
	MAR	2007	**74.0000**	**.**	**1**
		2008	**119.0000**	**.**	**1**
		2009	**32.0000**	**.**	**1**
		2010	**65.0000**	**.**	**1**
		2011	**159.0000**	**.**	**1**
		Total	**89.8000**	**49.61552**	**5**
	APR	2007	**50.0000**	**.**	**1**
		2008	**86.0000**	**.**	**1**
		2009	**49.0000**	**.**	**1**
		2010	**85.0000**	**.**	**1**
		2011	**105.0000**	**.**	**1**
		Total	**75.0000**	**24.60691**	**5**
	MAY	2007	**118.0000**	**.**	**1**
		2008	**69.0000**	**.**	**1**
		2009	**33.0000**	**.**	**1**
		2010	**99.0000**	**.**	**1**
		2011	**88.0000**	**.**	**1**
		Total	**81.4000**	**32.36201**	**5**
	JUNE	2007	**112.0000**	**.**	**1**
		2008	**58.0000**	**.**	**1**
		2009	**35.0000**	**.**	**1**

		2010	**98.0000**	**.**	**1**
		2011	**69.0000**	**.**	**1**
		Total	**74.4000**	**30.90793**	**5**
	JULY	2007	**65.0000**	**.**	**1**
		2008	**123.0000**	**.**	**1**
		2009	**69.0000**	**.**	**1**
		2010	**37.0000**	**.**	**1**
		2011	**89.0000**	**.**	**1**
		Total	**76.6000**	**31.88730**	**5**
	AUG	2007	**79.0000**	**.**	**1**
		2008	**54.0000**	**.**	**1**
		2009	**56.0000**	**.**	**1**
		2010	**62.0000**	**.**	**1**
		2011	**61.0000**	**.**	**1**
		Total	**62.4000**	**9.86408**	**5**
	SEP	2007	**147.0000**	**.**	**1**
		2008	**22.0000**	**.**	**1**
		2009	**21.0000**	**.**	**1**
		2010	**73.0000**	**.**	**1**
		2011	**48.0000**	**.**	**1**
		Total	**62.2000**	**52.01634**	**5**
	OCT	2007	**90.0000**	**.**	**1**
		2008	**25.0000**	**.**	**1**
		2009	**38.0000**	**.**	**1**
		2010	**47.0000**	**.**	**1**
		2011	**123.0000**	**.**	**1**
		Total	**64.6000**	**40.74678**	**5**
	NOV	2007	**96.0000**	**.**	**1**
		2008	**27.0000**	**.**	**1**
		2009	**76.0000**	**.**	**1**
		2010	**98.0000**	**.**	**1**
		2011	**240.0000**	**.**	**1**
		Total	**107.4000**	**79.45313**	**5**
	DEC	2007	**111.0000**	**.**	**1**
		2008	**55.0000**	**.**	**1**
		2009	**52.0000**	**.**	**1**
		2010	**114.0000**	**.**	**1**
		2011	**123.0000**	**.**	**1**
		Total	**91.0000**	**34.53259**	**5**
	Total	2007	**88.7500**	**28.92977**	**12**
		2008	**70.6667**	**42.12176**	**12**
		2009	**44.9167**	**16.32320**	**12**
		2010	**72.5833**	**26.51058**	**12**
		2011	**104.1667**	**54.48909**	**12**
		Total	**76.2167**	**40.25095**	**60**
NO OF PERSON KILLED	JAN	2007	**14.0000**	**.**	**1**
		2008	**9.0000**	**.**	**1**
		2009	**9.0000**	**.**	**1**
		2010	**9.0000**	**.**	**1**
		2011	**10.0000**	**.**	**1**
		Total	**10.2000**	**2.16795**	**5**
	FEB	2007	**14.0000**	**.**	**1**
		2008	**12.0000**	**.**	**1**
		2009	**8.0000**	**.**	**1**
		2010	**1.0000**	**.**	**1**
		2011	**6.0000**	**.**	**1**
		Total	**8.2000**	**5.11859**	**5**
	MAR	2007	**3.0000**	**.**	**1**
		2008	**26.0000**	**.**	**1**

	2009	**8.0000**	**.**	**1**
	2010	**8.0000**	**.**	**1**
	2011	**30.0000**	**.**	**1**
	Total	**15.0000**	**12.12436**	**5**
APR	2007	**1.0000**	**.**	**1**
	2008	**36.0000**	**.**	**1**
	2009	**4.0000**	**.**	**1**
	2010	**14.0000**	**.**	**1**
	2011	**26.0000**	**.**	**1**
	Total	**16.2000**	**14.77159**	**5**
MAY	2007	**6.0000**	**.**	**1**
	2008	**14.0000**	**.**	**1**
	2009	**11.0000**	**.**	**1**
	2010	**18.0000**	**.**	**1**
	2011	**13.0000**	**.**	**1**
	Total	**12.4000**	**4.39318**	**5**
JUNE	2007	**18.0000**	**.**	**1**
	2008	**5.0000**	**.**	**1**
	2009	**2.0000**	**.**	**1**
	2010	**44.0000**	**.**	**1**
	2011	**7.0000**	**.**	**1**
	Total	**15.2000**	**17.19593**	**5**
JULY	2007	**7.0000**	**.**	**1**
	2008	**8.0000**	**.**	**1**
	2009	**11.0000**	**.**	**1**
	2010	**5.0000**	**.**	**1**
	2011	**6.0000**	**.**	**1**
	Total	**7.4000**	**2.30217**	**5**
AUG	2007	**23.0000**	**.**	**1**
	2008	**10.0000**	**.**	**1**
	2009	**4.0000**	**.**	**1**
	2010	**5.0000**	**.**	**1**
	2011	**8.0000**	**.**	**1**
	Total	**10.0000**	**7.64853**	**5**
SEP	2007	**14.0000**	**.**	**1**
	2008	**3.0000**	**.**	**1**
	2009	**7.0000**	**.**	**1**
	2010	**13.0000**	**.**	**1**
	2011	**10.0000**	**.**	**1**
	Total	**9.4000**	**4.50555**	**5**
OCT	2007	**14.0000**	**.**	**1**
	2008	**5.0000**	**.**	**1**
	2009	**4.0000**	**.**	**1**
	2010	**16.0000**	**.**	**1**
	2011	**6.0000**	**.**	**1**
	Total	**9.0000**	**5.56776**	**5**
NOV	2007	**4.0000**	**.**	**1**
	2008	**11.0000**	**.**	**1**
	2009	**2.0000**	**.**	**1**
	2010	**12.0000**	**.**	**1**
	2011	**26.0000**	**.**	**1**
	Total	**11.0000**	**9.43398**	**5**

DEC	2007	17.0000	.	1
	2008	4.0000	.	1
	2009	13.0000	.	1
	2010	18.0000	.	1
	2011	12.0000	.	1
	Total	12.8000	5.54076	5
Total	2007	11.2500	6.86394	12
	2008	11.9167	9.76504	12
	2009	6.9167	3.70401	12
	2010	13.5833	10.99966	12
	2011	13.3333	8.80427	12
	Total	11.4000	8.48568	60

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.
VAR00001	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.
VAR00009	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.
VAR00001 * VAR00009	Pillai's Trace	.	.[b]	.	.	.
	Wilks' Lambda	.	.[b]	.	.	.
	Hotelling's Trace	.	.[b]	.	.	.
	Roy's Largest Root	.	.[b]	.	.	.

a. Design: Intercept + VAR00001 + VAR00009 + VAR00001 * VAR00009
b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	NO OF CASES REPORTED	2496.600[a]	59	42.315	.	.
	NO OF FATAL CASES	540.733[a]	59	9.165	.	.
	NO OF SERIOUS CASES	1532.333[a]	59	25.972	.	.
	NO OF MINOR CASES	143.600[a]	59	2.434	.	.
	NO OF PERSONS INVOLVED	273460.983[a]	59	4634.932	.	.
	NO OF PERSONS INJURED	95588.183[a]	59	1620.139	.	.
	NO OF PERSON KILLED	4248.400[a]	59	72.007	.	.
Intercept	NO OF CASES REPORTED	17957.400	1	17957.400	.	.
	NO OF FATAL CASES	1771.267	1	1771.267	.	.
	NO OF SERIOUS CASES	6201.667	1	6201.667	.	.
	NO OF MINOR CASES	194.400	1	194.400	.	.
	NO OF PERSONS INVOLVED	1227226.017	1	1227226.017	.	.
	NO OF PERSONS INJURED	348538.817	1	348538.817	.	.
	NO OF PERSON KILLED	7797.600	1	7797.600	.	.
VAR00001	NO OF CASES REPORTED	577.400	11	52.491	.	.
	NO OF FATAL CASES	95.133	11	8.648	.	.
	NO OF SERIOUS CASES	323.533	11	29.412	.	.
	NO OF MINOR CASES	16.400	11	1.491	.	.
	NO OF PERSONS INVOLVED	56776.583	11	5161.508	.	.
	NO OF PERSONS INJURED	10928.583	11	993.508	.	.

	NO OF PERSON KILLED	464.800	11	42.255	.	.
VAR00009	NO OF CASES REPORTED	741.600	4	185.400	.	.
	NO OF FATAL CASES	97.900	4	24.475	.	.
	NO OF SERIOUS CASES	419.833	4	104.958	.	.
	NO OF MINOR CASES	19.767	4	4.942	.	.
	NO OF PERSONS INVOLVED	65800.900	4	16450.225	.	.
	NO OF PERSONS INJURED	23543.767	4	5885.942	.	.
	NO OF PERSON KILLED	346.733	4	86.683	.	.
VAR00001 * VAR00009	NO OF CASES REPORTED	1177.600	44	26.764	.	.
	NO OF FATAL CASES	347.700	44	7.902	.	.
	NO OF SERIOUS CASES	788.967	44	17.931	.	.
	NO OF MINOR CASES	107.433	44	2.442	.	.
	NO OF PERSONS INVOLVED	150883.500	44	3429.170	.	.
	NO OF PERSONS INJURED	61115.833	44	1388.996	.	.
	NO OF PERSON KILLED	3436.867	44	78.111	.	.
Error	NO OF CASES REPORTED	.000	0	.		
	NO OF FATAL CASES	.000	0	.		
	NO OF SERIOUS CASES	.000	0	.		
	NO OF MINOR CASES	.000	0	.		
	NO OF PERSONS INVOLVED	.000	0	.		
	NO OF PERSONS INJURED	.000	0	.		
	NO OF PERSON KILLED	.000	0	.		
Total	NO OF CASES REPORTED	20454.000	60			
	NO OF FATAL CASES	2312.000	60			
	NO OF SERIOUS CASES	7734.000	60			
	NO OF MINOR CASES	338.000	60			
	NO OF PERSONS INVOLVED	1500687.000	60			
	NO OF PERSONS INJURED	444127.000	60			
	NO OF PERSON KILLED	12046.000	60			
Corrected Total	NO OF CASES REPORTED	2496.600	59			
	NO OF FATAL CASES	540.733	59			
	NO OF SERIOUS CASES	1532.333	59			
	NO OF MINOR CASES	143.600	59			
	NO OF PERSONS INVOLVED	273460.983	59			
	NO OF PERSONS INJURED	95588.183	59			
	NO OF PERSON KILLED	4248.400	59			

a. R Squared = 1.000 (Adjusted R Squared = .)

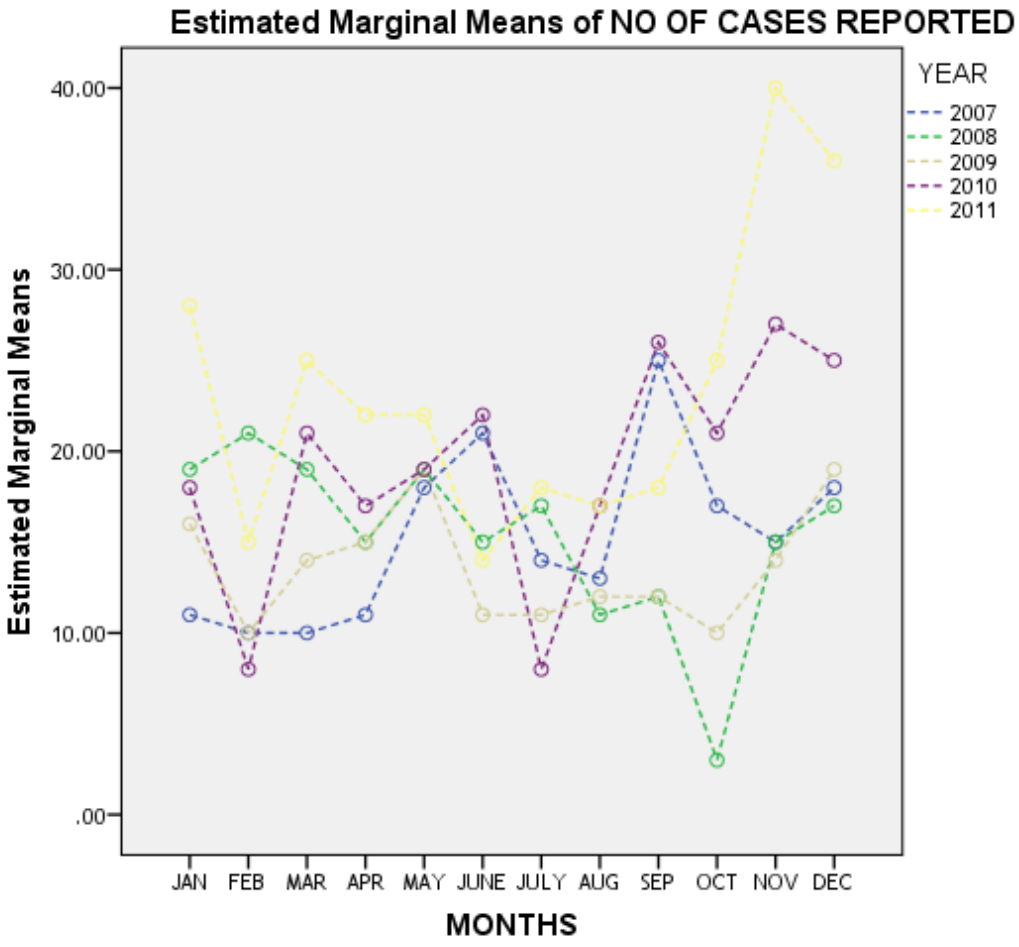
Estimated Marginal Means

Grand Mean

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
NO OF CASES REPORTED	17.300	.	.	.
NO OF FATAL CASES	5.433	.	.	.
NO OF SERIOUS CASES	10.167	.	.	.
NO OF MINOR CASES	1.800	.	.	.
NO OF PERSONS INVOLVED	143.017	.	.	.
NO OF PERSONS INJURED	76.217	.	.	.
NO OF PERSON KILLED	11.400	.	.	.

Profile Plots

NO OF CASES REPORTED



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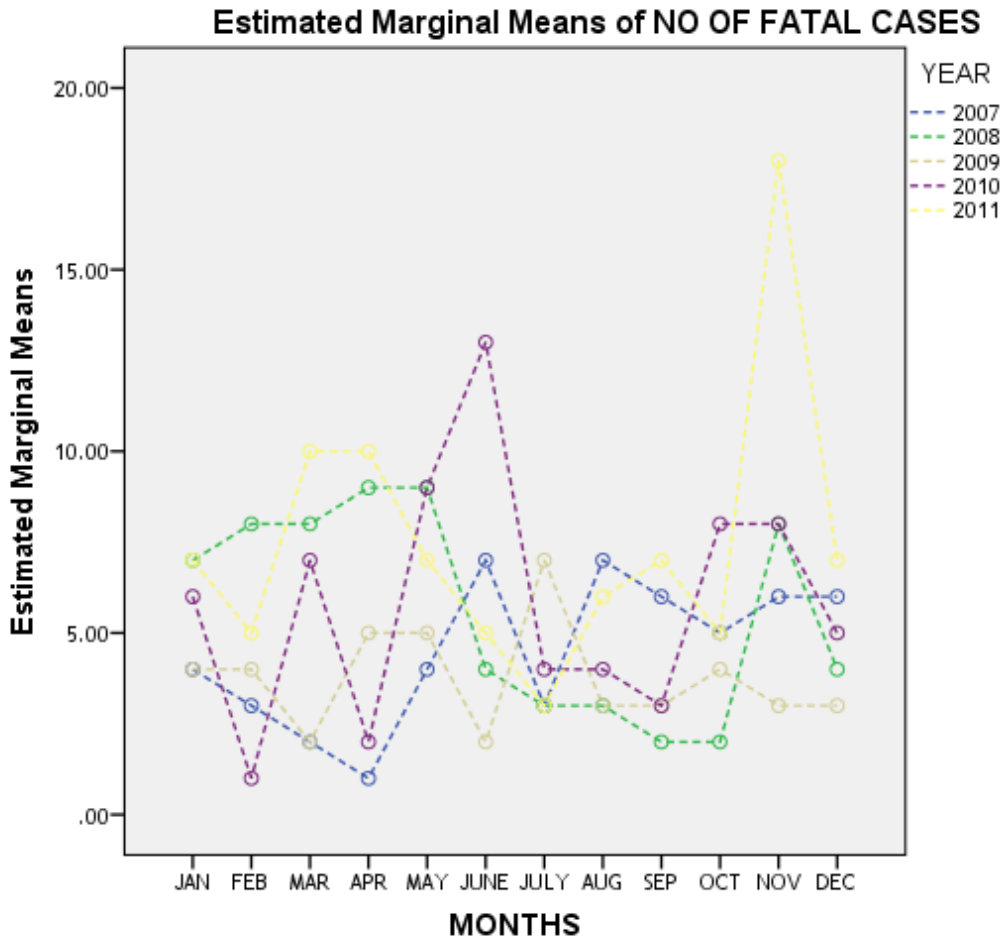
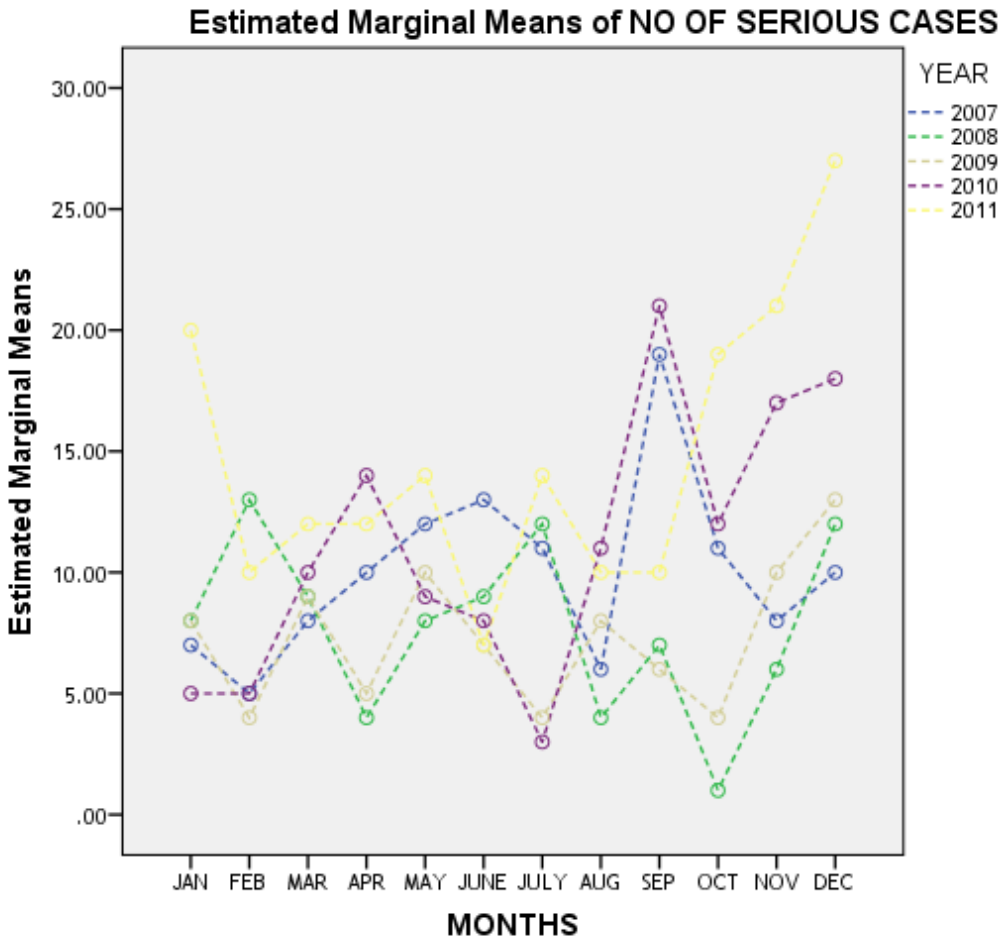
NO OF FATAL CASES



