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DETERMINATION THE PREVALENCE OF RISK FACTORS ASSOCIATED WITH ROAD TRAFFIC ACCIDENTS AMONG ADULTS IN LAHORE PAKISTAN

BY

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DEDICATION

This thesis work is dedicated to my honorable parents and teachers. Their economic backing, time and inspiration have no words to be stated. I would like to dedicate to my instructor supervisor who encouraged me to strive and being with me at every step.

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Aatqa Ishtiaq

DECLARATION

The proposed work reported in this synopsis carried out by me under the supervision of Mrs.Wafa Fatima, from Afro-Asian Institute affiliated with GC University, Faisalabad, Pakistan.

It is hereby affirming that the title of proposed research “Determination the prevalence of risk factors associated with road traffic accidents among Adults” and its insides are the creation of my own planned research and no fragment copied from any available source (except the references, standard mathematical or genetic models /equations /formulas/protocols etc.). I additional proclaim that this work has not been submitted for award of any other degree /diploma. The University has right to take action if the material delivered is establish wrong at any stage.

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LIST OF ABBEREVIATIONS

S/N	Abbreviations	Full Form
1	RTA	Road Traffic Accident
2	GDP	Gross domestic product
3	WHO	World health organization
4	NFI	Non-fatal injury
5	KSA	Kingdom of Saudi Arabia
6	USD	United states dollar
7	PURE	Prospective Urban Rural Epidemiological

Abstract

Background: Road Traffic increased and injuries are among the leading causes of death and infirmity in the world and a major public health concern. The burden of road traffic accidents (RTA) is a leading cause of all trauma admissions in hospitals worldwide.

Objectives: Determine the prevalence of risk factors associated with Road traffic accidents among adults and identify the factors associated with road traffic accidents among adults.

Methodology: This was Cross-sectional descriptive study in which a structured questionnaire of data collection form was used to collect data about factors associated.

Data will be collected by a structured questionnaire comprise of close ended questions.

Results: More of the applicant have no ideas about the causative factors which are the leading cause of RTA. The study finding determined those factor in which violation of traffic rules, lacking of driving skills, unlicensed driving, over-speeding was common in motor cycle and sleepiness were common car driving. These factors were mostly found in young ages (20-26). Value of the data was measured by analyzing normality test.

Presents Cronbach's alpha is a scales used in the study.

Conclusion: The study findings revealed many prominent and contributing factors that linked with RTA, s is violating the traffic rules, lacking of driving skill, over speeding, sleepiness and many more. The Independent variable was road traffic accident (RTA) for this and factors were dependent variable.

Key words: Road Traffic Accident, Risk Factors, lacking of driving skills,

Chapter 1

INTRODUCTIO N

The routine of the people in the world has transformed unusually during the last 30 years. Road Transportation amplified and damages are among the leading causes of death and disability in the world and a major public health concern. The burden of road traffic accidents (RTA) is a leading cause of all trauma admissions in hospitals worldwide. According to the World Health Organization (WHO), about two million people die

each year as a result of road traffic accident resulting in important financial harms. Road traffic accident cost most countries three percent of their gross domestic product, more than half of all road traffic deaths are among vulnerable road users: walkers, cyclists, and motorcyclists. Twenty to fifty million more people undergo non-fatal injuries, with numerous suffering a disability as a result of their injury (World Health HYPERLINK "https://www.sciencedirect.com/science/article/pii/S0167494317302285?casa_token=BxVh0PBlXCgAAAAA:FQlx_P0x1MkNX-f9Vh5dbscMz20ytCXVpEEoDrRXnxHnwup02L2UcxRvPrGcloOrkSd_MkfSdwbib0250"Organization, 2020). In the United States, injuries due to RTA result in forty million serious injury admission annually, with a probable eighty one billion US Dollar in direct medical cost (National Center for Health Statistics, 2016 HYPERLINK "https://www.sciencedirect.com/science/article/pii/S0167494317302285?casa_token=BxVh0PBlXCgAAAAA:FQlx_P0x1MkNX-f9Vh5dbscMz20ytCXVpEEoDrRXnxHnwup02L2UcxRvPrGcloOrkSd_MkfSdwbib0135").