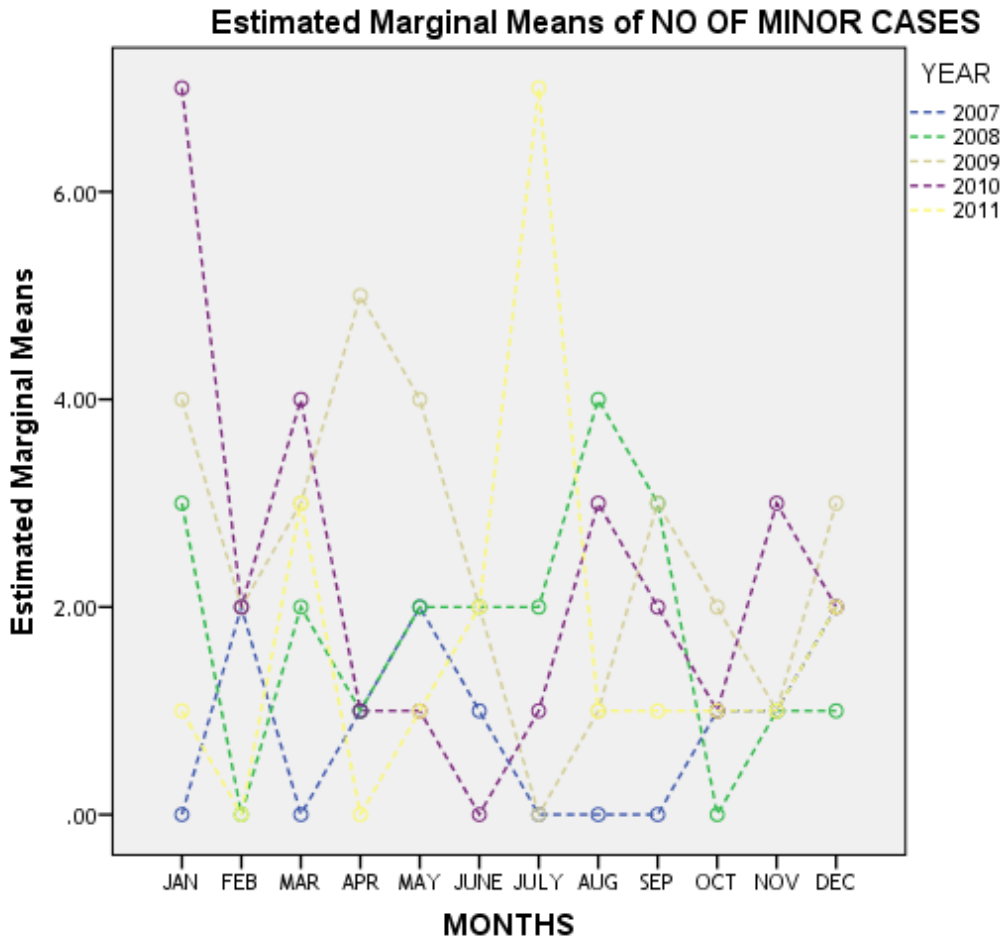
UNIVERSI

NO OF SERIOUS CASES



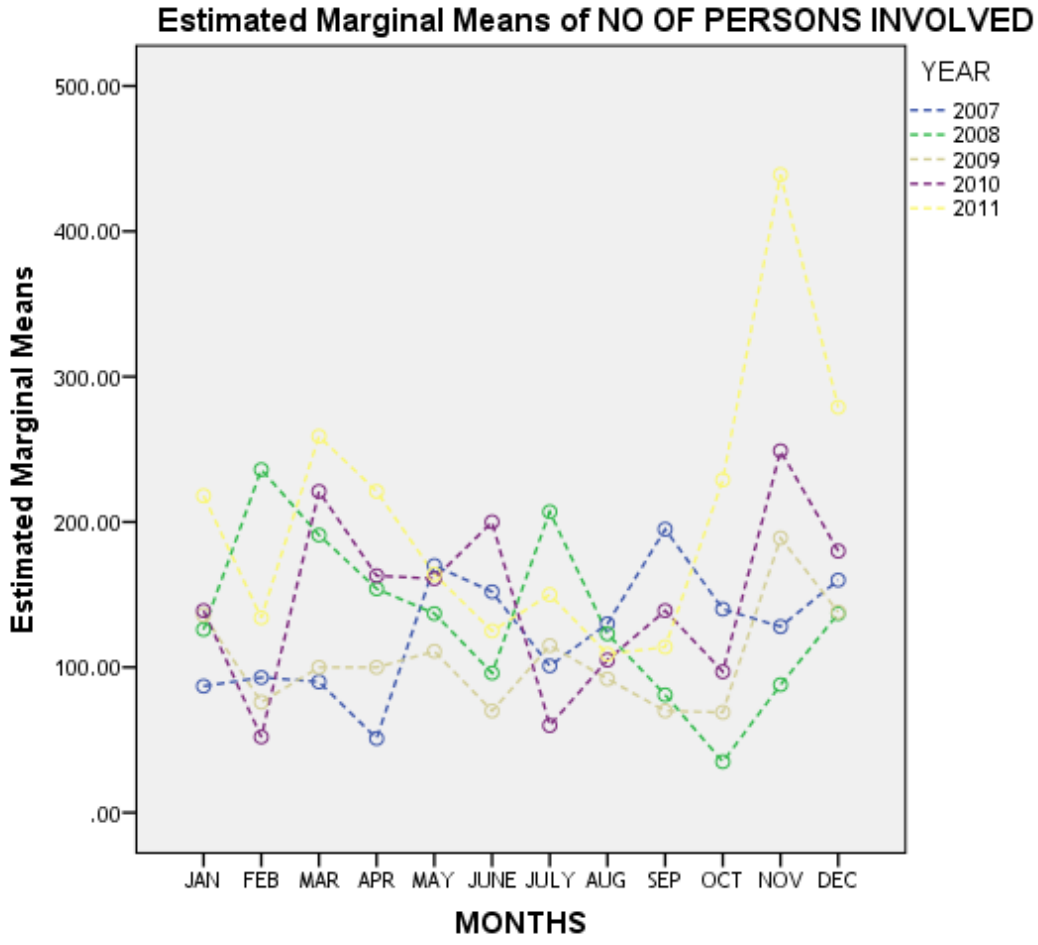
UNIVERSI

NO OF MINOR CASES



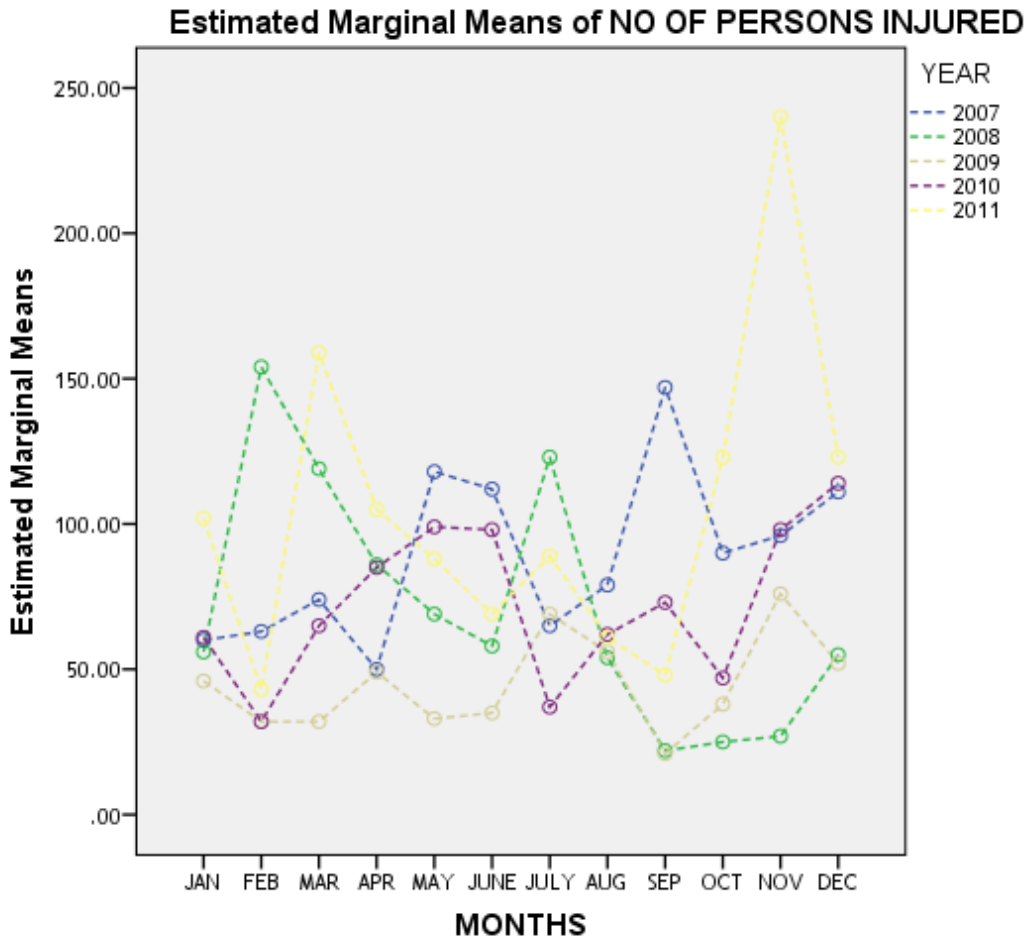
UNIVERSI

NO OF PERSONS INVOLVED



UNIVERSI

NO OF PERSONS INJURED



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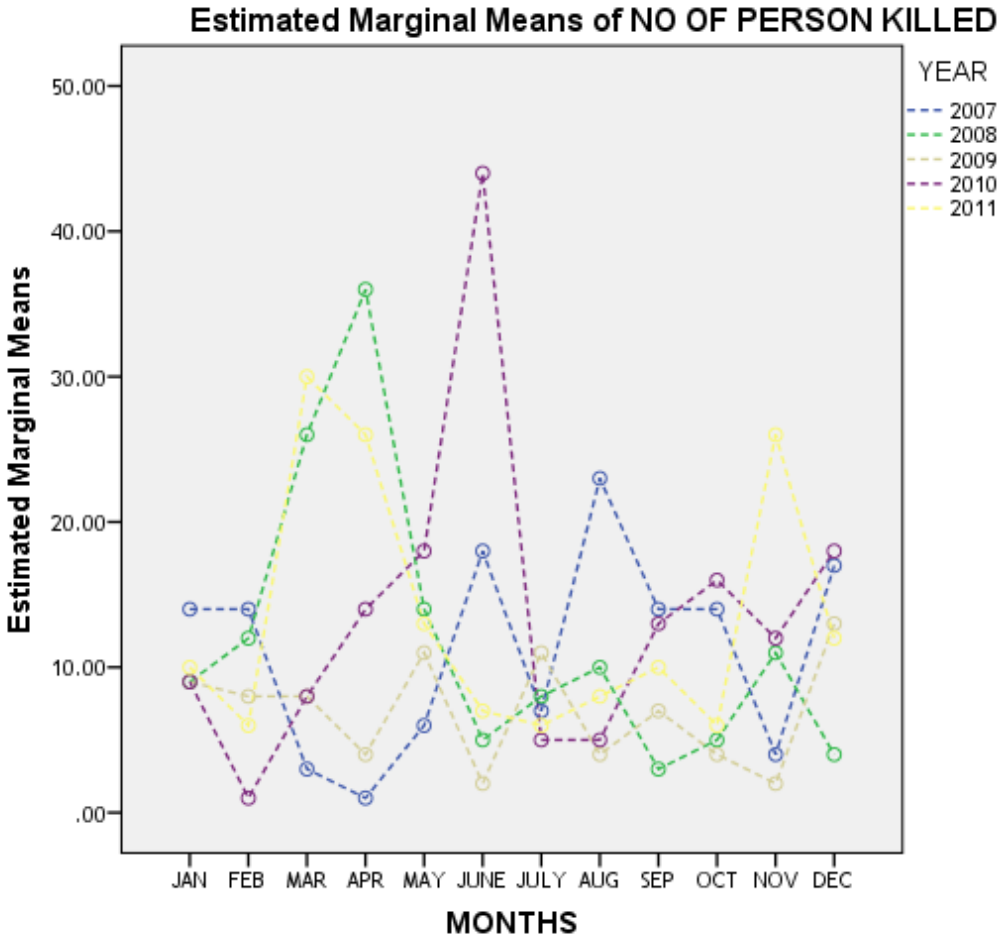
NO OF PERSON KILLED



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Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
NO OF CASES REPORTED	2007	12	15.2500	4.71217	1.36029	12.2560	18.2440	10.00	25.00
	2008	12	15.2500	4.86406	1.40413	12.1595	18.3405	3.00	21.00
	2009	12	13.5833	3.17543	.91667	11.5658	15.6009	10.00	19.00
	2010	12	19.0833	6.15642	1.77721	15.1717	22.9949	8.00	27.00
	2011	12	23.3333	8.10537	2.33982	18.1834	28.4832	14.00	40.00
	Total	60	17.3000	6.50502	.83979	15.6196	18.9804	3.00	40.00
NO OF FATAL CASES	2007	12	4.5000	1.97714	.57075	3.2438	5.7562	1.00	7.00
	2008	12	5.5833	2.81096	.81146	3.7973	7.3693	2.00	9.00
	2009	12	3.7500	1.42223	.41056	2.8464	4.6536	2.00	7.00
	2010	12	5.8333	3.37998	.97572	3.6858	7.9809	1.00	13.00
	2011	12	7.5000	3.87298	1.11803	5.0392	9.9608	3.00	18.00
	Total	60	5.4333	3.02737	.39083	4.6513	6.2154	1.00	18.00
NO OF SERIOUS CASES	2007	12	10.0000	3.74166	1.08012	7.6227	12.3773	5.00	19.00
	2008	12	7.7500	3.62128	1.04537	5.4492	10.0508	1.00	13.00
	2009	12	7.3333	2.87096	.82878	5.5092	9.1575	4.00	13.00
	2010	12	11.0833	5.59965	1.61648	7.5255	14.6412	3.00	21.00
	2011	12	14.6667	5.86722	1.69372	10.9388	18.3945	7.00	27.00
	Total	60	10.1667	5.09625	.65792	8.8502	11.4832	1.00	27.00
NO OF MINOR CASES	2007	12	.8333	.83485	.24100	.3029	1.3638	.00	2.00
	2008	12	1.7500	1.21543	.35086	.9778	2.5222	.00	4.00
	2009	12	2.5000	1.44600	.41742	1.5813	3.4187	.00	5.00
	2010	12	2.2500	1.86474	.53831	1.0652	3.4348	.00	7.00
	2011	12	1.6667	1.87487	.54123	.4754	2.8579	.00	7.00
	Total	60	1.8000	1.56010	.20141	1.3970	2.2030	.00	7.00
NO OF PERSONS INVOLVED	2007	12	124.7500	41.43149	11.96024	98.4257	151.0743	51.00	195.00
	2008	12	134.2500	57.01216	16.45799	98.0262	170.4738	35.00	236.00
	2009	12	105.5000	35.73259	10.31511	82.7966	128.2034	69.00	189.00
	2010	12	147.1667	61.21175	17.67031	108.2746	186.0588	52.00	249.00
	2011	12	203.4167	94.27374	27.21448	143.5180	263.3153	109.00	439.00
	Total	60	143.0167	68.08033	8.78913	125.4297	160.6037	35.00	439.00
NO OF PERSONS INJURED	2007	12	88.7500	28.92977	8.35131	70.3689	107.1311	50.00	147.00
	2008	12	70.6667	42.12176	12.15950	43.9038	97.4296	22.00	154.00
	2009	12	44.9167	16.32320	4.71210	34.5454	55.2879	21.00	76.00
	2010	12	72.5833	26.51058	7.65294	55.7393	89.4273	32.00	114.00
	2011	12	104.1667	54.48909	15.72964	69.5460	138.7874	43.00	240.00
	Total	60	76.2167	40.25095	5.19637	65.8187	86.6146	21.00	240.00
NO OF PERSON KILLED	2007	12	11.2500	6.86394	1.98145	6.8889	15.6111	1.00	23.00
	2008	12	11.9167	9.76504	2.81893	5.7123	18.1211	3.00	36.00
	2009	12	6.9167	3.70401	1.06926	4.5633	9.2701	2.00	13.00
	2010	12	13.5833	10.99966	3.17533	6.5945	20.5722	1.00	44.00
	2011	12	13.3333	8.80427	2.54157	7.7394	18.9273	6.00	30.00
	Total	60	11.4000	8.48568	1.09550	9.2079	13.5921	1.00	44.00

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
NO OF CASES REPORTED	Between Groups	741.600	4	185.400	5.810	.001
	Within Groups	1755.000	55	31.909		
	Total	2496.600	59			
NO OF FATAL CASES	Between Groups	97.900	4	24.475	3.040	.025
	Within Groups	442.833	55	8.052		
	Total	540.733	59			
NO OF SERIOUS CASES	Between Groups	419.833	4	104.958	5.189	.001
	Within Groups	1112.500	55	20.227		
	Total	1532.333	59			
NO OF MINOR CASES	Between Groups	19.767	4	4.942	2.195	.082
	Within Groups	123.833	55	2.252		
	Total	143.600	59			
NO OF PERSONS INVOLVED	Between Groups	65800.900	4	16450.225	4.357	.004
	Within Groups	207660.083	55	3775.638		
	Total	273460.983	59			
NO OF PERSONS INJURED	Between Groups	23543.767	4	5885.942	4.493	.003
	Within Groups	72044.417	55	1309.898		
	Total	95588.183	59			
NO OF PERSON KILLED	Between Groups	346.733	4	86.683	1.222	.312
	Within Groups	3901.667	55	70.939		
	Total	4248.400	59			

UNIVERSITY OF BRARY

Post Hoc Tests

Multiple Comparisons

LSD

Dependent Variable	(I) YEAR	(J) YEAR	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
NO OF CASES REPORTED	2007	2007					
		2008	.00000	2.30612	1.000	-4.6216	4.6216
		2009	1.66667	2.30612	.473	-2.9549	6.2882
		2010	-3.83333	2.30612	.102	-8.4549	.7882
		2011	-8.08333*	2.30612	.001	-12.7049	-3.4618
	2008	2007	.00000	2.30612	1.000	-4.6216	4.6216
		2008					
		2009	1.66667	2.30612	.473	-2.9549	6.2882
		2010	-3.83333	2.30612	.102	-8.4549	.7882
		2011	-8.08333*	2.30612	.001	-12.7049	-3.4618
	2009	2007	-1.66667	2.30612	.473	-6.2882	2.9549
		2008	-1.66667	2.30612	.473	-6.2882	2.9549
		2009					
		2010	-5.50000*	2.30612	.021	-10.1216	-.8784
		2011	-9.75000*	2.30612	.000	-14.3716	-5.1284
	2010	2007	3.83333	2.30612	.102	-.7882	8.4549
		2008	3.83333	2.30612	.102	-.7882	8.4549
		2009	5.50000*	2.30612	.021	.8784	10.1216
		2010					
		2011	-4.25000	2.30612	.071	-8.8716	.3716
	2011	2007	8.08333*	2.30612	.001	3.4618	12.7049
		2008	8.08333*	2.30612	.001	3.4618	12.7049
		2009	9.75000*	2.30612	.000	5.1284	14.3716
		2010	4.25000	2.30612	.071	-.3716	8.8716
		2011					
NO OF FATAL CASES	2007	2007					
		2008	-1.08333	1.15841	.354	-3.4048	1.2382
		2009	.75000	1.15841	.520	-1.5715	3.0715
		2010	-1.33333	1.15841	.255	-3.6548	.9882
		2011	-3.00000*	1.15841	.012	-5.3215	-.6785
	2008	2007	1.08333	1.15841	.354	-1.2382	3.4048
		2008					
		2009	1.83333	1.15841	.119	-.4882	4.1548
		2010	-.25000	1.15841	.830	-2.5715	2.0715
		2011	-1.91667	1.15841	.104	-4.2382	.4048
	2009	2007	-.75000	1.15841	.520	-3.0715	1.5715
		2008	-1.83333	1.15841	.119	-4.1548	.4882
		2009					
		2010	-2.08333	1.15841	.078	-4.4048	.2382
		2011	-3.75000*	1.15841	.002	-6.0715	-1.4285
	2010	2007	1.33333	1.15841	.255	-.9882	3.6548
		2008	.25000	1.15841	.830	-2.0715	2.5715
		2009	2.08333	1.15841	.078	-.2382	4.4048
		2010					
		2011	-1.66667	1.15841	.156	-3.9882	.6548
	2011	2007	3.00000*	1.15841	.012	.6785	5.3215
		2008	1.91667	1.15841	.104	-.4048	4.2382
		2009	3.75000*	1.15841	.002	1.4285	6.0715

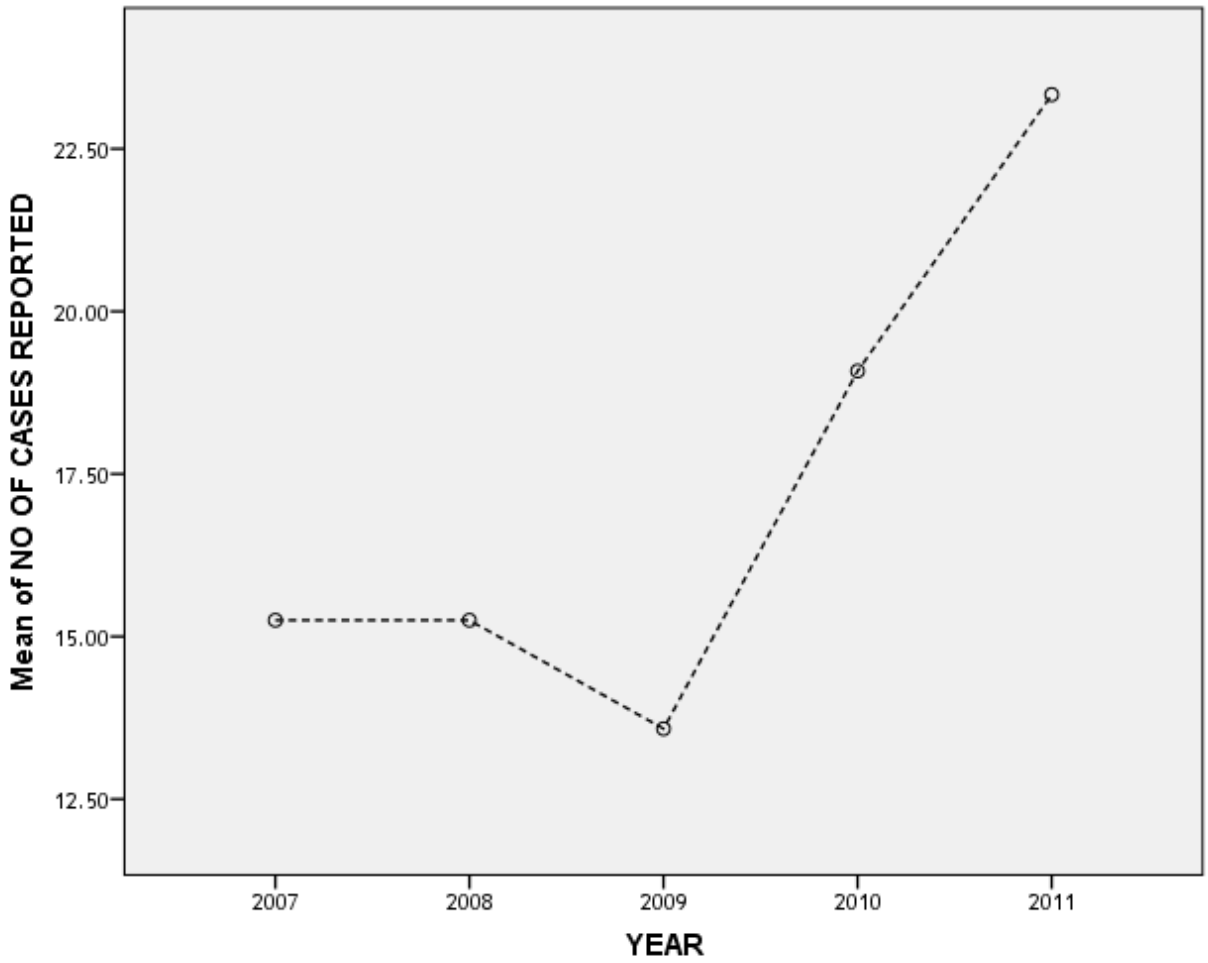
		2010	1.66667	1.15841	.156	-.6548	3.9882
		2011					
NO OF SERIOUS CASES	2007	2007					
		2008	2.25000	1.83609	.226	-1.4296	5.9296
		2009	2.66667	1.83609	.152	-1.0129	6.3463
		2010	-1.08333	1.83609	.558	-4.7629	2.5963
		2011	-4.66667*	1.83609	.014	-8.3463	-.9871
	2008	2007	-2.25000	1.83609	.226	-5.9296	1.4296
		2008					
		2009	.41667	1.83609	.821	-3.2629	4.0963
		2010	-3.33333	1.83609	.075	-7.0129	.3463
		2011	-6.91667*	1.83609	.000	-10.5963	-3.2371
	2009	2007	-2.66667	1.83609	.152	-6.3463	1.0129
		2008	-.41667	1.83609	.821	-4.0963	3.2629
		2009					
		2010	-3.75000*	1.83609	.046	-7.4296	-.0704
		2011	-7.33333*	1.83609	.000	-11.0129	-3.6537
	2010	2007	1.08333	1.83609	.558	-2.5963	4.7629
		2008	3.33333	1.83609	.075	-.3463	7.0129
		2009	3.75000*	1.83609	.046	.0704	7.4296
		2010					
		2011	-3.58333	1.83609	.056	-7.2629	.0963
	2011	2007	4.66667*	1.83609	.014	.9871	8.3463
		2008	6.91667*	1.83609	.000	3.2371	10.5963
		2009	7.33333*	1.83609	.000	3.6537	11.0129
		2010	3.58333	1.83609	.056	-.0963	7.2629
		2011					
NO OF MINOR CASES	2007	2007					
		2008	-.91667	.61258	.140	-2.1443	.3110
		2009	-1.66667*	.61258	.009	-2.8943	-.4390
		2010	-1.41667*	.61258	.025	-2.6443	-.1890
		2011	-.83333	.61258	.179	-2.0610	.3943
	2008	2007	.91667	.61258	.140	-.3110	2.1443
		2008					
		2009	-.75000	.61258	.226	-1.9776	.4776
		2010	-.50000	.61258	.418	-1.7276	.7276
		2011	.08333	.61258	.892	-1.1443	1.3110
	2009	2007	1.66667*	.61258	.009	.4390	2.8943
		2008	.75000	.61258	.226	-.4776	1.9776
		2009					
		2010	.25000	.61258	.685	-.9776	1.4776
		2011	.83333	.61258	.179	-.3943	2.0610
	2010	2007	1.41667*	.61258	.025	.1890	2.6443
		2008	.50000	.61258	.418	-.7276	1.7276
		2009	-.25000	.61258	.685	-1.4776	.9776
		2010					
		2011	.58333	.61258	.345	-.6443	1.8110
	2011	2007	.83333	.61258	.179	-.3943	2.0610
		2008	-.08333	.61258	.892	-1.3110	1.1443
		2009	-.83333	.61258	.179	-2.0610	.3943
		2010	-.58333	.61258	.345	-1.8110	.6443
		2011					
NO OF PERSONS INVOLVED	2007	2007					
		2008	-9.50000	25.08531	.706	-59.7721	40.7721
		2009	19.25000	25.08531	.446	-31.0221	69.5221
		2010	-22.41667	25.08531	.375	-72.6888	27.8554
		2011	-78.66667*	25.08531	.003	-128.9388	-28.3946
	2008	2007	9.50000	25.08531	.706	-40.7721	59.7721

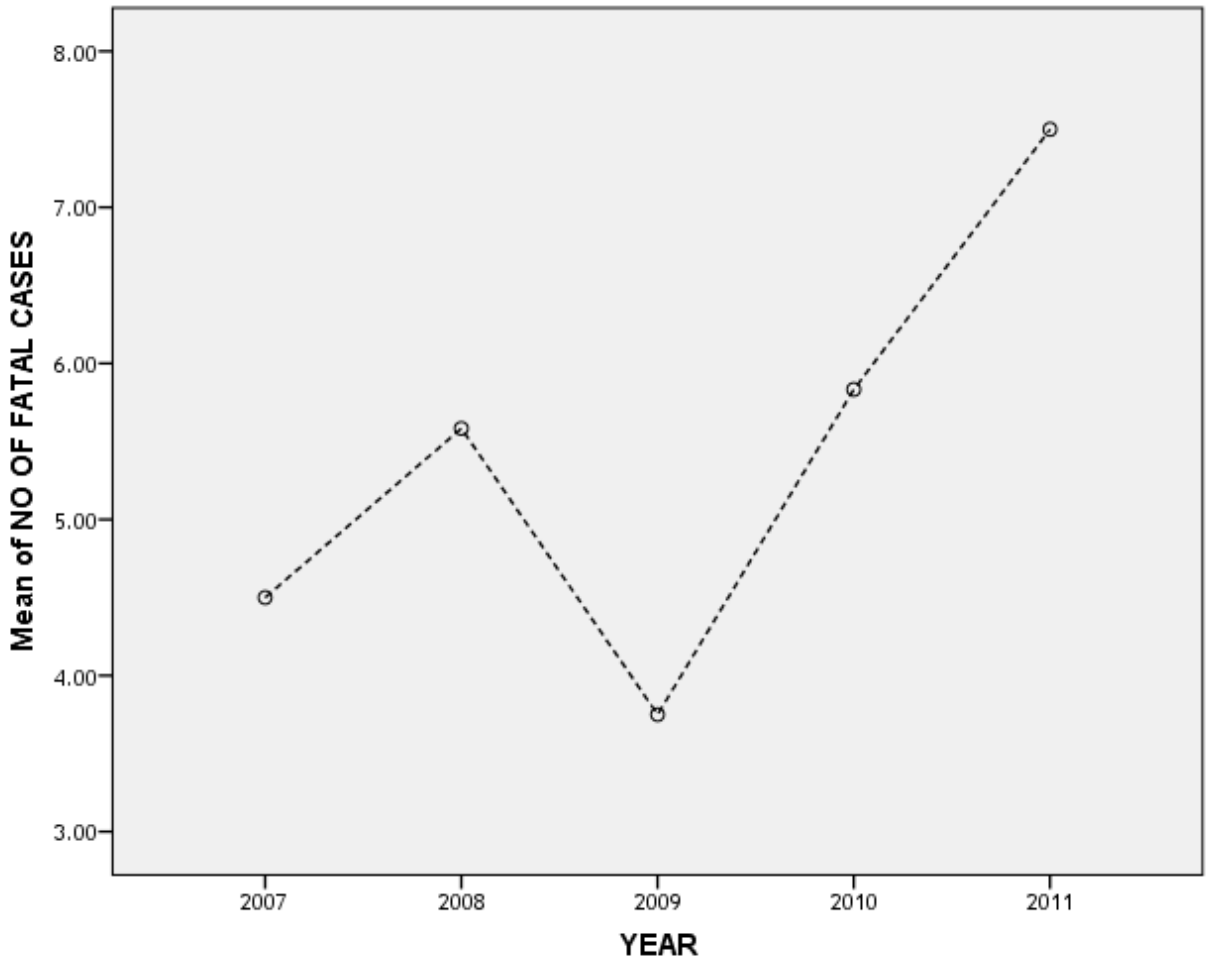
		2008					
		2009	**28.75000**	**25.08531**	**.257**	**-21.5221**	**79.0221**
		2010	**-12.91667**	**25.08531**	**.609**	**-63.1888**	**37.3554**
		2011	**-69.16667***	**25.08531**	**.008**	**-119.4388**	**-18.8946**
	2009	2007	**-19.25000**	**25.08531**	**.446**	**-69.5221**	**31.0221**
		2008	**-28.75000**	**25.08531**	**.257**	**-79.0221**	**21.5221**
		2009					
		2010	**-41.66667**	**25.08531**	**.102**	**-91.9388**	**8.6054**
		2011	**-97.91667***	**25.08531**	**.000**	**-148.1888**	**-47.6446**
	2010	2007	**22.41667**	**25.08531**	**.375**	**-27.8554**	**72.6888**
		2008	**12.91667**	**25.08531**	**.609**	**-37.3554**	**63.1888**
		2009	**41.66667**	**25.08531**	**.102**	**-8.6054**	**91.9388**
		2010					
		2011	**-56.25000***	**25.08531**	**.029**	**-106.5221**	**-5.9779**
	2011	2007	**78.66667***	**25.08531**	**.003**	**28.3946**	**128.9388**
		2008	**69.16667***	**25.08531**	**.008**	**18.8946**	**119.4388**
		2009	**97.91667***	**25.08531**	**.000**	**47.6446**	**148.1888**
		2010	**56.25000***	**25.08531**	**.029**	**5.9779**	**106.5221**
		2011					
NO OF PERSONS INJURED	2007	2007					
		2008	**18.08333**	**14.77553**	**.226**	**-11.5275**	**47.6942**
		2009	**43.83333***	**14.77553**	**.004**	**14.2225**	**73.4442**
		2010	**16.16667**	**14.77553**	**.279**	**-13.4442**	**45.7775**
		2011	**-15.41667**	**14.77553**	**.301**	**-45.0275**	**14.1942**
	2008	2007	**-18.08333**	**14.77553**	**.226**	**-47.6942**	**11.5275**
		2008					
		2009	**25.75000**	**14.77553**	**.087**	**-3.8608**	**55.3608**
		2010	**-1.91667**	**14.77553**	**.897**	**-31.5275**	**27.6942**
		2011	**-33.50000***	**14.77553**	**.027**	**-63.1108**	**-3.8892**
	2009	2007	**-43.83333***	**14.77553**	**.004**	**-73.4442**	**-14.2225**
		2008	**-25.75000**	**14.77553**	**.087**	**-55.3608**	**3.8608**
		2009					
		2010	**-27.66667**	**14.77553**	**.066**	**-57.2775**	**1.9442**
		2011	**-59.25000***	**14.77553**	**.000**	**-88.8608**	**-29.6392**
	2010	2007	**-16.16667**	**14.77553**	**.279**	**-45.7775**	**13.4442**
		2008	**1.91667**	**14.77553**	**.897**	**-27.6942**	**31.5275**
		2009	**27.66667**	**14.77553**	**.066**	**-1.9442**	**57.2775**
		2010					
		2011	**-31.58333***	**14.77553**	**.037**	**-61.1942**	**-1.9725**
	2011	2007	**15.41667**	**14.77553**	**.301**	**-14.1942**	**45.0275**
		2008	**33.50000***	**14.77553**	**.027**	**3.8892**	**63.1108**
		2009	**59.25000***	**14.77553**	**.000**	**29.6392**	**88.8608**
		2010	**31.58333***	**14.77553**	**.037**	**1.9725**	**61.1942**
		2011					
NO OF PERSON KILLED	2007	2007					
		2008	**-.66667**	**3.43849**	**.847**	**-7.5576**	**6.2242**
		2009	**4.33333**	**3.43849**	**.213**	**-2.5576**	**11.2242**
		2010	**-2.33333**	**3.43849**	**.500**	**-9.2242**	**4.5576**
		2011	**-2.08333**	**3.43849**	**.547**	**-8.9742**	**4.8076**
	2008	2007	**.66667**	**3.43849**	**.847**	**-6.2242**	**7.5576**
		2008					
		2009	**5.00000**	**3.43849**	**.152**	**-1.8909**	**11.8909**
		2010	**-1.66667**	**3.43849**	**.630**	**-8.5576**	**5.2242**
		2011	**-1.41667**	**3.43849**	**.682**	**-8.3076**	**5.4742**
	2009	2007	**-4.33333**	**3.43849**	**.213**	**-11.2242**	**2.5576**
		2008	**-5.00000**	**3.43849**	**.152**	**-11.8909**	**1.8909**

	2009					
	2010	-6.66667	3.43849	.058	-13.5576	.2242
	2011	-6.41667	3.43849	.067	-13.3076	.4742
2010	2007	2.33333	3.43849	.500	-4.5576	9.2242
	2008	1.66667	3.43849	.630	-5.2242	8.5576
	2009	6.66667	3.43849	.058	-.2242	13.5576
	2010					
	2011	.25000	3.43849	.942	-6.6409	7.1409
2011	2007	2.08333	3.43849	.547	-4.8076	8.9742
	2008	1.41667	3.43849	.682	-5.4742	8.3076
	2009	6.41667	3.43849	.067	-.4742	13.3076
	2010	-.25000	3.43849	.942	-7.1409	6.6409
	2011					

*. The mean difference is significant at the 0.05 level.

Means Plots




8.00
7.00
6.00
5.00
4.00
3.00
Mean of NO OF FATAL CASES
2007
2008
2009
2010
2011
YEAR

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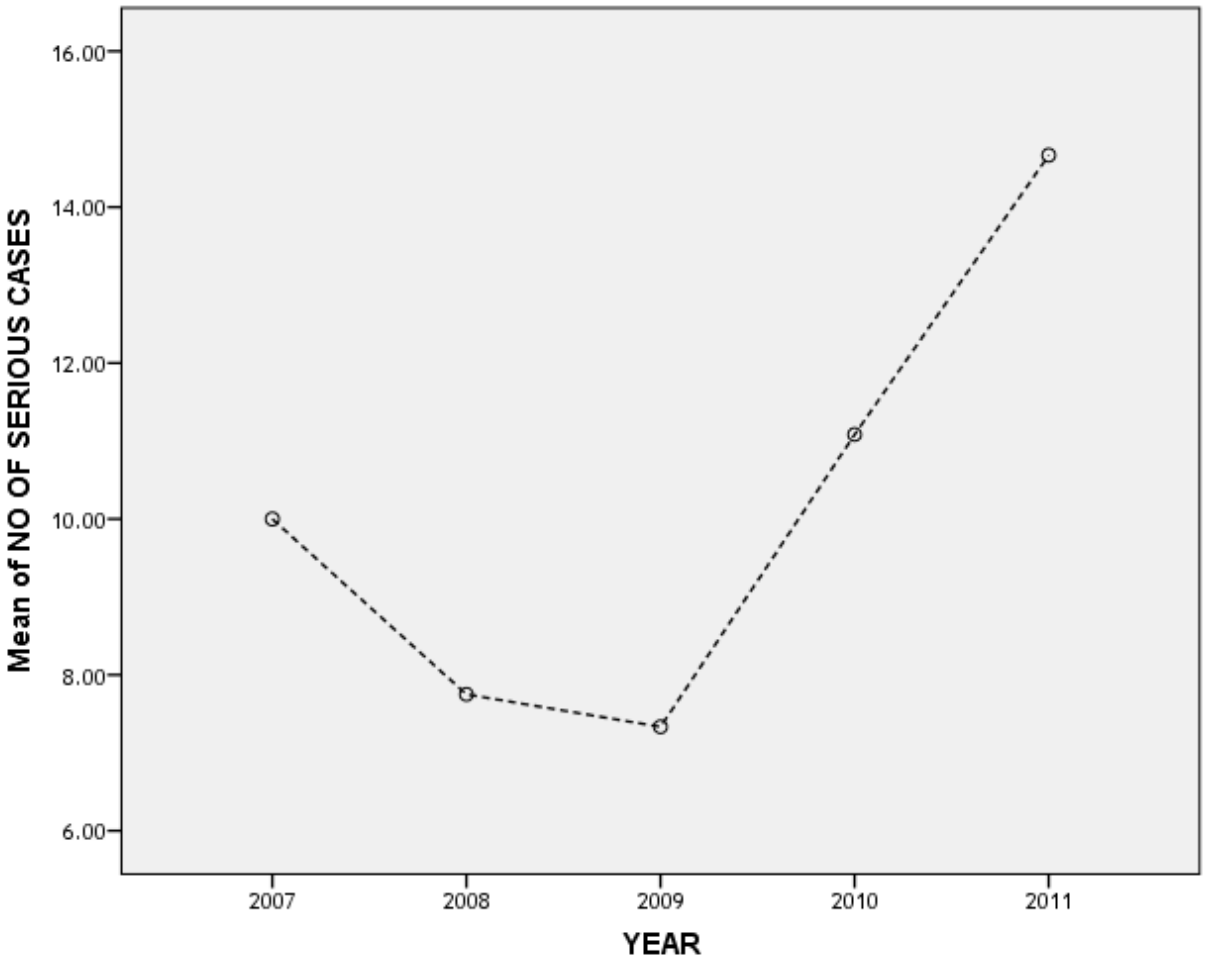
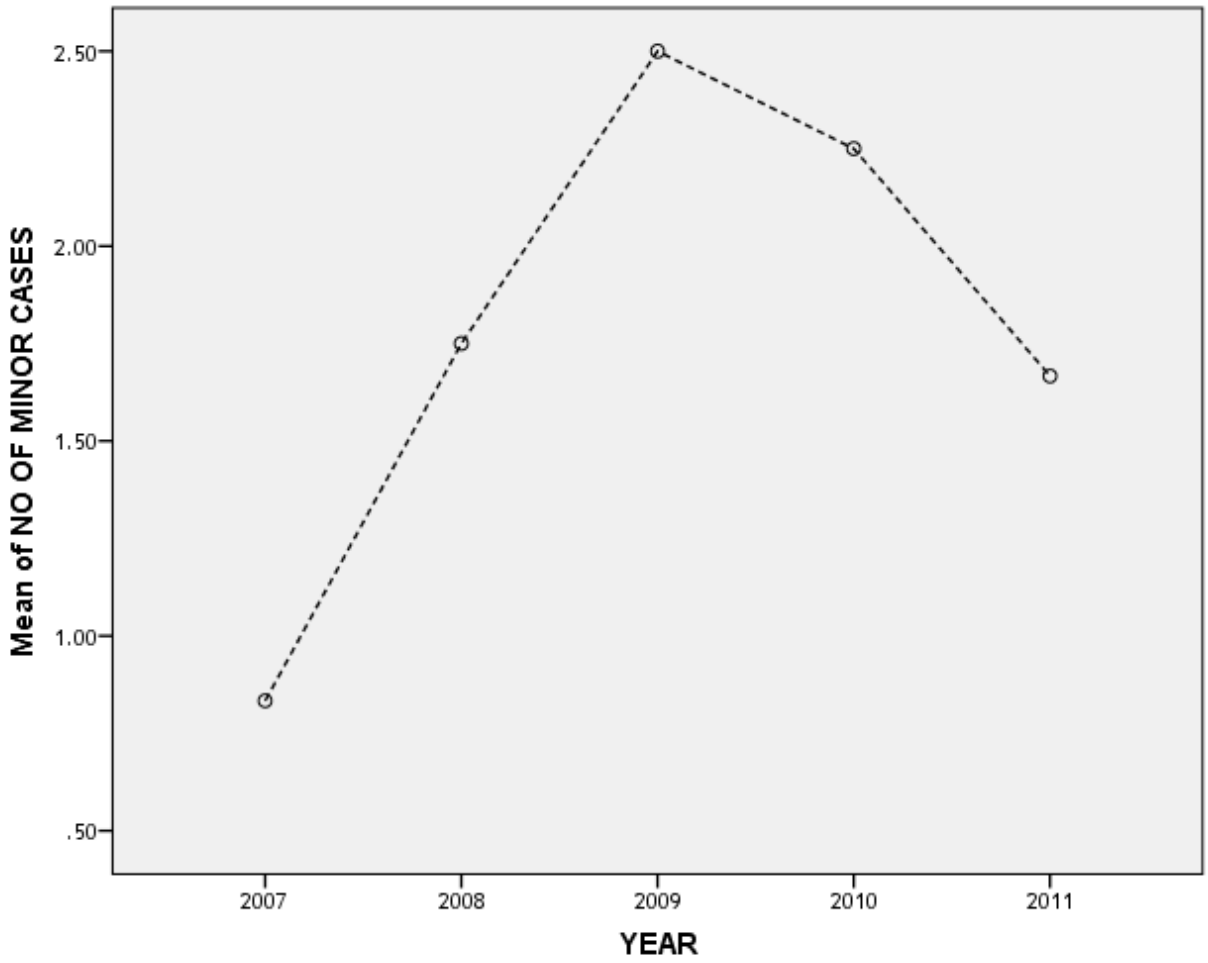
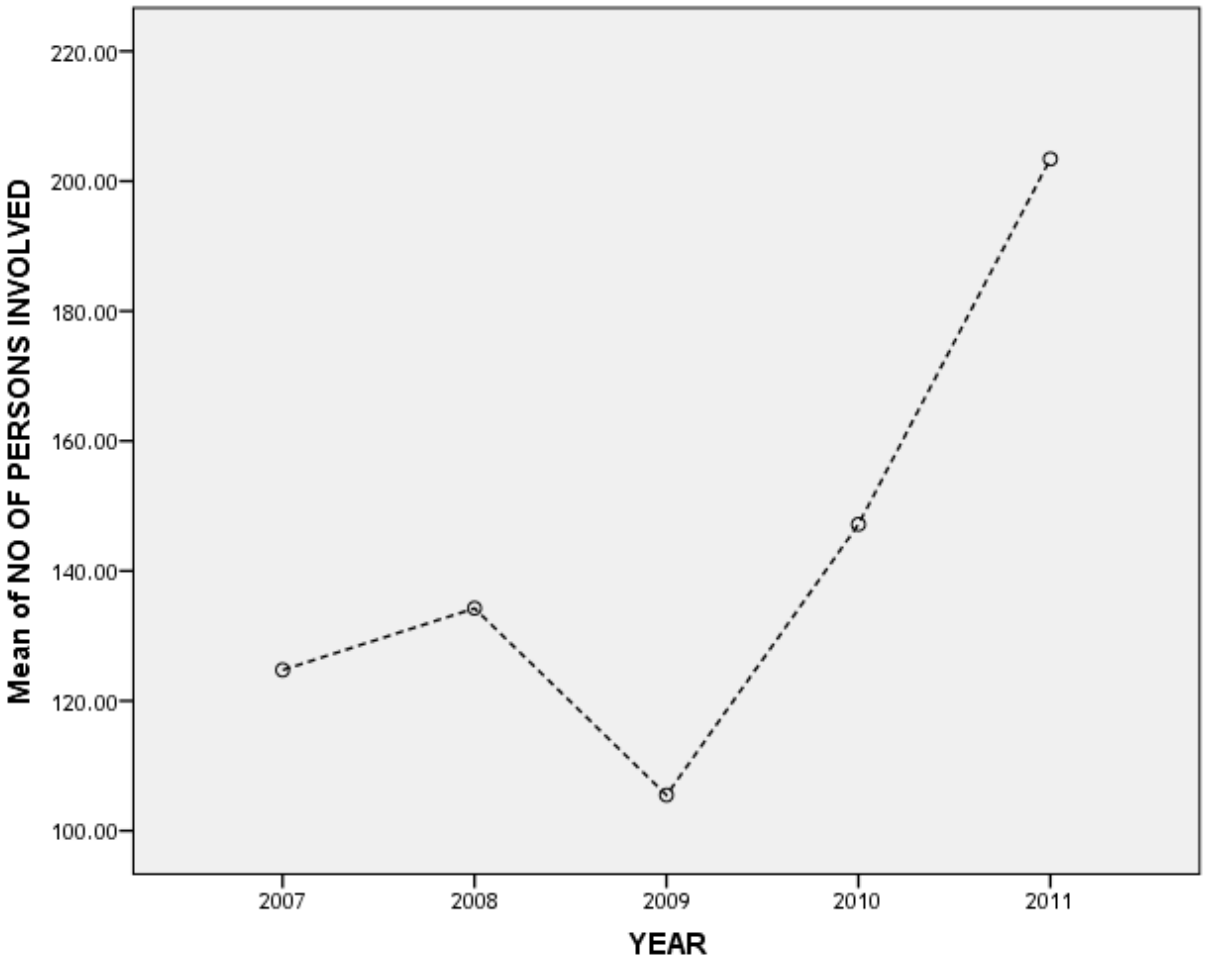

16.00
14.00
12.00
10.00
8.00
6.00
Mean of NO OF SERIOUS CASES
2007
2008
2009
2010
2011
YEAR

UNIVERSITY


Mean of NO OF MINOR CASES
2.50
2.00
1.50
1.00
.50
2007
2008
2009
2010
2011
YEAR

UNIVERSITY


Mean of NO OF PERSONS INVOLVED
220.00
200.00
180.00
160.00
140.00
120.00
100.00
2007
2008
2009
2010
2011
YEAR

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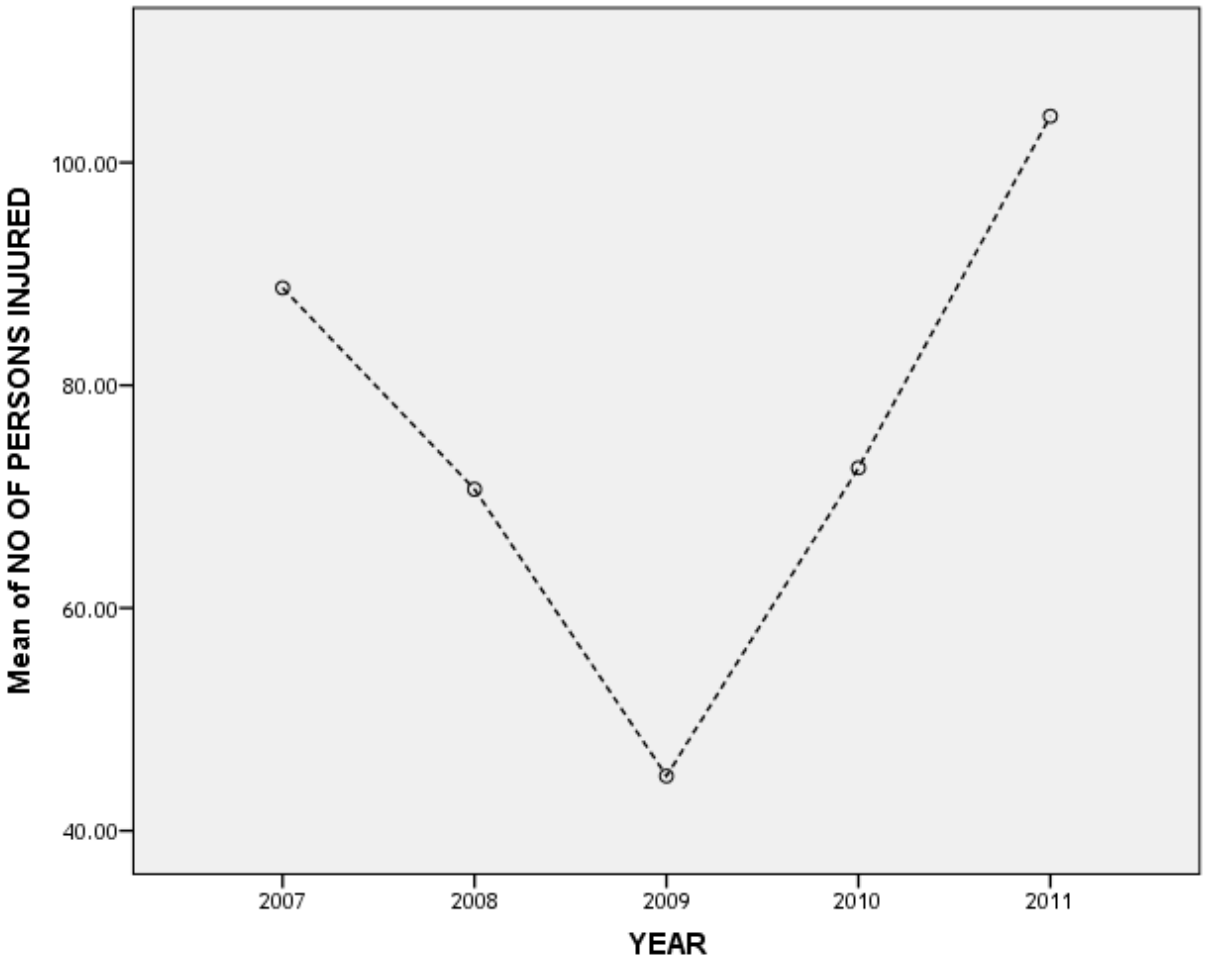
Mean of NO OF PERSONS INJURED
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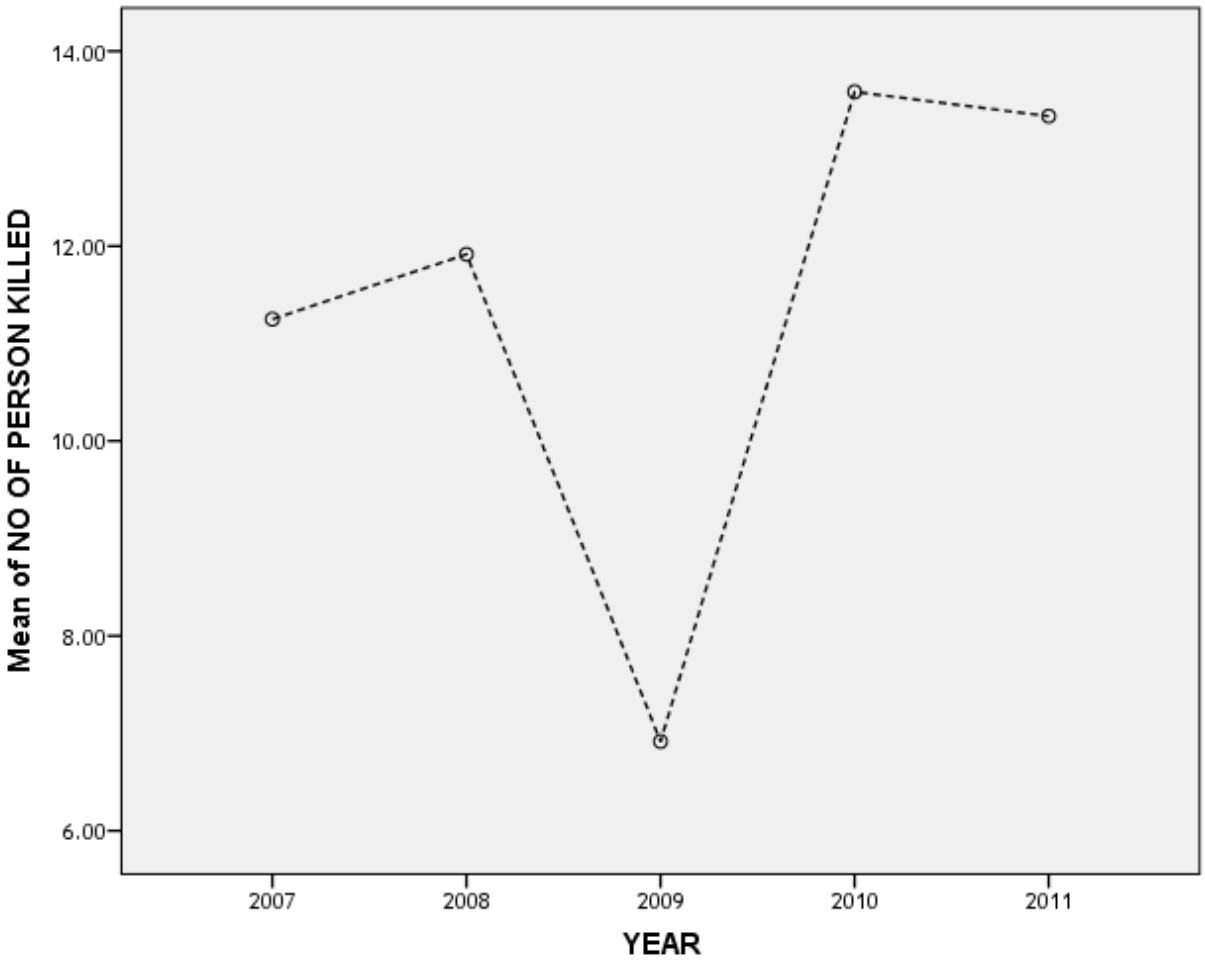
80.00
60.00
40.00
2007
2008
2009
2010
2011
YEAR

UNIVERSITY


14.00
12.00
10.00
8.00
6.00
Mean of NO OF PERSON KILLED
2007
2008
2009
2010
2011
YEAR

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Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
NO OF CASES REPORTED	JAN	5	18.4000	6.18870	2.76767	10.7157	26.0843	11.00	28.00
	FEB	5	12.8000	5.26308	2.35372	6.2650	19.3350	8.00	21.00
	MAR	5	17.8000	5.89067	2.63439	10.4858	25.1142	10.00	25.00
	APR	5	16.0000	4.00000	1.78885	11.0333	20.9667	11.00	22.00
	MAY	5	19.4000	1.51658	.67823	17.5169	21.2831	18.00	22.00
	JUNE	5	16.6000	4.72229	2.11187	10.7365	22.4635	11.00	22.00
	JULY	5	13.6000	4.15933	1.86011	8.4355	18.7645	8.00	18.00
	AUG	5	14.0000	2.82843	1.26491	10.4880	17.5120	11.00	17.00
	SEP	5	18.6000	6.76757	3.02655	10.1970	27.0030	12.00	26.00
	OCT	5	15.2000	8.78635	3.92938	4.2903	26.1097	3.00	25.00
	NOV	5	22.2000	11.30044	5.05371	8.1686	36.2314	14.00	40.00
	DEC	5	23.0000	7.90569	3.53553	13.1838	32.8162	17.00	36.00
	Total	60	17.3000	6.50502	.83979	15.6196	18.9804	3.00	40.00
NO OF FATAL CASES	JAN	5	5.6000	1.51658	.67823	3.7169	7.4831	4.00	7.00
	FEB	5	4.2000	2.58844	1.15758	.9860	7.4140	1.00	8.00
	MAR	5	5.8000	3.63318	1.62481	1.2888	10.3112	2.00	10.00
	APR	5	5.4000	4.03733	1.80555	.3870	10.4130	1.00	10.00
	MAY	5	6.8000	2.28035	1.01980	3.9686	9.6314	4.00	9.00
	JUNE	5	6.2000	4.20714	1.88149	.9761	11.4239	2.00	13.00
	JULY	5	4.0000	1.73205	.77460	1.8494	6.1506	3.00	7.00
	AUG	5	4.6000	1.81659	.81240	2.3444	6.8556	3.00	7.00
	SEP	5	4.2000	2.16795	.96954	1.5081	6.8919	2.00	7.00
	OCT	5	4.8000	2.16795	.96954	2.1081	7.4919	2.00	8.00
	NOV	5	8.6000	5.63915	2.52190	1.5981	15.6019	3.00	18.00
	DEC	5	5.0000	1.58114	.70711	3.0368	6.9632	3.00	7.00
	Total	60	5.4333	3.02737	.39083	4.6513	6.2154	1.00	18.00
NO OF SERIOUS CASES	JAN	5	9.6000	5.94138	2.65707	2.2228	16.9772	5.00	20.00
	FEB	5	7.4000	3.91152	1.74929	2.5432	12.2568	4.00	13.00
	MAR	5	9.6000	1.51658	.67823	7.7169	11.4831	8.00	12.00
	APR	5	9.0000	4.35890	1.94936	3.5877	14.4123	4.00	14.00
	MAY	5	10.6000	2.40832	1.07703	7.6097	13.5903	8.00	14.00
	JUNE	5	8.8000	2.48998	1.11355	5.7083	11.8917	7.00	13.00
	JULY	5	8.8000	4.96991	2.22261	2.6290	14.9710	3.00	14.00
	AUG	5	7.8000	2.86356	1.28062	4.2444	11.3556	4.00	11.00
	SEP	5	12.6000	6.94982	3.10805	3.9707	21.2293	6.00	21.00
	OCT	5	9.4000	7.09225	3.17175	.5938	18.2062	1.00	19.00
	NOV	5	12.4000	6.34823	2.83901	4.5176	20.2824	6.00	21.00
	DEC	5	16.0000	6.81909	3.04959	7.5330	24.4670	10.00	27.00
	Total	60	10.1667	5.09625	.65792	8.8502	11.4832	1.00	27.00
NO OF MINOR CASES	JAN	5	3.0000	2.73861	1.22474	-.4004	6.4004	.00	7.00
	FEB	5	1.2000	1.09545	.48990	-.1602	2.5602	.00	2.00
	MAR	5	2.4000	1.51658	.67823	.5169	4.2831	.00	4.00
	APR	5	1.6000	1.94936	.87178	-.8204	4.0204	.00	5.00
	MAY	5	2.0000	1.22474	.54772	.4793	3.5207	1.00	4.00
	JUNE	5	1.4000	.89443	.40000	.2894	2.5106	.00	2.00
	JULY	5	2.0000	2.91548	1.30384	-1.6200	5.6200	.00	7.00
	AUG	5	1.8000	1.64317	.73485	-.2403	3.8403	.00	4.00
	SEP	5	1.8000	1.30384	.58310	.1811	3.4189	.00	3.00
	OCT	5	1.0000	.70711	.31623	.1220	1.8780	.00	2.00
	NOV	5	1.4000	.89443	.40000	.2894	2.5106	1.00	3.00
	DEC	5	2.0000	.70711	.31623	1.1220	2.8780	1.00	3.00
	Total	60	1.8000	1.56010	.20141	1.3970	2.2030	.00	7.00
NO OF	JAN	5	141.2000	47.69382	21.32932	81.9803	200.4197	87.00	218.00

PERSONS INVOLVED	FEB	5	118.2000	72.32704	32.34563	28.3941	208.0059	52.00	236.00
	MAR	5	172.2000	74.56340	33.34576	79.6173	264.7827	90.00	259.00
	APR	5	137.8000	64.77422	28.96791	57.3722	218.2278	51.00	221.00
	MAY	5	148.6000	24.48060	10.94806	118.2033	178.9967	111.00	170.00
	JUNE	5	128.6000	50.38651	22.53353	66.0369	191.1631	70.00	200.00
	JULY	5	126.6000	55.31094	24.73580	57.9224	195.2776	60.00	207.00
	AUG	5	111.8000	15.02332	6.71863	93.1461	130.4539	92.00	130.00
	SEP	5	119.8000	50.10689	22.40848	57.5841	182.0159	70.00	195.00
	OCT	5	114.0000	74.92663	33.50821	20.9663	207.0337	35.00	229.00
	NOV	5	218.6000	137.51473	61.49846	47.8529	389.3471	88.00	439.00
	DEC	5	178.8000	58.75117	26.27432	105.8508	251.7492	137.00	279.00
	Total	60	143.0167	68.08033	8.78913	125.4297	160.6037	35.00	439.00
NO OF PERSONS INJURED	JAN	5	65.0000	21.51743	9.62289	38.2826	91.7174	46.00	102.00
	FEB	5	64.8000	51.44609	23.00739	.9212	128.6788	32.00	154.00
	MAR	5	89.8000	49.61552	22.18874	28.1942	151.4058	32.00	159.00
	APR	5	75.0000	24.60691	11.00454	44.4465	105.5535	49.00	105.00
	MAY	5	81.4000	32.36201	14.47273	41.2173	121.5827	33.00	118.00
	JUNE	5	74.4000	30.90793	13.82245	36.0227	112.7773	35.00	112.00
	JULY	5	76.6000	31.88730	14.26043	37.0067	116.1933	37.00	123.00
	AUG	5	62.4000	9.86408	4.41135	50.1521	74.6479	54.00	79.00
	SEP	5	62.2000	52.01634	23.26242	-2.3868	126.7868	21.00	147.00
	OCT	5	64.6000	40.74678	18.22251	14.0062	115.1938	25.00	123.00
	NOV	5	107.4000	79.45313	35.53252	8.7459	206.0541	27.00	240.00
	DEC	5	91.0000	34.53259	15.44345	48.1221	133.8779	52.00	123.00
	Total	60	76.2167	40.25095	5.19637	65.8187	86.6146	21.00	240.00
NO OF PERSON KILLED	JAN	5	10.2000	2.16795	.96954	7.5081	12.8919	9.00	14.00
	FEB	5	8.2000	5.11859	2.28910	1.8444	14.5556	1.00	14.00
	MAR	5	15.0000	12.12436	5.42218	-.0544	30.0544	3.00	30.00
	APR	5	16.2000	14.77159	6.60606	-2.1414	34.5414	1.00	36.00
	MAY	5	12.4000	4.39318	1.96469	6.9452	17.8548	6.00	18.00
	JUNE	5	15.2000	17.19593	7.69025	-6.1516	36.5516	2.00	44.00
	JULY	5	7.4000	2.30217	1.02956	4.5415	10.2585	5.00	11.00
	AUG	5	10.0000	7.64853	3.42053	.5031	19.4969	4.00	23.00
	SEP	5	9.4000	4.50555	2.01494	3.8056	14.9944	3.00	14.00
	OCT	5	9.0000	5.56776	2.48998	2.0867	15.9133	4.00	16.00
	NOV	5	11.0000	9.43398	4.21900	-.7138	22.7138	2.00	26.00
	DEC	5	12.8000	5.54076	2.47790	5.9202	19.6798	4.00	18.00
	Total	60	11.4000	8.48568	1.09550	9.2079	13.5921	1.00	44.00

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ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
NO OF CASES REPORTED	Between Groups	577.400	11	52.491	1.313	.247
	Within Groups	1919.200	48	39.983		
	Total	2496.600	59			
NO OF FATAL CASES	Between Groups	95.133	11	8.648	.932	.519
	Within Groups	445.600	48	9.283		
	Total	540.733	59			
NO OF SERIOUS CASES	Between Groups	323.533	11	29.412	1.168	.334
	Within Groups	1208.800	48	25.183		
	Total	1532.333	59			
NO OF MINOR CASES	Between Groups	16.400	11	1.491	.563	.849
	Within Groups	127.200	48	2.650		
	Total	143.600	59			
NO OF PERSONS INVOLVED	Between Groups	56776.583	11	5161.508	1.143	.351
	Within Groups	216684.400	48	4514.258		
	Total	273460.983	59			
NO OF PERSONS INJURED	Between Groups	10928.583	11	993.508	.563	.848
	Within Groups	84659.600	48	1763.742		
	Total	95588.183	59			
NO OF PERSON KILLED	Between Groups	464.800	11	42.255	.536	.869
	Within Groups	3783.600	48	78.825		
	Total	4248.400	59			

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Post Hoc Tests

Multiple Comparisons

LSD Dependent Variable	(I) MONTHS	(J) MONTHS	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
NO OF CASES REPORTED	JAN	JAN					
		FEB	5.60000	3.99917	.168	-2.4409	13.6409
		MAR	.60000	3.99917	.881	-7.4409	8.6409
		APR	2.40000	3.99917	.551	-5.6409	10.4409
		MAY	-1.00000	3.99917	.804	-9.0409	7.0409
		JUNE	1.80000	3.99917	.655	-6.2409	9.8409
		JULY	4.80000	3.99917	.236	-3.2409	12.8409
		AUG	4.40000	3.99917	.277	-3.6409	12.4409
		SEP	-.20000	3.99917	.960	-8.2409	7.8409
		OCT	3.20000	3.99917	.428	-4.8409	11.2409
		NOV	-3.80000	3.99917	.347	-11.8409	4.2409
		DEC	-4.60000	3.99917	.256	-12.6409	3.4409
	FEB	JAN	-5.60000	3.99917	.168	-13.6409	2.4409
		FEB					
		MAR	-5.00000	3.99917	.217	-13.0409	3.0409
		APR	-3.20000	3.99917	.428	-11.2409	4.8409
		MAY	-6.60000	3.99917	.105	-14.6409	1.4409
		JUNE	-3.80000	3.99917	.347	-11.8409	4.2409
		JULY	-.80000	3.99917	.842	-8.8409	7.2409
		AUG	-1.20000	3.99917	.765	-9.2409	6.8409
		SEP	-5.80000	3.99917	.153	-13.8409	2.2409
		OCT	-2.40000	3.99917	.551	-10.4409	5.6409
		NOV	-9.40000*	3.99917	.023	-17.4409	-1.3591
		DEC	-10.20000*	3.99917	.014	-18.2409	-2.1591
	MAR	JAN	-.60000	3.99917	.881	-8.6409	7.4409
		FEB	5.00000	3.99917	.217	-3.0409	13.0409
		MAR					
		APR	1.80000	3.99917	.655	-6.2409	9.8409
		MAY	-1.60000	3.99917	.691	-9.6409	6.4409
		JUNE	1.20000	3.99917	.765	-6.8409	9.2409
		JULY	4.20000	3.99917	.299	-3.8409	12.2409
		AUG	3.80000	3.99917	.347	-4.2409	11.8409
		SEP	-.80000	3.99917	.842	-8.8409	7.2409
		OCT	2.60000	3.99917	.519	-5.4409	10.6409
		NOV	-4.40000	3.99917	.277	-12.4409	3.6409
		DEC	-5.20000	3.99917	.200	-13.2409	2.8409
	APR	JAN	-2.40000	3.99917	.551	-10.4409	5.6409
		FEB	3.20000	3.99917	.428	-4.8409	11.2409
		MAR	-1.80000	3.99917	.655	-9.8409	6.2409
		APR					
		MAY	-3.40000	3.99917	.399	-11.4409	4.6409
		JUNE	-.60000	3.99917	.881	-8.6409	7.4409
		JULY	2.40000	3.99917	.551	-5.6409	10.4409
		AUG	2.00000	3.99917	.619	-6.0409	10.0409
		SEP	-2.60000	3.99917	.519	-10.6409	5.4409
		OCT	.80000	3.99917	.842	-7.2409	8.8409

		NOV	-6.20000	3.99917	.128	-14.2409	1.8409
		DEC	-7.00000	3.99917	.086	-15.0409	1.0409
	MAY	JAN	1.00000	3.99917	.804	-7.0409	9.0409
		FEB	6.60000	3.99917	.105	-1.4409	14.6409
		MAR	1.60000	3.99917	.691	-6.4409	9.6409
		APR	3.40000	3.99917	.399	-4.6409	11.4409
		MAY					
		JUNE	2.80000	3.99917	.487	-5.2409	10.8409
		JULY	5.80000	3.99917	.153	-2.2409	13.8409
		AUG	5.40000	3.99917	.183	-2.6409	13.4409
		SEP	.80000	3.99917	.842	-7.2409	8.8409
		OCT	4.20000	3.99917	.299	-3.8409	12.2409
		NOV	-2.80000	3.99917	.487	-10.8409	5.2409
		DEC	-3.60000	3.99917	.373	-11.6409	4.4409
	JUNE	JAN	-1.80000	3.99917	.655	-9.8409	6.2409
		FEB	3.80000	3.99917	.347	-4.2409	11.8409
		MAR	-1.20000	3.99917	.765	-9.2409	6.8409
		APR	.60000	3.99917	.881	-7.4409	8.6409
		MAY	-2.80000	3.99917	.487	-10.8409	5.2409
		JUNE					
		JULY	3.00000	3.99917	.457	-5.0409	11.0409
		AUG	2.60000	3.99917	.519	-5.4409	10.6409
		SEP	-2.00000	3.99917	.619	-10.0409	6.0409
		OCT	1.40000	3.99917	.728	-6.6409	9.4409
		NOV	-5.60000	3.99917	.168	-13.6409	2.4409
		DEC	-6.40000	3.99917	.116	-14.4409	1.6409
	JULY	JAN	-4.80000	3.99917	.236	-12.8409	3.2409
		FEB	.80000	3.99917	.842	-7.2409	8.8409
		MAR	-4.20000	3.99917	.299	-12.2409	3.8409
		APR	-2.40000	3.99917	.551	-10.4409	5.6409
		MAY	-5.80000	3.99917	.153	-13.8409	2.2409
		JUNE	-3.00000	3.99917	.457	-11.0409	5.0409
		JULY					
		AUG	-.40000	3.99917	.921	-8.4409	7.6409
		SEP	-5.00000	3.99917	.217	-13.0409	3.0409
		OCT	-1.60000	3.99917	.691	-9.6409	6.4409
		NOV	-8.60000*	3.99917	.037	-16.6409	-.5591
		DEC	-9.40000*	3.99917	.023	-17.4409	-1.3591
	AUG	JAN	-4.40000	3.99917	.277	-12.4409	3.6409
		FEB	1.20000	3.99917	.765	-6.8409	9.2409
		MAR	-3.80000	3.99917	.347	-11.8409	4.2409
		APR	-2.00000	3.99917	.619	-10.0409	6.0409
		MAY	-5.40000	3.99917	.183	-13.4409	2.6409
		JUNE	-2.60000	3.99917	.519	-10.6409	5.4409
		JULY	.40000	3.99917	.921	-7.6409	8.4409
		AUG					
		SEP	-4.60000	3.99917	.256	-12.6409	3.4409
		OCT	-1.20000	3.99917	.765	-9.2409	6.8409
		NOV	-8.20000*	3.99917	.046	-16.2409	-.1591
		DEC	-9.00000*	3.99917	.029	-17.0409	-.9591
	SEP	JAN	.20000	3.99917	.960	-7.8409	8.2409
		FEB	5.80000	3.99917	.153	-2.2409	13.8409
		MAR	.80000	3.99917	.842	-7.2409	8.8409
		APR	2.60000	3.99917	.519	-5.4409	10.6409
		MAY	-.80000	3.99917	.842	-8.8409	7.2409

		JUNE	2.00000	3.99917	.619	-6.0409	10.0409
		JULY	5.00000	3.99917	.217	-3.0409	13.0409
		AUG	4.60000	3.99917	.256	-3.4409	12.6409
		SEP					
		OCT	3.40000	3.99917	.399	-4.6409	11.4409
		NOV	-3.60000	3.99917	.373	-11.6409	4.4409
		DEC	-4.40000	3.99917	.277	-12.4409	3.6409
	OCT	JAN	-3.20000	3.99917	.428	-11.2409	4.8409
		FEB	2.40000	3.99917	.551	-5.6409	10.4409
		MAR	-2.60000	3.99917	.519	-10.6409	5.4409
		APR	-.80000	3.99917	.842	-8.8409	7.2409
		MAY	-4.20000	3.99917	.299	-12.2409	3.8409
		JUNE	-1.40000	3.99917	.728	-9.4409	6.6409
		JULY	1.60000	3.99917	.691	-6.4409	9.6409
		AUG	1.20000	3.99917	.765	-6.8409	9.2409
		SEP	-3.40000	3.99917	.399	-11.4409	4.6409
		OCT					
		NOV	-7.00000	3.99917	.086	-15.0409	1.0409
		DEC	-7.80000	3.99917	.057	-15.8409	.2409
	NOV	JAN	3.80000	3.99917	.347	-4.2409	11.8409
		FEB	9.40000*	3.99917	.023	1.3591	17.4409
		MAR	4.40000	3.99917	.277	-3.6409	12.4409
		APR	6.20000	3.99917	.128	-1.8409	14.2409
		MAY	2.80000	3.99917	.487	-5.2409	10.8409
		JUNE	5.60000	3.99917	.168	-2.4409	13.6409
		JULY	8.60000*	3.99917	.037	.5591	16.6409
		AUG	8.20000*	3.99917	.046	.1591	16.2409
		SEP	3.60000	3.99917	.373	-4.4409	11.6409
		OCT	7.00000	3.99917	.086	-1.0409	15.0409
		NOV					
		DEC	-.80000	3.99917	.842	-8.8409	7.2409
	DEC	JAN	4.60000	3.99917	.256	-3.4409	12.6409
		FEB	10.20000*	3.99917	.014	2.1591	18.2409
		MAR	5.20000	3.99917	.200	-2.8409	13.2409
		APR	7.00000	3.99917	.086	-1.0409	15.0409
		MAY	3.60000	3.99917	.373	-4.4409	11.6409
		JUNE	6.40000	3.99917	.116	-1.6409	14.4409
		JULY	9.40000*	3.99917	.023	1.3591	17.4409
		AUG	9.00000*	3.99917	.029	.9591	17.0409
		SEP	4.40000	3.99917	.277	-3.6409	12.4409
		OCT	7.80000	3.99917	.057	-.2409	15.8409
		NOV	.80000	3.99917	.842	-7.2409	8.8409
		DEC					
NO OF FATAL CASES	JAN	JAN					
		FEB	1.40000	1.92700	.471	-2.4745	5.2745
		MAR	-.20000	1.92700	.918	-4.0745	3.6745
		APR	.20000	1.92700	.918	-3.6745	4.0745
		MAY	-1.20000	1.92700	.536	-5.0745	2.6745
		JUNE	-.60000	1.92700	.757	-4.4745	3.2745
		JULY	1.60000	1.92700	.410	-2.2745	5.4745
		AUG	1.00000	1.92700	.606	-2.8745	4.8745
		SEP	1.40000	1.92700	.471	-2.4745	5.2745
		OCT	.80000	1.92700	.680	-3.0745	4.6745
		NOV	-3.00000	1.92700	.126	-6.8745	.8745
		DEC	.60000	1.92700	.757	-3.2745	4.4745
	FEB	JAN	-1.40000	1.92700	.471	-5.2745	2.4745

	FEB					
	MAR	-1.60000	1.92700	.410	-5.4745	2.2745
	APR	-1.20000	1.92700	.536	-5.0745	2.6745
	MAY	-2.60000	1.92700	.184	-6.4745	1.2745
	JUNE	-2.00000	1.92700	.305	-5.8745	1.8745
	JULY	.20000	1.92700	.918	-3.6745	4.0745
	AUG	-.40000	1.92700	.836	-4.2745	3.4745
	SEP	.00000	1.92700	1.000	-3.8745	3.8745
	OCT	-.60000	1.92700	.757	-4.4745	3.2745
	NOV	-4.40000*	1.92700	.027	-8.2745	-.5255
	DEC	-.80000	1.92700	.680	-4.6745	3.0745
MAR	JAN	.20000	1.92700	.918	-3.6745	4.0745
	FEB	1.60000	1.92700	.410	-2.2745	5.4745
	MAR					
	APR	.40000	1.92700	.836	-3.4745	4.2745
	MAY	-1.00000	1.92700	.606	-4.8745	2.8745
	JUNE	-.40000	1.92700	.836	-4.2745	3.4745
	JULY	1.80000	1.92700	.355	-2.0745	5.6745
	AUG	1.20000	1.92700	.536	-2.6745	5.0745
	SEP	1.60000	1.92700	.410	-2.2745	5.4745
	OCT	1.00000	1.92700	.606	-2.8745	4.8745
	NOV	-2.80000	1.92700	.153	-6.6745	1.0745
	DEC	.80000	1.92700	.680	-3.0745	4.6745
APR	JAN	-.20000	1.92700	.918	-4.0745	3.6745
	FEB	1.20000	1.92700	.536	-2.6745	5.0745
	MAR	-.40000	1.92700	.836	-4.2745	3.4745
	APR					
	MAY	-1.40000	1.92700	.471	-5.2745	2.4745
	JUNE	-.80000	1.92700	.680	-4.6745	3.0745
	JULY	1.40000	1.92700	.471	-2.4745	5.2745
	AUG	.80000	1.92700	.680	-3.0745	4.6745
	SEP	1.20000	1.92700	.536	-2.6745	5.0745
	OCT	.60000	1.92700	.757	-3.2745	4.4745
	NOV	-3.20000	1.92700	.103	-7.0745	.6745
	DEC	.40000	1.92700	.836	-3.4745	4.2745
MAY	JAN	1.20000	1.92700	.536	-2.6745	5.0745
	FEB	2.60000	1.92700	.184	-1.2745	6.4745
	MAR	1.00000	1.92700	.606	-2.8745	4.8745
	APR	1.40000	1.92700	.471	-2.4745	5.2745
	MAY					
	JUNE	.60000	1.92700	.757	-3.2745	4.4745
	JULY	2.80000	1.92700	.153	-1.0745	6.6745
	AUG	2.20000	1.92700	.259	-1.6745	6.0745
	SEP	2.60000	1.92700	.184	-1.2745	6.4745
	OCT	2.00000	1.92700	.305	-1.8745	5.8745
	NOV	-1.80000	1.92700	.355	-5.6745	2.0745
	DEC	1.80000	1.92700	.355	-2.0745	5.6745
JUNE	JAN	.60000	1.92700	.757	-3.2745	4.4745
	FEB	2.00000	1.92700	.305	-1.8745	5.8745
	MAR	.40000	1.92700	.836	-3.4745	4.2745
	APR	.80000	1.92700	.680	-3.0745	4.6745
	MAY	-.60000	1.92700	.757	-4.4745	3.2745
	JUNE					
	JULY	2.20000	1.92700	.259	-1.6745	6.0745
	AUG	1.60000	1.92700	.410	-2.2745	5.4745
	SEP	2.00000	1.92700	.305	-1.8745	5.8745
	OCT	1.40000	1.92700	.471	-2.4745	5.2745
	NOV	-2.40000	1.92700	.219	-6.2745	1.4745
	DEC	1.20000	1.92700	.536	-2.6745	5.0745
JULY	JAN	-1.60000	1.92700	.410	-5.4745	2.2745

	FEB	-.20000	1.92700	.918	-4.0745	3.6745
	MAR	-1.80000	1.92700	.355	-5.6745	2.0745
	APR	-1.40000	1.92700	.471	-5.2745	2.4745
	MAY	-2.80000	1.92700	.153	-6.6745	1.0745
	JUNE	-2.20000	1.92700	.259	-6.0745	1.6745
	JULY					
	AUG	-.60000	1.92700	.757	-4.4745	3.2745
	SEP	-.20000	1.92700	.918	-4.0745	3.6745
	OCT	-.80000	1.92700	.680	-4.6745	3.0745
	NOV	-4.60000*	1.92700	.021	-8.4745	-.7255
	DEC	-1.00000	1.92700	.606	-4.8745	2.8745
AUG	JAN	-1.00000	1.92700	.606	-4.8745	2.8745
	FEB	.40000	1.92700	.836	-3.4745	4.2745
	MAR	-1.20000	1.92700	.536	-5.0745	2.6745
	APR	-.80000	1.92700	.680	-4.6745	3.0745
	MAY	-2.20000	1.92700	.259	-6.0745	1.6745
	JUNE	-1.60000	1.92700	.410	-5.4745	2.2745
	JULY	.60000	1.92700	.757	-3.2745	4.4745
	AUG					
	SEP	.40000	1.92700	.836	-3.4745	4.2745
	OCT	-.20000	1.92700	.918	-4.0745	3.6745
	NOV	-4.00000*	1.92700	.043	-7.8745	-.1255
	DEC	-.40000	1.92700	.836	-4.2745	3.4745
SEP	JAN	-1.40000	1.92700	.471	-5.2745	2.4745
	FEB	.00000	1.92700	1.000	-3.8745	3.8745
	MAR	-1.60000	1.92700	.410	-5.4745	2.2745
	APR	-1.20000	1.92700	.536	-5.0745	2.6745
	MAY	-2.60000	1.92700	.184	-6.4745	1.2745
	JUNE	-2.00000	1.92700	.305	-5.8745	1.8745
	JULY	.20000	1.92700	.918	-3.6745	4.0745
	AUG	-.40000	1.92700	.836	-4.2745	3.4745
	SEP					
	OCT	-.60000	1.92700	.757	-4.4745	3.2745
	NOV	-4.40000*	1.92700	.027	-8.2745	-.5255
	DEC	-.80000	1.92700	.680	-4.6745	3.0745
OCT	JAN	-.80000	1.92700	.680	-4.6745	3.0745
	FEB	.60000	1.92700	.757	-3.2745	4.4745
	MAR	-1.00000	1.92700	.606	-4.8745	2.8745
	APR	-.60000	1.92700	.757	-4.4745	3.2745
	MAY	-2.00000	1.92700	.305	-5.8745	1.8745
	JUNE	-1.40000	1.92700	.471	-5.2745	2.4745
	JULY	.80000	1.92700	.680	-3.0745	4.6745
	AUG	.20000	1.92700	.918	-3.6745	4.0745
	SEP	.60000	1.92700	.757	-3.2745	4.4745
	OCT					
	NOV	-3.80000	1.92700	.054	-7.6745	.0745
	DEC	-.20000	1.92700	.918	-4.0745	3.6745
NOV	JAN	3.00000	1.92700	.126	-.8745	6.8745
	FEB	4.40000*	1.92700	.027	.5255	8.2745
	MAR	2.80000	1.92700	.153	-1.0745	6.6745
	APR	3.20000	1.92700	.103	-.6745	7.0745
	MAY	1.80000	1.92700	.355	-2.0745	5.6745
	JUNE	2.40000	1.92700	.219	-1.4745	6.2745
	JULY	4.60000*	1.92700	.021	.7255	8.4745
	AUG	4.00000*	1.92700	.043	.1255	7.8745
	SEP	4.40000*	1.92700	.027	.5255	8.2745
	OCT	3.80000	1.92700	.054	-.0745	7.6745
	NOV					
	DEC	3.60000	1.92700	.068	-.2745	7.4745
DEC	JAN	-.60000	1.92700	.757	-4.4745	3.2745

		FEB	.80000	1.92700	.680	-3.0745	4.6745
		MAR	-.80000	1.92700	.680	-4.6745	3.0745
		APR	-.40000	1.92700	.836	-4.2745	3.4745
		MAY	-1.80000	1.92700	.355	-5.6745	2.0745
		JUNE	-1.20000	1.92700	.536	-5.0745	2.6745
		JULY	1.00000	1.92700	.606	-2.8745	4.8745
		AUG	.40000	1.92700	.836	-3.4745	4.2745
		SEP	.80000	1.92700	.680	-3.0745	4.6745
		OCT	.20000	1.92700	.918	-3.6745	4.0745
		NOV	-3.60000	1.92700	.068	-7.4745	.2745
		DEC					
NO OF SERIOUS CASES	JAN	JAN					
		FEB	2.20000	3.17385	.492	-4.1815	8.5815
		MAR	.00000	3.17385	1.000	-6.3815	6.3815
		APR	.60000	3.17385	.851	-5.7815	6.9815
		MAY	-1.00000	3.17385	.754	-7.3815	5.3815
		JUNE	.80000	3.17385	.802	-5.5815	7.1815
		JULY	.80000	3.17385	.802	-5.5815	7.1815
		AUG	1.80000	3.17385	.573	-4.5815	8.1815
		SEP	-3.00000	3.17385	.349	-9.3815	3.3815
		OCT	.20000	3.17385	.950	-6.1815	6.5815
		NOV	-2.80000	3.17385	.382	-9.1815	3.5815
		DEC	-6.40000*	3.17385	.049	-12.7815	-.0185
	FEB	JAN	-2.20000	3.17385	.492	-8.5815	4.1815
		FEB					
		MAR	-2.20000	3.17385	.492	-8.5815	4.1815
		APR	-1.60000	3.17385	.616	-7.9815	4.7815
		MAY	-3.20000	3.17385	.318	-9.5815	3.1815
		JUNE	-1.40000	3.17385	.661	-7.7815	4.9815
		JULY	-1.40000	3.17385	.661	-7.7815	4.9815
		AUG	-.40000	3.17385	.900	-6.7815	5.9815
		SEP	-5.20000	3.17385	.108	-11.5815	1.1815
		OCT	-2.00000	3.17385	.532	-8.3815	4.3815
		NOV	-5.00000	3.17385	.122	-11.3815	1.3815
		DEC	-8.60000*	3.17385	.009	-14.9815	-2.2185
	MAR	JAN	.00000	3.17385	1.000	-6.3815	6.3815
		FEB	2.20000	3.17385	.492	-4.1815	8.5815
		MAR					
		APR	.60000	3.17385	.851	-5.7815	6.9815
		MAY	-1.00000	3.17385	.754	-7.3815	5.3815
		JUNE	.80000	3.17385	.802	-5.5815	7.1815
		JULY	.80000	3.17385	.802	-5.5815	7.1815
		AUG	1.80000	3.17385	.573	-4.5815	8.1815
		SEP	-3.00000	3.17385	.349	-9.3815	3.3815
		OCT	.20000	3.17385	.950	-6.1815	6.5815
		NOV	-2.80000	3.17385	.382	-9.1815	3.5815
		DEC	-6.40000*	3.17385	.049	-12.7815	-.0185
	APR	JAN	-.60000	3.17385	.851	-6.9815	5.7815
		FEB	1.60000	3.17385	.616	-4.7815	7.9815
		MAR	-.60000	3.17385	.851	-6.9815	5.7815
		APR					
		MAY	-1.60000	3.17385	.616	-7.9815	4.7815
		JUNE	.20000	3.17385	.950	-6.1815	6.5815
		JULY	.20000	3.17385	.950	-6.1815	6.5815
		AUG	1.20000	3.17385	.707	-5.1815	7.5815
		SEP	-3.60000	3.17385	.262	-9.9815	2.7815
		OCT	-.40000	3.17385	.900	-6.7815	5.9815
		NOV	-3.40000	3.17385	.289	-9.7815	2.9815
		DEC	-7.00000*	3.17385	.032	-13.3815	-.6185
	MAY	JAN	1.00000	3.17385	.754	-5.3815	7.3815

	FEB	3.20000	3.17385	.318	-3.1815	9.5815
	MAR	1.00000	3.17385	.754	-5.3815	7.3815
	APR	1.60000	3.17385	.616	-4.7815	7.9815
	MAY					
	JUNE	1.80000	3.17385	.573	-4.5815	8.1815
	JULY	1.80000	3.17385	.573	-4.5815	8.1815
	AUG	2.80000	3.17385	.382	-3.5815	9.1815
	SEP	-2.00000	3.17385	.532	-8.3815	4.3815
	OCT	1.20000	3.17385	.707	-5.1815	7.5815
	NOV	-1.80000	3.17385	.573	-8.1815	4.5815
	DEC	-5.40000	3.17385	.095	-11.7815	.9815
JUNE	JAN	-.80000	3.17385	.802	-7.1815	5.5815
	FEB	1.40000	3.17385	.661	-4.9815	7.7815
	MAR	-.80000	3.17385	.802	-7.1815	5.5815
	APR	-.20000	3.17385	.950	-6.5815	6.1815
	MAY	-1.80000	3.17385	.573	-8.1815	4.5815
	JUNE					
	JULY	.00000	3.17385	1.000	-6.3815	6.3815
	AUG	1.00000	3.17385	.754	-5.3815	7.3815
	SEP	-3.80000	3.17385	.237	-10.1815	2.5815
	OCT	-.60000	3.17385	.851	-6.9815	5.7815
	NOV	-3.60000	3.17385	.262	-9.9815	2.7815
	DEC	-7.20000*	3.17385	.028	-13.5815	-.8185
JULY	JAN	-.80000	3.17385	.802	-7.1815	5.5815
	FEB	1.40000	3.17385	.661	-4.9815	7.7815
	MAR	-.80000	3.17385	.802	-7.1815	5.5815
	APR	-.20000	3.17385	.950	-6.5815	6.1815
	MAY	-1.80000	3.17385	.573	-8.1815	4.5815
	JUNE	.00000	3.17385	1.000	-6.3815	6.3815
	JULY					
	AUG	1.00000	3.17385	.754	-5.3815	7.3815
	SEP	-3.80000	3.17385	.237	-10.1815	2.5815
	OCT	-.60000	3.17385	.851	-6.9815	5.7815
	NOV	-3.60000	3.17385	.262	-9.9815	2.7815
	DEC	-7.20000*	3.17385	.028	-13.5815	-.8185
AUG	JAN	-1.80000	3.17385	.573	-8.1815	4.5815
	FEB	.40000	3.17385	.900	-5.9815	6.7815
	MAR	-1.80000	3.17385	.573	-8.1815	4.5815
	APR	-1.20000	3.17385	.707	-7.5815	5.1815
	MAY	-2.80000	3.17385	.382	-9.1815	3.5815
	JUNE	-1.00000	3.17385	.754	-7.3815	5.3815
	JULY	-1.00000	3.17385	.754	-7.3815	5.3815
	AUG					
	SEP	-4.80000	3.17385	.137	-11.1815	1.5815
	OCT	-1.60000	3.17385	.616	-7.9815	4.7815
	NOV	-4.60000	3.17385	.154	-10.9815	1.7815
	DEC	-8.20000*	3.17385	.013	-14.5815	-1.8185
SEP	JAN	3.00000	3.17385	.349	-3.3815	9.3815
	FEB	5.20000	3.17385	.108	-1.1815	11.5815
	MAR	3.00000	3.17385	.349	-3.3815	9.3815
	APR	3.60000	3.17385	.262	-2.7815	9.9815
	MAY	2.00000	3.17385	.532	-4.3815	8.3815
	JUNE	3.80000	3.17385	.237	-2.5815	10.1815
	JULY	3.80000	3.17385	.237	-2.5815	10.1815
	AUG	4.80000	3.17385	.137	-1.5815	11.1815
	SEP					
	OCT	3.20000	3.17385	.318	-3.1815	9.5815
	NOV	.20000	3.17385	.950	-6.1815	6.5815
	DEC	-3.40000	3.17385	.289	-9.7815	2.9815
OCT	JAN	-.20000	3.17385	.950	-6.5815	6.1815

		FEB	2.00000	3.17385	.532	-4.3815	8.3815
		MAR	-.20000	3.17385	.950	-6.5815	6.1815
		APR	.40000	3.17385	.900	-5.9815	6.7815
		MAY	-1.20000	3.17385	.707	-7.5815	5.1815
		JUNE	.60000	3.17385	.851	-5.7815	6.9815
		JULY	.60000	3.17385	.851	-5.7815	6.9815
		AUG	1.60000	3.17385	.616	-4.7815	7.9815
		SEP	-3.20000	3.17385	.318	-9.5815	3.1815
		OCT					
		NOV	-3.00000	3.17385	.349	-9.3815	3.3815
		DEC	-6.60000*	3.17385	.043	-12.9815	-.2185
	NOV	JAN	2.80000	3.17385	.382	-3.5815	9.1815
		FEB	5.00000	3.17385	.122	-1.3815	11.3815
		MAR	2.80000	3.17385	.382	-3.5815	9.1815
		APR	3.40000	3.17385	.289	-2.9815	9.7815
		MAY	1.80000	3.17385	.573	-4.5815	8.1815
		JUNE	3.60000	3.17385	.262	-2.7815	9.9815
		JULY	3.60000	3.17385	.262	-2.7815	9.9815
		AUG	4.60000	3.17385	.154	-1.7815	10.9815
		SEP	-.20000	3.17385	.950	-6.5815	6.1815
		OCT	3.00000	3.17385	.349	-3.3815	9.3815
		NOV					
		DEC	-3.60000	3.17385	.262	-9.9815	2.7815
	DEC	JAN	6.40000*	3.17385	.049	.0185	12.7815
		FEB	8.60000*	3.17385	.009	2.2185	14.9815
		MAR	6.40000*	3.17385	.049	.0185	12.7815
		APR	7.00000*	3.17385	.032	.6185	13.3815
		MAY	5.40000	3.17385	.095	-.9815	11.7815
		JUNE	7.20000*	3.17385	.028	.8185	13.5815
		JULY	7.20000*	3.17385	.028	.8185	13.5815
		AUG	8.20000*	3.17385	.013	1.8185	14.5815
		SEP	3.40000	3.17385	.289	-2.9815	9.7815
		OCT	6.60000*	3.17385	.043	.2185	12.9815
		NOV	3.60000	3.17385	.262	-2.7815	9.9815
		DEC					
NO OF MINOR CASES	JAN	JAN					
		FEB	1.80000	1.02956	.087	-.2701	3.8701
		MAR	.60000	1.02956	.563	-1.4701	2.6701
		APR	1.40000	1.02956	.180	-.6701	3.4701
		MAY	1.00000	1.02956	.336	-1.0701	3.0701
		JUNE	1.60000	1.02956	.127	-.4701	3.6701
		JULY	1.00000	1.02956	.336	-1.0701	3.0701
		AUG	1.20000	1.02956	.250	-.8701	3.2701
		SEP	1.20000	1.02956	.250	-.8701	3.2701
		OCT	2.00000	1.02956	.058	-.0701	4.0701
		NOV	1.60000	1.02956	.127	-.4701	3.6701
		DEC	1.00000	1.02956	.336	-1.0701	3.0701
	FEB	JAN	-1.80000	1.02956	.087	-3.8701	.2701
		FEB					
		MAR	-1.20000	1.02956	.250	-3.2701	.8701
		APR	-.40000	1.02956	.699	-2.4701	1.6701
		MAY	-.80000	1.02956	.441	-2.8701	1.2701
		JUNE	-.20000	1.02956	.847	-2.2701	1.8701
		JULY	-.80000	1.02956	.441	-2.8701	1.2701
		AUG	-.60000	1.02956	.563	-2.6701	1.4701
		SEP	-.60000	1.02956	.563	-2.6701	1.4701
		OCT	.20000	1.02956	.847	-1.8701	2.2701
		NOV	-.20000	1.02956	.847	-2.2701	1.8701
		DEC	-.80000	1.02956	.441	-2.8701	1.2701
	MAR	JAN	-.60000	1.02956	.563	-2.6701	1.4701

	FEB	1.20000	1.02956	.250	-.8701	3.2701
	MAR					
	APR	.80000	1.02956	.441	-1.2701	2.8701
	MAY	.40000	1.02956	.699	-1.6701	2.4701
	JUNE	1.00000	1.02956	.336	-1.0701	3.0701
	JULY	.40000	1.02956	.699	-1.6701	2.4701
	AUG	.60000	1.02956	.563	-1.4701	2.6701
	SEP	.60000	1.02956	.563	-1.4701	2.6701
	OCT	1.40000	1.02956	.180	-.6701	3.4701
	NOV	1.00000	1.02956	.336	-1.0701	3.0701
	DEC	.40000	1.02956	.699	-1.6701	2.4701
APR	JAN	-1.40000	1.02956	.180	-3.4701	.6701
	FEB	.40000	1.02956	.699	-1.6701	2.4701
	MAR	-.80000	1.02956	.441	-2.8701	1.2701
	APR					
	MAY	-.40000	1.02956	.699	-2.4701	1.6701
	JUNE	.20000	1.02956	.847	-1.8701	2.2701
	JULY	-.40000	1.02956	.699	-2.4701	1.6701
	AUG	-.20000	1.02956	.847	-2.2701	1.8701
	SEP	-.20000	1.02956	.847	-2.2701	1.8701
	OCT	.60000	1.02956	.563	-1.4701	2.6701
	NOV	.20000	1.02956	.847	-1.8701	2.2701
	DEC	-.40000	1.02956	.699	-2.4701	1.6701
MAY	JAN	-1.00000	1.02956	.336	-3.0701	1.0701
	FEB	.80000	1.02956	.441	-1.2701	2.8701
	MAR	-.40000	1.02956	.699	-2.4701	1.6701
	APR	.40000	1.02956	.699	-1.6701	2.4701
	MAY					
	JUNE	.60000	1.02956	.563	-1.4701	2.6701
	JULY	.00000	1.02956	1.000	-2.0701	2.0701
	AUG	.20000	1.02956	.847	-1.8701	2.2701
	SEP	.20000	1.02956	.847	-1.8701	2.2701
	OCT	1.00000	1.02956	.336	-1.0701	3.0701
	NOV	.60000	1.02956	.563	-1.4701	2.6701
	DEC	.00000	1.02956	1.000	-2.0701	2.0701
JUNE	JAN	-1.60000	1.02956	.127	-3.6701	.4701
	FEB	.20000	1.02956	.847	-1.8701	2.2701
	MAR	-1.00000	1.02956	.336	-3.0701	1.0701
	APR	-.20000	1.02956	.847	-2.2701	1.8701
	MAY	-.60000	1.02956	.563	-2.6701	1.4701
	JUNE					
	JULY	-.60000	1.02956	.563	-2.6701	1.4701
	AUG	-.40000	1.02956	.699	-2.4701	1.6701
	SEP	-.40000	1.02956	.699	-2.4701	1.6701
	OCT	.40000	1.02956	.699	-1.6701	2.4701
	NOV	.00000	1.02956	1.000	-2.0701	2.0701
	DEC	-.60000	1.02956	.563	-2.6701	1.4701
JULY	JAN	-1.00000	1.02956	.336	-3.0701	1.0701
	FEB	.80000	1.02956	.441	-1.2701	2.8701
	MAR	-.40000	1.02956	.699	-2.4701	1.6701
	APR	.40000	1.02956	.699	-1.6701	2.4701
	MAY	.00000	1.02956	1.000	-2.0701	2.0701
	JUNE	.60000	1.02956	.563	-1.4701	2.6701
	JULY					
	AUG	.20000	1.02956	.847	-1.8701	2.2701
	SEP	.20000	1.02956	.847	-1.8701	2.2701
	OCT	1.00000	1.02956	.336	-1.0701	3.0701
	NOV	.60000	1.02956	.563	-1.4701	2.6701
	DEC	.00000	1.02956	1.000	-2.0701	2.0701
AUG	JAN	-1.20000	1.02956	.250	-3.2701	.8701

	FEB	.60000	1.02956	.563	-1.4701	2.6701
	MAR	-.60000	1.02956	.563	-2.6701	1.4701
	APR	.20000	1.02956	.847	-1.8701	2.2701
	MAY	-.20000	1.02956	.847	-2.2701	1.8701
	JUNE	.40000	1.02956	.699	-1.6701	2.4701
	JULY	-.20000	1.02956	.847	-2.2701	1.8701
	AUG					
	SEP	.00000	1.02956	1.000	-2.0701	2.0701
	OCT	.80000	1.02956	.441	-1.2701	2.8701
	NOV	.40000	1.02956	.699	-1.6701	2.4701
	DEC	-.20000	1.02956	.847	-2.2701	1.8701
SEP	JAN	-1.20000	1.02956	.250	-3.2701	.8701
	FEB	.60000	1.02956	.563	-1.4701	2.6701
	MAR	-.60000	1.02956	.563	-2.6701	1.4701
	APR	.20000	1.02956	.847	-1.8701	2.2701
	MAY	-.20000	1.02956	.847	-2.2701	1.8701
	JUNE	.40000	1.02956	.699	-1.6701	2.4701
	JULY	-.20000	1.02956	.847	-2.2701	1.8701
	AUG	.00000	1.02956	1.000	-2.0701	2.0701
	SEP					
	OCT	.80000	1.02956	.441	-1.2701	2.8701
	NOV	.40000	1.02956	.699	-1.6701	2.4701
	DEC	-.20000	1.02956	.847	-2.2701	1.8701
OCT	JAN	-2.00000	1.02956	.058	-4.0701	.0701
	FEB	-.20000	1.02956	.847	-2.2701	1.8701
	MAR	-1.40000	1.02956	.180	-3.4701	.6701
	APR	-.60000	1.02956	.563	-2.6701	1.4701
	MAY	-1.00000	1.02956	.336	-3.0701	1.0701
	JUNE	-.40000	1.02956	.699	-2.4701	1.6701
	JULY	-1.00000	1.02956	.336	-3.0701	1.0701
	AUG	-.80000	1.02956	.441	-2.8701	1.2701
	SEP	-.80000	1.02956	.441	-2.8701	1.2701
	OCT					
	NOV	-.40000	1.02956	.699	-2.4701	1.6701
	DEC	-1.00000	1.02956	.336	-3.0701	1.0701
NOV	JAN	-1.60000	1.02956	.127	-3.6701	.4701
	FEB	.20000	1.02956	.847	-1.8701	2.2701
	MAR	-1.00000	1.02956	.336	-3.0701	1.0701
	APR	-.20000	1.02956	.847	-2.2701	1.8701
	MAY	-.60000	1.02956	.563	-2.6701	1.4701
	JUNE	.00000	1.02956	1.000	-2.0701	2.0701
	JULY	-.60000	1.02956	.563	-2.6701	1.4701
	AUG	-.40000	1.02956	.699	-2.4701	1.6701
	SEP	-.40000	1.02956	.699	-2.4701	1.6701
	OCT	.40000	1.02956	.699	-1.6701	2.4701
	NOV					
	DEC	-.60000	1.02956	.563	-2.6701	1.4701
DEC	JAN	-1.00000	1.02956	.336	-3.0701	1.0701
	FEB	.80000	1.02956	.441	-1.2701	2.8701
	MAR	-.40000	1.02956	.699	-2.4701	1.6701
	APR	.40000	1.02956	.699	-1.6701	2.4701
	MAY	.00000	1.02956	1.000	-2.0701	2.0701
	JUNE	.60000	1.02956	.563	-1.4701	2.6701
	JULY	.00000	1.02956	1.000	-2.0701	2.0701
	AUG	.20000	1.02956	.847	-1.8701	2.2701
	SEP	.20000	1.02956	.847	-1.8701	2.2701
	OCT	1.00000	1.02956	.336	-1.0701	3.0701
	NOV	.60000	1.02956	.563	-1.4701	2.6701
	DEC					

NO OF PERSONS INVOLVED	JAN	JAN					
		FEB	23.00000	42.49357	.591	-62.4390	108.4390
		MAR	-31.00000	42.49357	.469	-116.4390	54.4390
		APR	3.40000	42.49357	.937	-82.0390	88.8390
		MAY	-7.40000	42.49357	.862	-92.8390	78.0390
		JUNE	12.60000	42.49357	.768	-72.8390	98.0390
		JULY	14.60000	42.49357	.733	-70.8390	100.0390
		AUG	29.40000	42.49357	.492	-56.0390	114.8390
		SEP	21.40000	42.49357	.617	-64.0390	106.8390
		OCT	27.20000	42.49357	.525	-58.2390	112.6390
		NOV	-77.40000	42.49357	.075	-162.8390	8.0390
		DEC	-37.60000	42.49357	.381	-123.0390	47.8390
	FEB	JAN	-23.00000	42.49357	.591	-108.4390	62.4390
		FEB					
		MAR	-54.00000	42.49357	.210	-139.4390	31.4390
		APR	-19.60000	42.49357	.647	-105.0390	65.8390
		MAY	-30.40000	42.49357	.478	-115.8390	55.0390
		JUNE	-10.40000	42.49357	.808	-95.8390	75.0390
		JULY	-8.40000	42.49357	.844	-93.8390	77.0390
		AUG	6.40000	42.49357	.881	-79.0390	91.8390
		SEP	-1.60000	42.49357	.970	-87.0390	83.8390
		OCT	4.20000	42.49357	.922	-81.2390	89.6390
		NOV	-100.40000*	42.49357	.022	-185.8390	-14.9610
		DEC	-60.60000	42.49357	.160	-146.0390	24.8390
	MAR	JAN	31.00000	42.49357	.469	-54.4390	116.4390
		FEB	54.00000	42.49357	.210	-31.4390	139.4390
		MAR					
		APR	34.40000	42.49357	.422	-51.0390	119.8390
		MAY	23.60000	42.49357	.581	-61.8390	109.0390
		JUNE	43.60000	42.49357	.310	-41.8390	129.0390
		JULY	45.60000	42.49357	.289	-39.8390	131.0390
		AUG	60.40000	42.49357	.162	-25.0390	145.8390
		SEP	52.40000	42.49357	.224	-33.0390	137.8390
		OCT	58.20000	42.49357	.177	-27.2390	143.6390
		NOV	-46.40000	42.49357	.280	-131.8390	39.0390
		DEC	-6.60000	42.49357	.877	-92.0390	78.8390
	APR	JAN	-3.40000	42.49357	.937	-88.8390	82.0390
		FEB	19.60000	42.49357	.647	-65.8390	105.0390
		MAR	-34.40000	42.49357	.422	-119.8390	51.0390
		APR					
		MAY	-10.80000	42.49357	.800	-96.2390	74.6390
		JUNE	9.20000	42.49357	.830	-76.2390	94.6390
		JULY	11.20000	42.49357	.793	-74.2390	96.6390
		AUG	26.00000	42.49357	.544	-59.4390	111.4390
		SEP	18.00000	42.49357	.674	-67.4390	103.4390
		OCT	23.80000	42.49357	.578	-61.6390	109.2390
		NOV	-80.80000	42.49357	.063	-166.2390	4.6390
		DEC	-41.00000	42.49357	.339	-126.4390	44.4390
	MAY	JAN	7.40000	42.49357	.862	-78.0390	92.8390
		FEB	30.40000	42.49357	.478	-55.0390	115.8390
		MAR	-23.60000	42.49357	.581	-109.0390	61.8390
		APR	10.80000	42.49357	.800	-74.6390	96.2390
		MAY					
		JUNE	20.00000	42.49357	.640	-65.4390	105.4390
		JULY	22.00000	42.49357	.607	-63.4390	107.4390
		AUG	36.80000	42.49357	.391	-48.6390	122.2390
		SEP	28.80000	42.49357	.501	-56.6390	114.2390

	OCT	**34.60000**	**42.49357**	**.420**	**-50.8390**	**120.0390**
	NOV	**-70.00000**	**42.49357**	**.106**	**-155.4390**	**15.4390**
	DEC	**-30.20000**	**42.49357**	**.481**	**-115.6390**	**55.2390**
JUNE	JAN	**-12.60000**	**42.49357**	**.768**	**-98.0390**	**72.8390**
	FEB	**10.40000**	**42.49357**	**.808**	**-75.0390**	**95.8390**
	MAR	**-43.60000**	**42.49357**	**.310**	**-129.0390**	**41.8390**
	APR	**-9.20000**	**42.49357**	**.830**	**-94.6390**	**76.2390**
	MAY	**-20.00000**	**42.49357**	**.640**	**-105.4390**	**65.4390**
	JUNE					
	JULY	**2.00000**	**42.49357**	**.963**	**-83.4390**	**87.4390**
	AUG	**16.80000**	**42.49357**	**.694**	**-68.6390**	**102.2390**
	SEP	**8.80000**	**42.49357**	**.837**	**-76.6390**	**94.2390**
	OCT	**14.60000**	**42.49357**	**.733**	**-70.8390**	**100.0390**
	NOV	**-90.00000***	**42.49357**	**.039**	**-175.4390**	**-4.5610**
	DEC	**-50.20000**	**42.49357**	**.243**	**-135.6390**	**35.2390**
JULY	JAN	**-14.60000**	**42.49357**	**.733**	**-100.0390**	**70.8390**
	FEB	**8.40000**	**42.49357**	**.844**	**-77.0390**	**93.8390**
	MAR	**-45.60000**	**42.49357**	**.289**	**-131.0390**	**39.8390**
	APR	**-11.20000**	**42.49357**	**.793**	**-96.6390**	**74.2390**
	MAY	**-22.00000**	**42.49357**	**.607**	**-107.4390**	**63.4390**
	JUNE	**-2.00000**	**42.49357**	**.963**	**-87.4390**	**83.4390**
	JULY					
	AUG	**14.80000**	**42.49357**	**.729**	**-70.6390**	**100.2390**
	SEP	**6.80000**	**42.49357**	**.874**	**-78.6390**	**92.2390**
	OCT	**12.60000**	**42.49357**	**.768**	**-72.8390**	**98.0390**
	NOV	**-92.00000***	**42.49357**	**.035**	**-177.4390**	**-6.5610**
	DEC	**-52.20000**	**42.49357**	**.225**	**-137.6390**	**33.2390**
AUG	JAN	**-29.40000**	**42.49357**	**.492**	**-114.8390**	**56.0390**
	FEB	**-6.40000**	**42.49357**	**.881**	**-91.8390**	**79.0390**
	MAR	**-60.40000**	**42.49357**	**.162**	**-145.8390**	**25.0390**
	APR	**-26.00000**	**42.49357**	**.544**	**-111.4390**	**59.4390**
	MAY	**-36.80000**	**42.49357**	**.391**	**-122.2390**	**48.6390**
	JUNE	**-16.80000**	**42.49357**	**.694**	**-102.2390**	**68.6390**
	JULY	**-14.80000**	**42.49357**	**.729**	**-100.2390**	**70.6390**
	AUG					
	SEP	**-8.00000**	**42.49357**	**.851**	**-93.4390**	**77.4390**
	OCT	**-2.20000**	**42.49357**	**.959**	**-87.6390**	**83.2390**
	NOV	**-106.80000***	**42.49357**	**.015**	**-192.2390**	**-21.3610**
	DEC	**-67.00000**	**42.49357**	**.121**	**-152.4390**	**18.4390**
SEP	JAN	**-21.40000**	**42.49357**	**.617**	**-106.8390**	**64.0390**
	FEB	**1.60000**	**42.49357**	**.970**	**-83.8390**	**87.0390**
	MAR	**-52.40000**	**42.49357**	**.224**	**-137.8390**	**33.0390**
	APR	**-18.00000**	**42.49357**	**.674**	**-103.4390**	**67.4390**
	MAY	**-28.80000**	**42.49357**	**.501**	**-114.2390**	**56.6390**
	JUNE	**-8.80000**	**42.49357**	**.837**	**-94.2390**	**76.6390**
	JULY	**-6.80000**	**42.49357**	**.874**	**-92.2390**	**78.6390**
	AUG	**8.00000**	**42.49357**	**.851**	**-77.4390**	**93.4390**
	SEP					
	OCT	**5.80000**	**42.49357**	**.892**	**-79.6390**	**91.2390**
	NOV	**-98.80000***	**42.49357**	**.024**	**-184.2390**	**-13.3610**
	DEC	**-59.00000**	**42.49357**	**.171**	**-144.4390**	**26.4390**
OCT	JAN	**-27.20000**	**42.49357**	**.525**	**-112.6390**	**58.2390**
	FEB	**-4.20000**	**42.49357**	**.922**	**-89.6390**	**81.2390**
	MAR	**-58.20000**	**42.49357**	**.177**	**-143.6390**	**27.2390**
	APR	**-23.80000**	**42.49357**	**.578**	**-109.2390**	**61.6390**
	MAY	**-34.60000**	**42.49357**	**.420**	**-120.0390**	**50.8390**

		JUNE	-14.60000	42.49357	.733	-100.0390	70.8390
		JULY	-12.60000	42.49357	.768	-98.0390	72.8390
		AUG	2.20000	42.49357	.959	-83.2390	87.6390
		SEP	-5.80000	42.49357	.892	-91.2390	79.6390
		OCT					
		NOV	-104.60000*	42.49357	.017	-190.0390	-19.1610
		DEC	-64.80000	42.49357	.134	-150.2390	20.6390
	NOV	JAN	77.40000	42.49357	.075	-8.0390	162.8390
		FEB	100.40000*	42.49357	.022	14.9610	185.8390
		MAR	46.40000	42.49357	.280	-39.0390	131.8390
		APR	80.80000	42.49357	.063	-4.6390	166.2390
		MAY	70.00000	42.49357	.106	-15.4390	155.4390
		JUNE	90.00000*	42.49357	.039	4.5610	175.4390
		JULY	92.00000*	42.49357	.035	6.5610	177.4390
		AUG	106.80000*	42.49357	.015	21.3610	192.2390
		SEP	98.80000*	42.49357	.024	13.3610	184.2390
		OCT	104.60000*	42.49357	.017	19.1610	190.0390
		NOV					
		DEC	39.80000	42.49357	.354	-45.6390	125.2390
	DEC	JAN	37.60000	42.49357	.381	-47.8390	123.0390
		FEB	60.60000	42.49357	.160	-24.8390	146.0390
		MAR	6.60000	42.49357	.877	-78.8390	92.0390
		APR	41.00000	42.49357	.339	-44.4390	126.4390
		MAY	30.20000	42.49357	.481	-55.2390	115.6390
		JUNE	50.20000	42.49357	.243	-35.2390	135.6390
		JULY	52.20000	42.49357	.225	-33.2390	137.6390
		AUG	67.00000	42.49357	.121	-18.4390	152.4390
		SEP	59.00000	42.49357	.171	-26.4390	144.4390
		OCT	64.80000	42.49357	.134	-20.6390	150.2390
		NOV	-39.80000	42.49357	.354	-125.2390	45.6390
		DEC					
NO OF PERSONS INJURED	JAN	JAN					
		FEB	.20000	26.56119	.994	-53.2048	53.6048
		MAR	-24.80000	26.56119	.355	-78.2048	28.6048
		APR	-10.00000	26.56119	.708	-63.4048	43.4048
		MAY	-16.40000	26.56119	.540	-69.8048	37.0048
		JUNE	-9.40000	26.56119	.725	-62.8048	44.0048
		JULY	-11.60000	26.56119	.664	-65.0048	41.8048
		AUG	2.60000	26.56119	.922	-50.8048	56.0048
		SEP	2.80000	26.56119	.916	-50.6048	56.2048
		OCT	.40000	26.56119	.988	-53.0048	53.8048
		NOV	-42.40000	26.56119	.117	-95.8048	11.0048
		DEC	-26.00000	26.56119	.333	-79.4048	27.4048
	FEB	JAN	-.20000	26.56119	.994	-53.6048	53.2048
		FEB					
		MAR	-25.00000	26.56119	.351	-78.4048	28.4048
		APR	-10.20000	26.56119	.703	-63.6048	43.2048
		MAY	-16.60000	26.56119	.535	-70.0048	36.8048
		JUNE	-9.60000	26.56119	.719	-63.0048	43.8048
		JULY	-11.80000	26.56119	.659	-65.2048	41.6048
		AUG	2.40000	26.56119	.928	-51.0048	55.8048
		SEP	2.60000	26.56119	.922	-50.8048	56.0048
		OCT	.20000	26.56119	.994	-53.2048	53.6048
		NOV	-42.60000	26.56119	.115	-96.0048	10.8048
		DEC	-26.20000	26.56119	.329	-79.6048	27.2048

MAR	JAN	**24.80000**	**26.56119**	**.355**	**-28.6048**	**78.2048**
	FEB	**25.00000**	**26.56119**	**.351**	**-28.4048**	**78.4048**
	MAR					
	APR	**14.80000**	**26.56119**	**.580**	**-38.6048**	**68.2048**
	MAY	**8.40000**	**26.56119**	**.753**	**-45.0048**	**61.8048**
	JUNE	**15.40000**	**26.56119**	**.565**	**-38.0048**	**68.8048**
	JULY	**13.20000**	**26.56119**	**.621**	**-40.2048**	**66.6048**
	AUG	**27.40000**	**26.56119**	**.307**	**-26.0048**	**80.8048**
	SEP	**27.60000**	**26.56119**	**.304**	**-25.8048**	**81.0048**
	OCT	**25.20000**	**26.56119**	**.347**	**-28.2048**	**78.6048**
	NOV	**-17.60000**	**26.56119**	**.511**	**-71.0048**	**35.8048**
	DEC	**-1.20000**	**26.56119**	**.964**	**-54.6048**	**52.2048**
APR	JAN	**10.00000**	**26.56119**	**.708**	**-43.4048**	**63.4048**
	FEB	**10.20000**	**26.56119**	**.703**	**-43.2048**	**63.6048**
	MAR	**-14.80000**	**26.56119**	**.580**	**-68.2048**	**38.6048**
	APR					
	MAY	**-6.40000**	**26.56119**	**.811**	**-59.8048**	**47.0048**
	JUNE	**.60000**	**26.56119**	**.982**	**-52.8048**	**54.0048**
	JULY	**-1.60000**	**26.56119**	**.952**	**-55.0048**	**51.8048**
	AUG	**12.60000**	**26.56119**	**.637**	**-40.8048**	**66.0048**
	SEP	**12.80000**	**26.56119**	**.632**	**-40.6048**	**66.2048**
	OCT	**10.40000**	**26.56119**	**.697**	**-43.0048**	**63.8048**
	NOV	**-32.40000**	**26.56119**	**.228**	**-85.8048**	**21.0048**
	DEC	**-16.00000**	**26.56119**	**.550**	**-69.4048**	**37.4048**
MAY	JAN	**16.40000**	**26.56119**	**.540**	**-37.0048**	**69.8048**
	FEB	**16.60000**	**26.56119**	**.535**	**-36.8048**	**70.0048**
	MAR	**-8.40000**	**26.56119**	**.753**	**-61.8048**	**45.0048**
	APR	**6.40000**	**26.56119**	**.811**	**-47.0048**	**59.8048**
	MAY					
	JUNE	**7.00000**	**26.56119**	**.793**	**-46.4048**	**60.4048**
	JULY	**4.80000**	**26.56119**	**.857**	**-48.6048**	**58.2048**
	AUG	**19.00000**	**26.56119**	**.478**	**-34.4048**	**72.4048**
	SEP	**19.20000**	**26.56119**	**.473**	**-34.2048**	**72.6048**
	OCT	**16.80000**	**26.56119**	**.530**	**-36.6048**	**70.2048**
	NOV	**-26.00000**	**26.56119**	**.333**	**-79.4048**	**27.4048**
	DEC	**-9.60000**	**26.56119**	**.719**	**-63.0048**	**43.8048**
JUNE	JAN	**9.40000**	**26.56119**	**.725**	**-44.0048**	**62.8048**
	FEB	**9.60000**	**26.56119**	**.719**	**-43.8048**	**63.0048**
	MAR	**-15.40000**	**26.56119**	**.565**	**-68.8048**	**38.0048**
	APR	**-.60000**	**26.56119**	**.982**	**-54.0048**	**52.8048**
	MAY	**-7.00000**	**26.56119**	**.793**	**-60.4048**	**46.4048**
	JUNE					
	JULY	**-2.20000**	**26.56119**	**.934**	**-55.6048**	**51.2048**
	AUG	**12.00000**	**26.56119**	**.653**	**-41.4048**	**65.4048**
	SEP	**12.20000**	**26.56119**	**.648**	**-41.2048**	**65.6048**
	OCT	**9.80000**	**26.56119**	**.714**	**-43.6048**	**63.2048**
	NOV	**-33.00000**	**26.56119**	**.220**	**-86.4048**	**20.4048**
	DEC	**-16.60000**	**26.56119**	**.535**	**-70.0048**	**36.8048**
JULY	JAN	**11.60000**	**26.56119**	**.664**	**-41.8048**	**65.0048**
	FEB	**11.80000**	**26.56119**	**.659**	**-41.6048**	**65.2048**
	MAR	**-13.20000**	**26.56119**	**.621**	**-66.6048**	**40.2048**
	APR	**1.60000**	**26.56119**	**.952**	**-51.8048**	**55.0048**
	MAY	**-4.80000**	**26.56119**	**.857**	**-58.2048**	**48.6048**
	JUNE	**2.20000**	**26.56119**	**.934**	**-51.2048**	**55.6048**
	JULY					
	AUG	**14.20000**	**26.56119**	**.595**	**-39.2048**	**67.6048**
	SEP	**14.40000**	**26.56119**	**.590**	**-39.0048**	**67.8048**
	OCT	**12.00000**	**26.56119**	**.653**	**-41.4048**	**65.4048**
	NOV	**-30.80000**	**26.56119**	**.252**	**-84.2048**	**22.6048**
	DEC	**-14.40000**	**26.56119**	**.590**	**-67.8048**	**39.0048**

AUG	JAN	-2.60000	26.56119	.922	-56.0048	50.8048
	FEB	-2.40000	26.56119	.928	-55.8048	51.0048
	MAR	-27.40000	26.56119	.307	-80.8048	26.0048
	APR	-12.60000	26.56119	.637	-66.0048	40.8048
	MAY	-19.00000	26.56119	.478	-72.4048	34.4048
	JUNE	-12.00000	26.56119	.653	-65.4048	41.4048
	JULY	-14.20000	26.56119	.595	-67.6048	39.2048
	AUG					
	SEP	.20000	26.56119	.994	-53.2048	53.6048
	OCT	-2.20000	26.56119	.934	-55.6048	51.2048
	NOV	-45.00000	26.56119	.097	-98.4048	8.4048
	DEC	-28.60000	26.56119	.287	-82.0048	24.8048
SEP	JAN	-2.80000	26.56119	.916	-56.2048	50.6048
	FEB	-2.60000	26.56119	.922	-56.0048	50.8048
	MAR	-27.60000	26.56119	.304	-81.0048	25.8048
	APR	-12.80000	26.56119	.632	-66.2048	40.6048
	MAY	-19.20000	26.56119	.473	-72.6048	34.2048
	JUNE	-12.20000	26.56119	.648	-65.6048	41.2048
	JULY	-14.40000	26.56119	.590	-67.8048	39.0048
	AUG	-.20000	26.56119	.994	-53.6048	53.2048
	SEP					
	OCT	-2.40000	26.56119	.928	-55.8048	51.0048
	NOV	-45.20000	26.56119	.095	-98.6048	8.2048
	DEC	-28.80000	26.56119	.284	-82.2048	24.6048
OCT	JAN	-.40000	26.56119	.988	-53.8048	53.0048
	FEB	-.20000	26.56119	.994	-53.6048	53.2048
	MAR	-25.20000	26.56119	.347	-78.6048	28.2048
	APR	-10.40000	26.56119	.697	-63.8048	43.0048
	MAY	-16.80000	26.56119	.530	-70.2048	36.6048
	JUNE	-9.80000	26.56119	.714	-63.2048	43.6048
	JULY	-12.00000	26.56119	.653	-65.4048	41.4048
	AUG	2.20000	26.56119	.934	-51.2048	55.6048
	SEP	2.40000	26.56119	.928	-51.0048	55.8048
	OCT					
	NOV	-42.80000	26.56119	.114	-96.2048	10.6048
	DEC	-26.40000	26.56119	.325	-79.8048	27.0048
NOV	JAN	42.40000	26.56119	.117	-11.0048	95.8048
	FEB	42.60000	26.56119	.115	-10.8048	96.0048
	MAR	17.60000	26.56119	.511	-35.8048	71.0048
	APR	32.40000	26.56119	.228	-21.0048	85.8048
	MAY	26.00000	26.56119	.333	-27.4048	79.4048
	JUNE	33.00000	26.56119	.220	-20.4048	86.4048
	JULY	30.80000	26.56119	.252	-22.6048	84.2048
	AUG	45.00000	26.56119	.097	-8.4048	98.4048
	SEP	45.20000	26.56119	.095	-8.2048	98.6048
	OCT	42.80000	26.56119	.114	-10.6048	96.2048
	NOV					
	DEC	16.40000	26.56119	.540	-37.0048	69.8048
DEC	JAN	26.00000	26.56119	.333	-27.4048	79.4048
	FEB	26.20000	26.56119	.329	-27.2048	79.6048
	MAR	1.20000	26.56119	.964	-52.2048	54.6048
	APR	16.00000	26.56119	.550	-37.4048	69.4048
	MAY	9.60000	26.56119	.719	-43.8048	63.0048
	JUNE	16.60000	26.56119	.535	-36.8048	70.0048
	JULY	14.40000	26.56119	.590	-39.0048	67.8048
	AUG	28.60000	26.56119	.287	-24.8048	82.0048
	SEP	28.80000	26.56119	.284	-24.6048	82.2048
	OCT	26.40000	26.56119	.325	-27.0048	79.8048
	NOV	-16.40000	26.56119	.540	-69.8048	37.0048
	DEC					

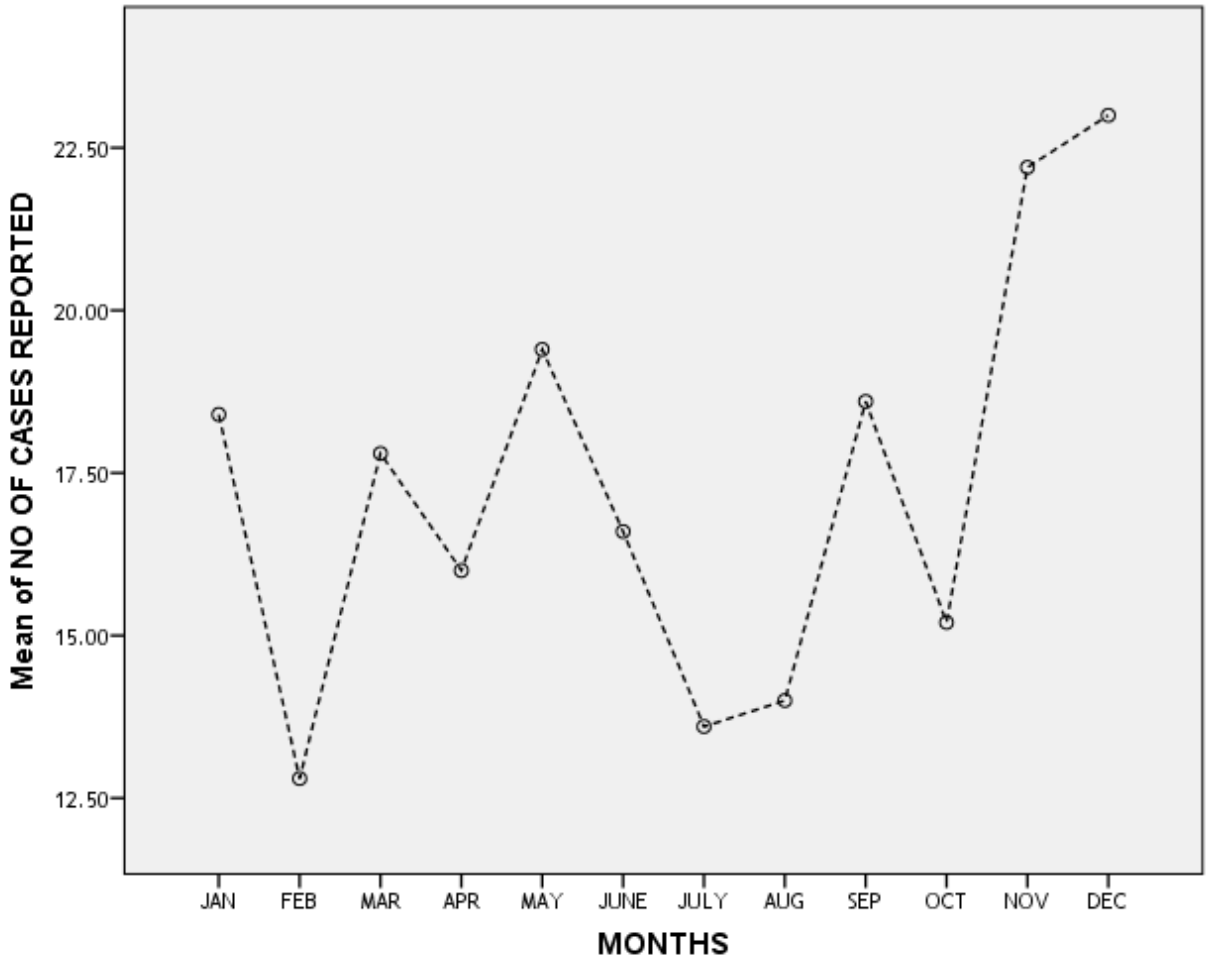
NO OF PERSON KILLED	JAN	JAN					
		FEB	**2.00000**	**5.61516**	**.723**	**-9.2900**	**13.2900**
		MAR	**-4.80000**	**5.61516**	**.397**	**-16.0900**	**6.4900**
		APR	**-6.00000**	**5.61516**	**.291**	**-17.2900**	**5.2900**
		MAY	**-2.20000**	**5.61516**	**.697**	**-13.4900**	**9.0900**
		JUNE	**-5.00000**	**5.61516**	**.378**	**-16.2900**	**6.2900**
		JULY	**2.80000**	**5.61516**	**.620**	**-8.4900**	**14.0900**
		AUG	**.20000**	**5.61516**	**.972**	**-11.0900**	**11.4900**
		SEP	**.80000**	**5.61516**	**.887**	**-10.4900**	**12.0900**
		OCT	**1.20000**	**5.61516**	**.832**	**-10.0900**	**12.4900**
		NOV	**-.80000**	**5.61516**	**.887**	**-12.0900**	**10.4900**
		DEC	**-2.60000**	**5.61516**	**.645**	**-13.8900**	**8.6900**
	FEB	JAN	**-2.00000**	**5.61516**	**.723**	**-13.2900**	**9.2900**
		FEB					
		MAR	**-6.80000**	**5.61516**	**.232**	**-18.0900**	**4.4900**
		APR	**-8.00000**	**5.61516**	**.161**	**-19.2900**	**3.2900**
		MAY	**-4.20000**	**5.61516**	**.458**	**-15.4900**	**7.0900**
		JUNE	**-7.00000**	**5.61516**	**.219**	**-18.2900**	**4.2900**
		JULY	**.80000**	**5.61516**	**.887**	**-10.4900**	**12.0900**
		AUG	**-1.80000**	**5.61516**	**.750**	**-13.0900**	**9.4900**
		SEP	**-1.20000**	**5.61516**	**.832**	**-12.4900**	**10.0900**
		OCT	**-.80000**	**5.61516**	**.887**	**-12.0900**	**10.4900**
		NOV	**-2.80000**	**5.61516**	**.620**	**-14.0900**	**8.4900**
		DEC	**-4.60000**	**5.61516**	**.417**	**-15.8900**	**6.6900**
	MAR	JAN	**4.80000**	**5.61516**	**.397**	**-6.4900**	**16.0900**
		FEB	**6.80000**	**5.61516**	**.232**	**-4.4900**	**18.0900**
		MAR					
		APR	**-1.20000**	**5.61516**	**.832**	**-12.4900**	**10.0900**
		MAY	**2.60000**	**5.61516**	**.645**	**-8.6900**	**13.8900**
		JUNE	**-.20000**	**5.61516**	**.972**	**-11.4900**	**11.0900**
		JULY	**7.60000**	**5.61516**	**.182**	**-3.6900**	**18.8900**
		AUG	**5.00000**	**5.61516**	**.378**	**-6.2900**	**16.2900**
		SEP	**5.60000**	**5.61516**	**.324**	**-5.6900**	**16.8900**
		OCT	**6.00000**	**5.61516**	**.291**	**-5.2900**	**17.2900**
		NOV	**4.00000**	**5.61516**	**.480**	**-7.2900**	**15.2900**
		DEC	**2.20000**	**5.61516**	**.697**	**-9.0900**	**13.4900**
	APR	JAN	**6.00000**	**5.61516**	**.291**	**-5.2900**	**17.2900**
		FEB	**8.00000**	**5.61516**	**.161**	**-3.2900**	**19.2900**
		MAR	**1.20000**	**5.61516**	**.832**	**-10.0900**	**12.4900**
		APR					
		MAY	**3.80000**	**5.61516**	**.502**	**-7.4900**	**15.0900**
		JUNE	**1.00000**	**5.61516**	**.859**	**-10.2900**	**12.2900**
		JULY	**8.80000**	**5.61516**	**.124**	**-2.4900**	**20.0900**
		AUG	**6.20000**	**5.61516**	**.275**	**-5.0900**	**17.4900**
		SEP	**6.80000**	**5.61516**	**.232**	**-4.4900**	**18.0900**
		OCT	**7.20000**	**5.61516**	**.206**	**-4.0900**	**18.4900**
		NOV	**5.20000**	**5.61516**	**.359**	**-6.0900**	**16.4900**
		DEC	**3.40000**	**5.61516**	**.548**	**-7.8900**	**14.6900**
	MAY	JAN	**2.20000**	**5.61516**	**.697**	**-9.0900**	**13.4900**
		FEB	**4.20000**	**5.61516**	**.458**	**-7.0900**	**15.4900**
		MAR	**-2.60000**	**5.61516**	**.645**	**-13.8900**	**8.6900**

	APR	-3.80000	5.61516	.502	-15.0900	7.4900
	MAY					
	JUNE	-2.80000	5.61516	.620	-14.0900	8.4900
	JULY	5.00000	5.61516	.378	-6.2900	16.2900
	AUG	2.40000	5.61516	.671	-8.8900	13.6900
	SEP	3.00000	5.61516	.596	-8.2900	14.2900
	OCT	3.40000	5.61516	.548	-7.8900	14.6900
	NOV	1.40000	5.61516	.804	-9.8900	12.6900
	DEC	-.40000	5.61516	.944	-11.6900	10.8900
JUNE	JAN	5.00000	5.61516	.378	-6.2900	16.2900
	FEB	7.00000	5.61516	.219	-4.2900	18.2900
	MAR	.20000	5.61516	.972	-11.0900	11.4900
	APR	-1.00000	5.61516	.859	-12.2900	10.2900
	MAY	2.80000	5.61516	.620	-8.4900	14.0900
	JUNE					
	JULY	7.80000	5.61516	.171	-3.4900	19.0900
	AUG	5.20000	5.61516	.359	-6.0900	16.4900
	SEP	5.80000	5.61516	.307	-5.4900	17.0900
	OCT	6.20000	5.61516	.275	-5.0900	17.4900
	NOV	4.20000	5.61516	.458	-7.0900	15.4900
	DEC	2.40000	5.61516	.671	-8.8900	13.6900
JULY	JAN	-2.80000	5.61516	.620	-14.0900	8.4900
	FEB	-.80000	5.61516	.887	-12.0900	10.4900
	MAR	-7.60000	5.61516	.182	-18.8900	3.6900
	APR	-8.80000	5.61516	.124	-20.0900	2.4900
	MAY	-5.00000	5.61516	.378	-16.2900	6.2900
	JUNE	-7.80000	5.61516	.171	-19.0900	3.4900
	JULY					
	AUG	-2.60000	5.61516	.645	-13.8900	8.6900
	SEP	-2.00000	5.61516	.723	-13.2900	9.2900
	OCT	-1.60000	5.61516	.777	-12.8900	9.6900
	NOV	-3.60000	5.61516	.524	-14.8900	7.6900
	DEC	-5.40000	5.61516	.341	-16.6900	5.8900
AUG	JAN	-.20000	5.61516	.972	-11.4900	11.0900
	FEB	1.80000	5.61516	.750	-9.4900	13.0900
	MAR	-5.00000	5.61516	.378	-16.2900	6.2900
	APR	-6.20000	5.61516	.275	-17.4900	5.0900
	MAY	-2.40000	5.61516	.671	-13.6900	8.8900
	JUNE	-5.20000	5.61516	.359	-16.4900	6.0900
	JULY	2.60000	5.61516	.645	-8.6900	13.8900
	AUG					
	SEP	.60000	5.61516	.915	-10.6900	11.8900
	OCT	1.00000	5.61516	.859	-10.2900	12.2900
	NOV	-1.00000	5.61516	.859	-12.2900	10.2900
	DEC	-2.80000	5.61516	.620	-14.0900	8.4900
SEP	JAN	-.80000	5.61516	.887	-12.0900	10.4900
	FEB	1.20000	5.61516	.832	-10.0900	12.4900
	MAR	-5.60000	5.61516	.324	-16.8900	5.6900
	APR	-6.80000	5.61516	.232	-18.0900	4.4900
	MAY	-3.00000	5.61516	.596	-14.2900	8.2900
	JUNE	-5.80000	5.61516	.307	-17.0900	5.4900

	JULY	**2.00000**	**5.61516**	**.723**	**-9.2900**	**13.2900**
	AUG	**-.60000**	**5.61516**	**.915**	**-11.8900**	**10.6900**
	SEP					
	OCT	**.40000**	**5.61516**	**.944**	**-10.8900**	**11.6900**
	NOV	**-1.60000**	**5.61516**	**.777**	**-12.8900**	**9.6900**
	DEC	**-3.40000**	**5.61516**	**.548**	**-14.6900**	**7.8900**
OCT	JAN	**-1.20000**	**5.61516**	**.832**	**-12.4900**	**10.0900**
	FEB	**.80000**	**5.61516**	**.887**	**-10.4900**	**12.0900**
	MAR	**-6.00000**	**5.61516**	**.291**	**-17.2900**	**5.2900**
	APR	**-7.20000**	**5.61516**	**.206**	**-18.4900**	**4.0900**
	MAY	**-3.40000**	**5.61516**	**.548**	**-14.6900**	**7.8900**
	JUNE	**-6.20000**	**5.61516**	**.275**	**-17.4900**	**5.0900**
	JULY	**1.60000**	**5.61516**	**.777**	**-9.6900**	**12.8900**
	AUG	**-1.00000**	**5.61516**	**.859**	**-12.2900**	**10.2900**
	SEP	**-.40000**	**5.61516**	**.944**	**-11.6900**	**10.8900**
	OCT					
	NOV	**-2.00000**	**5.61516**	**.723**	**-13.2900**	**9.2900**
	DEC	**-3.80000**	**5.61516**	**.502**	**-15.0900**	**7.4900**
NOV	JAN	**.80000**	**5.61516**	**.887**	**-10.4900**	**12.0900**
	FEB	**2.80000**	**5.61516**	**.620**	**-8.4900**	**14.0900**
	MAR	**-4.00000**	**5.61516**	**.480**	**-15.2900**	**7.2900**
	APR	**-5.20000**	**5.61516**	**.359**	**-16.4900**	**6.0900**
	MAY	**-1.40000**	**5.61516**	**.804**	**-12.6900**	**9.8900**
	JUNE	**-4.20000**	**5.61516**	**.458**	**-15.4900**	**7.0900**
	JULY	**3.60000**	**5.61516**	**.524**	**-7.6900**	**14.8900**
	AUG	**1.00000**	**5.61516**	**.859**	**-10.2900**	**12.2900**
	SEP	**1.60000**	**5.61516**	**.777**	**-9.6900**	**12.8900**
	OCT	**2.00000**	**5.61516**	**.723**	**-9.2900**	**13.2900**
	NOV					
	DEC	**-1.80000**	**5.61516**	**.750**	**-13.0900**	**9.4900**
DEC	JAN	**2.60000**	**5.61516**	**.645**	**-8.6900**	**13.8900**
	FEB	**4.60000**	**5.61516**	**.417**	**-6.6900**	**15.8900**
	MAR	**-2.20000**	**5.61516**	**.697**	**-13.4900**	**9.0900**
	APR	**-3.40000**	**5.61516**	**.548**	**-14.6900**	**7.8900**
	MAY	**.40000**	**5.61516**	**.944**	**-10.8900**	**11.6900**
	JUNE	**-2.40000**	**5.61516**	**.671**	**-13.6900**	**8.8900**
	JULY	**5.40000**	**5.61516**	**.341**	**-5.8900**	**16.6900**
	AUG	**2.80000**	**5.61516**	**.620**	**-8.4900**	**14.0900**
	SEP	**3.40000**	**5.61516**	**.548**	**-7.8900**	**14.6900**
	OCT	**3.80000**	**5.61516**	**.502**	**-7.4900**	**15.0900**
	NOV	**1.80000**	**5.61516**	**.750**	**-9.4900**	**13.0900**
	DEC					

*. The mean difference is significant at the 0.05 level.

Means Plots



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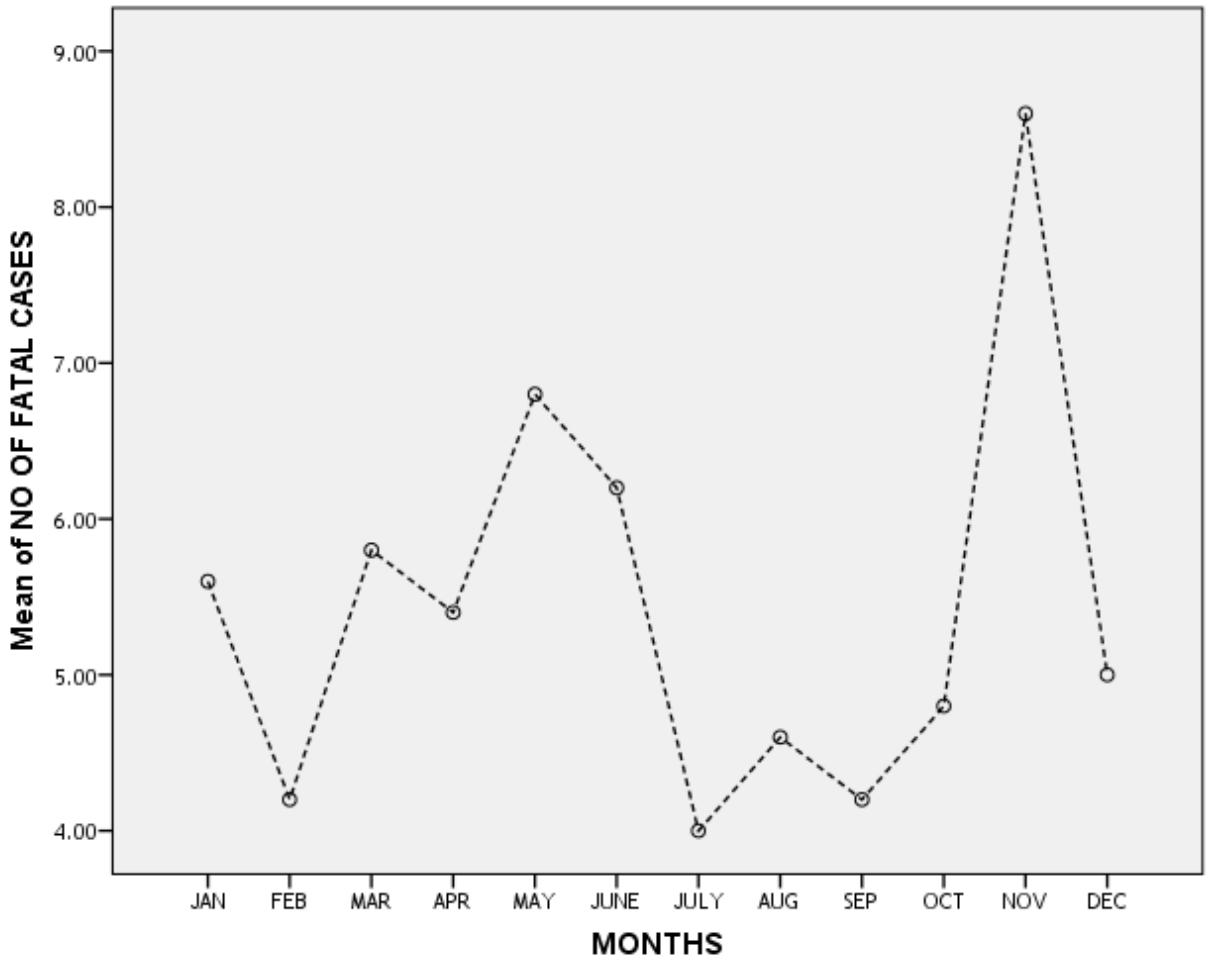
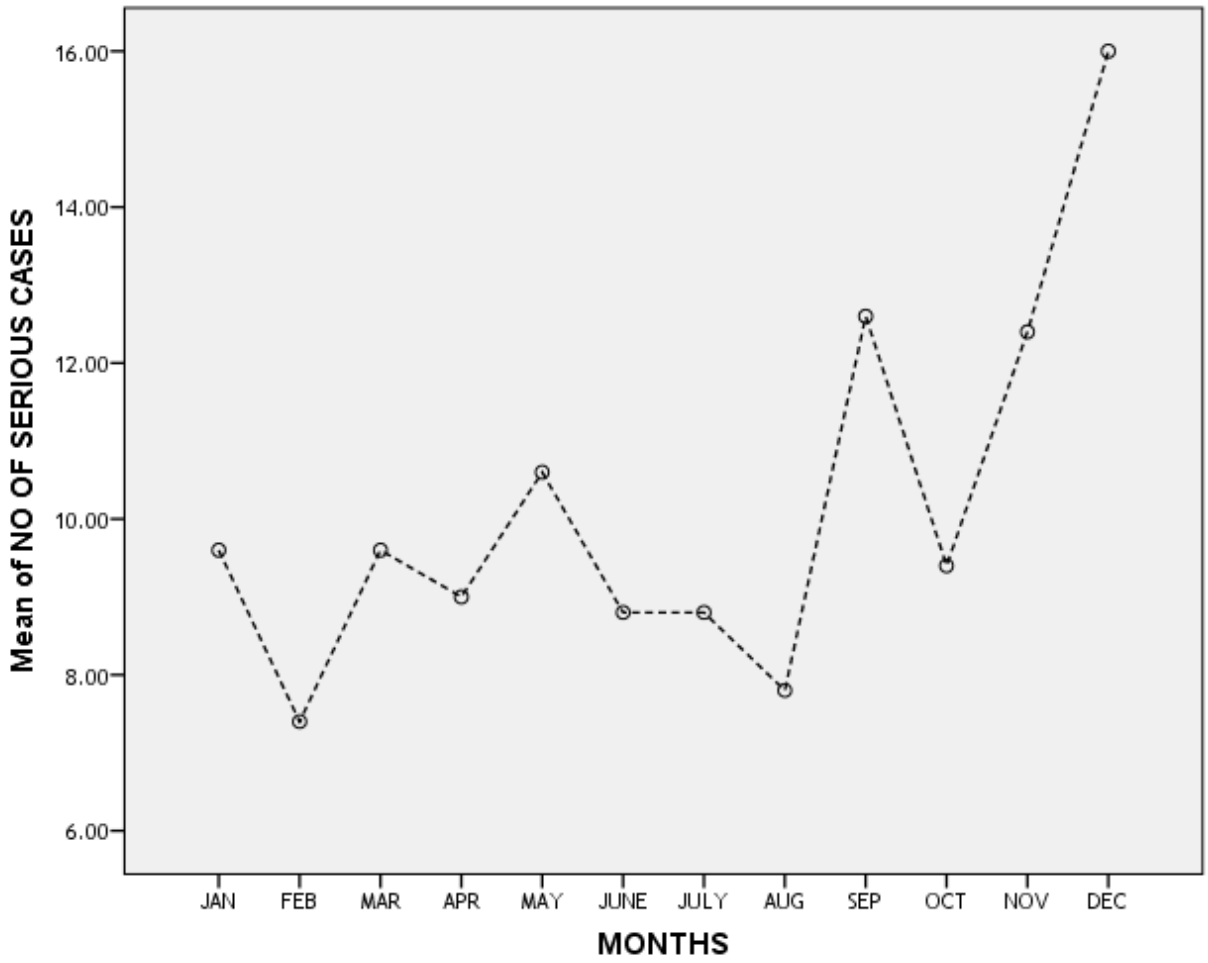
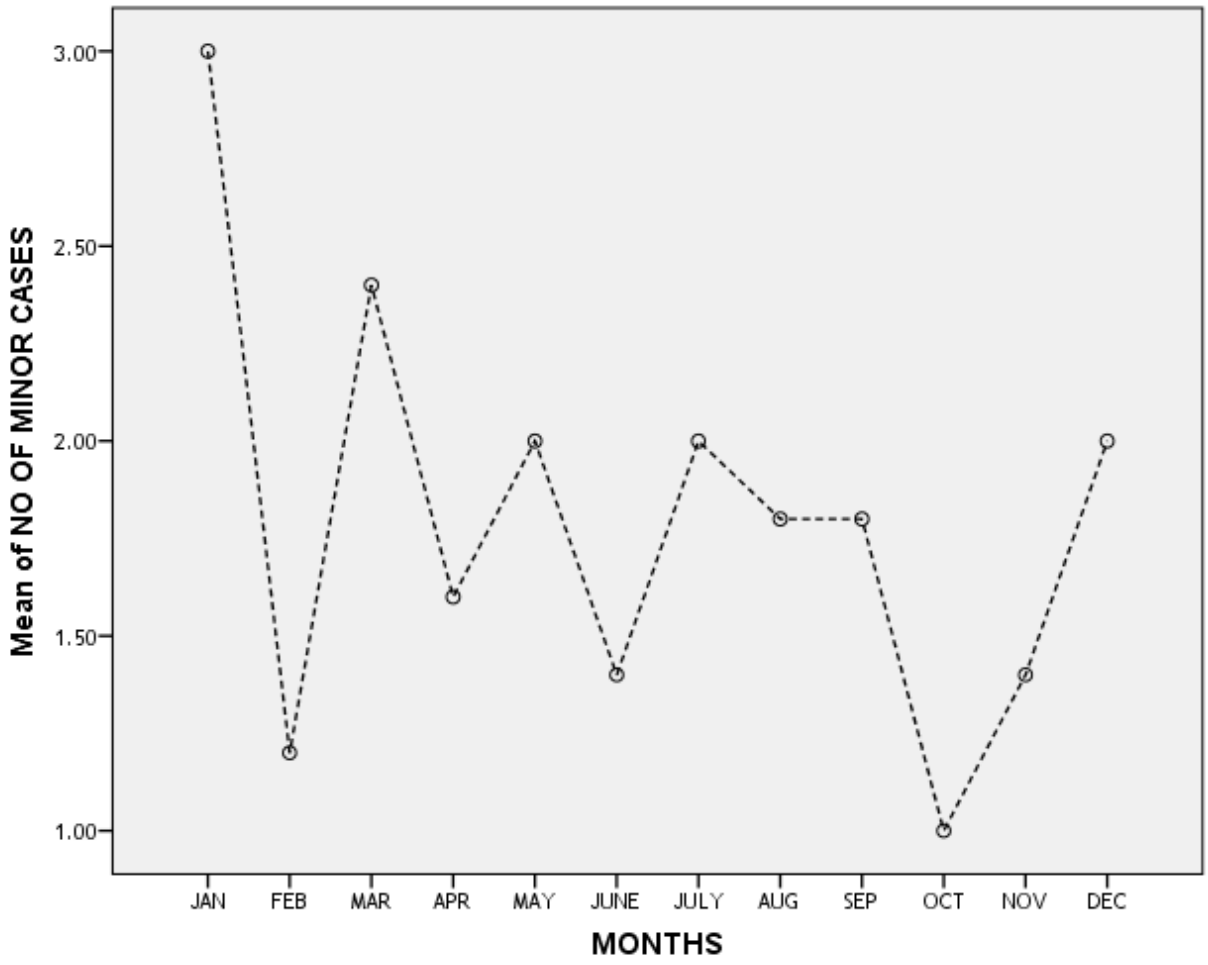

Mean of NO OF FATAL CASES
9.00
8.00
7.00
6.00
5.00
4.00
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
MONTHS

UNIVERSITY


Mean of NO OF SERIOUS CASES
16.00
14.00
12.00
10.00
8.00
6.00
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
MONTHS

UNIVERSITY


Mean of NO OF MINOR CASES
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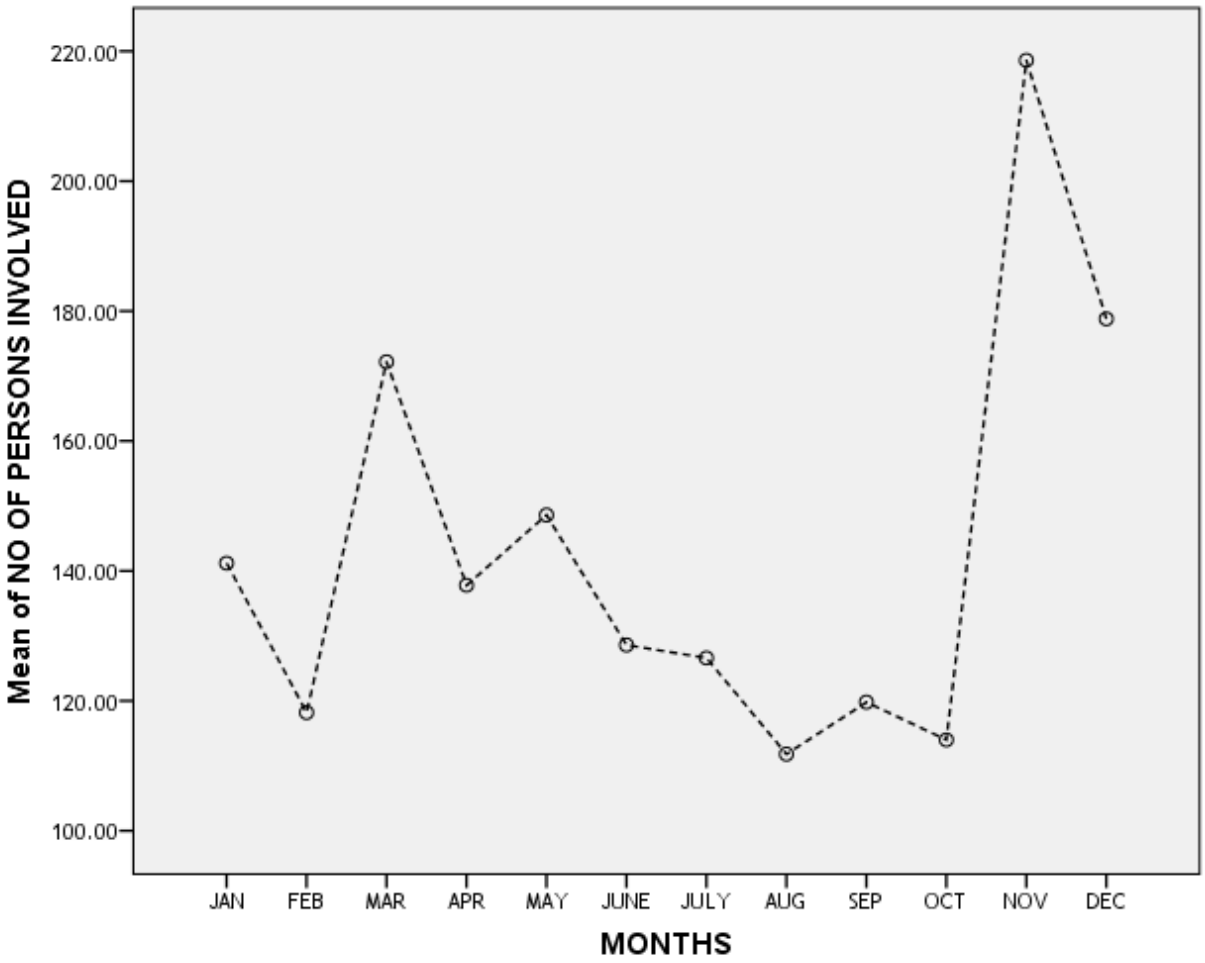
2.00
1.50
1.00
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
MONTHS

UNIVERSITY


Mean of NO OF PERSONS INVOLVED
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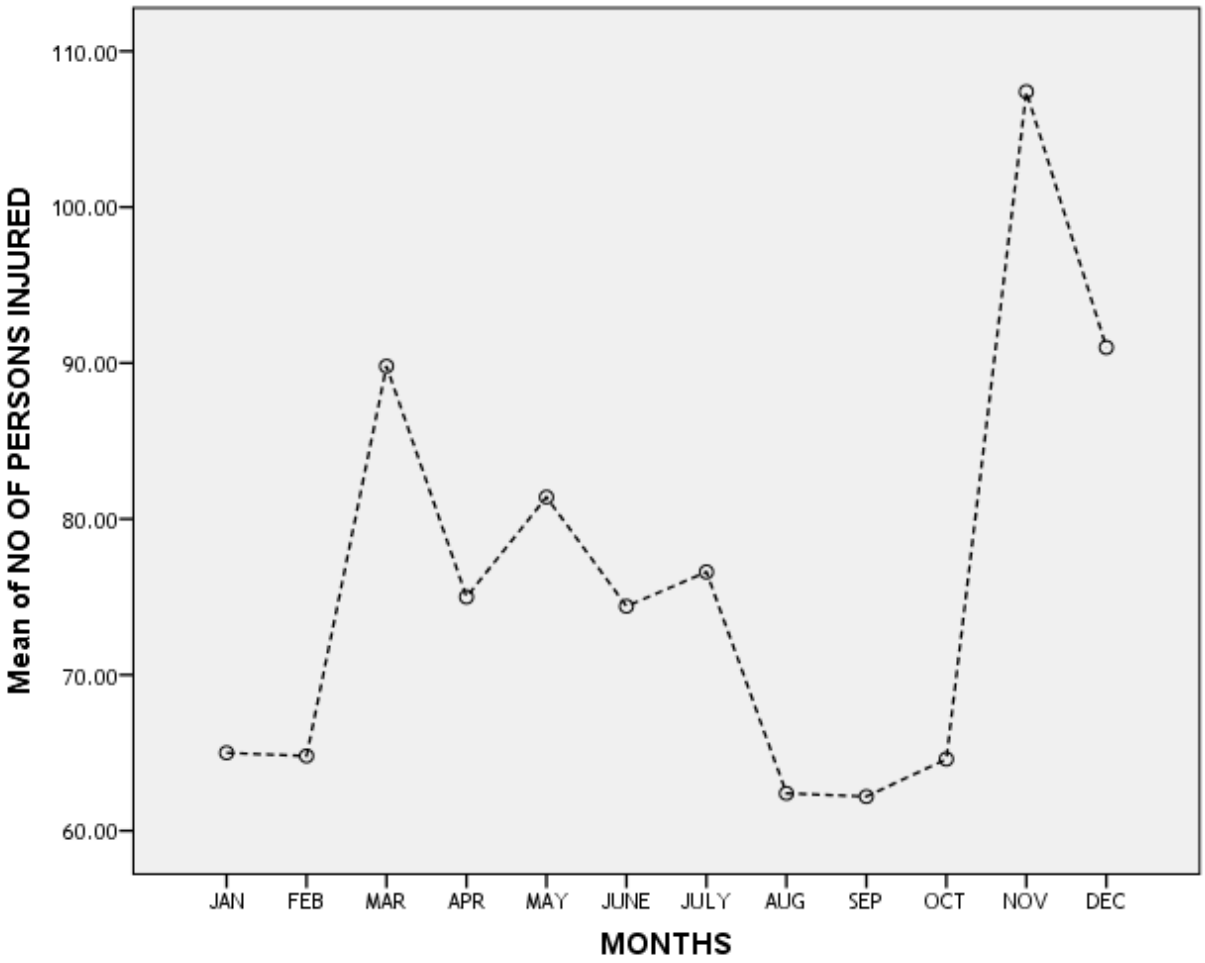
200.00
180.00
160.00
140.00
120.00
100.00
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
MONTHS

UNIVERSITY


Mean of NO OF PERSONS INJURED
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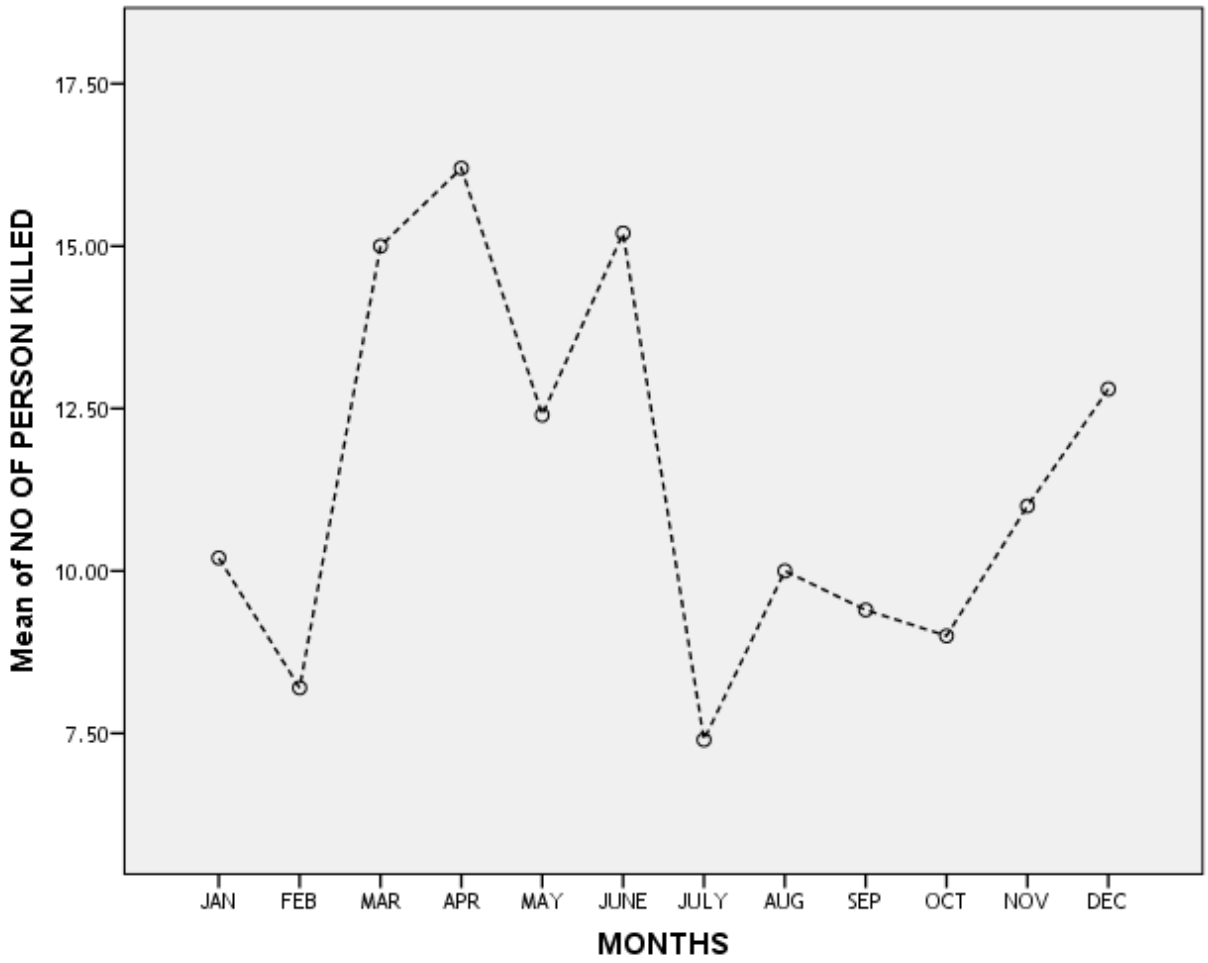
100.00
90.00
80.00
70.00
60.00
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
MONTHS

UNIVERSITY


Mean of NO OF PERSON KILLED
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12.50
10.00
7.50
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
MONTHS

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Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.626	30.843	30.843	4.626	30.843	30.843	3.056	20.372	20.372
2	2.318	15.454	46.297	2.318	15.454	46.297	2.258	15.056	35.428
3	1.438	9.589	55.886	1.438	9.589	55.886	2.119	14.127	49.555
4	1.228	8.186	64.073	1.228	8.186	64.073	1.823	12.155	61.710
5	1.117	7.448	71.521	1.117	7.448	71.521	1.472	9.811	71.521
6	.801	5.337	76.858						
7	.715	4.769	81.627						
8	.589	3.930	85.557						
9	.523	3.484	89.040						
10	.475	3.165	92.205						
11	.404	2.692	94.897						
12	.313	2.084	96.981						
13	.203	1.352	98.333						
14	.146	.976	99.309						
15	.104	.691	100.000						

Extraction Method: Principal Component Analysis.

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