Furthermore, the organization projects that road traffic injuries (RTIs) will be one of the main reasons of disability-adjusted life expectancy in 2030 (Peden HYPERLINK "https://www.sciencedirect.com/science/article/pii/S000145751300328X?casa_token=J-cYzD6xahgAAAAA:gp66-gOmZp50UZ8ci8-SfHwiyEyc46oIFqMNSRmIbym_FBEavNc8UyVQ5b0gVXVBjxDgW7BsMQbib0140"et al., 2004 HYPERLINK "https://www.sciencedirect.com/science/article/pii/S000145751300328X?c

asa_token=J-cYzD6xahgAAAAA:gp66-gOmZp50UZ8ci8-SfHwiyEyc46oIFqMNSRmIbym_FBEavNc8UyVQ5b0gVXVBjxDgW7BsMQ bib0140", HYPERLINK "https://www.sciencedirect.com/science/article/pii/S000145751300328X?casa_token=J-cYzD6xahgAAAAA:gp66-gOmZp50UZ8ci8-SfHwiyEyc46oIFqMNSRmIbym_FBEavNc8UyVQ5b0gVXVBjxDgW7BsMQ bib0165" HYPERLINK "https://www.sciencedirect.com/science/article/pii/S000145751300328X?casa_token=J-cYzD6xahgAAAAA:gp66-gOmZp50UZ8ci8-SfHwiyEyc46oIFqMNSRmIbym_FBEavNc8UyVQ5b0gVXVBjxDgW7BsMQ bib0165"Zimmerman et al., 2012). The cause for the growing severity of RTAs is not clear but the most possible cause could link in speeding, careless driving, the altering vehicle mix on the roads and the standard of immediate care accessible for victims. Additional study is important and will need close collaboration between police and health authorities. A study was conducted in Sweden report that most mortalities and most severe injuries treated over a given year are associated with road traffic accidents, and that a high proportion of these losses suffer permanent medical weakening. In furthermost established countries, the problem of RTAs has involved growing research and care intrusions causing in a decrease of the size of the problematic in many of these countries (Lawrence et al. 2017). For example, much has been completed to observe the causes of RTAs in the USA and the consistent decrease of RTA injuries and mortalities and there has specified the efficacy of the efforts to neutralize the numerous causes of RTAs. According to WHO

ninety-three of the world's mortalities on the roads occur in low and middle-income countries, even still these countries have about sixty percent of the world's automobiles. Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years (Sakai H, 2017).

According to a study which was completed in Iran in 2016, there are guaranteed features of driver manners and conduct that are significantly related with influence in car accidents. These unsafe behaviors need to be adapted to reduce future incidence of car accidents. Over fifty percent of the worldwide death due to Road Traffic Injury occurs amongst young adults aged between 15 and 44 years, and the taxes for these age groups are higher in middle and low income countries (Fergusson D,2016). A study was conducted in Saudi Arabia, it has been detected that escalations in both fatalities and mortalities due to

RTAs in equivalent with a growth in the number of introduced second hand cars. Cracks of different parts of the body founded the mainstream of injuries with obvious male majority all over. The study results shown the high risk of RTIs was among young male Qatari car user in the age group (25–34) years. It exhibited that human behavioral factors signify one of the main causes of RTIs such as excessive speed and using safety belt. Head and neck injuries were described more among Qatari drivers (Burgut, et al 2010).

A study was shown in Saudi Arabia in which difference was common in the type of reporting of RTAs, outcome methods, and potential reasons over a period of 20 years. All research fully observed into the

drivers' mistakes. A viewpoint investigation of road smashes should be reserved in place in the secondary and tertiary care hospitals for all regions of KSA (Mansuri et al 2015). Community strategies are needed to guarantee traffic protection in order to decrease the special effects of RTA about output and to carry news studies to propagate knowledge about loss productivity. This study will identify the related features of road traffic accidents among adults (Mansuri, F 2016)

William Haddon established a background that classifies risk factors before the accident, during the accident and after the accident, in relation to the person, vehicle and environment. Haddon labeled road transport as an illdesigned "man machine" scheme in need of all-inclusive systemic treatment. Respectively phase Pre, Intra and Post can be observed thoroughly for human, vehicle, road and environmental factors. The Haddon model is a systematic tool to help in classifying all factors associated with an accident. When the numerous features related with an accident are recognized and examined, counter processes can be recognized and emphasized for presentation over short-term and long-term periods. For the pre accident phase, it is essential to select all countermeasures that stop the crash from happening. The crash phase is related with countermeasures that avoid injury from happening or diminish its severity if it ensures occur. Finally, the after crash phase involves all activities that reduce the opposing outcome of the crash after it has occurred. Particular, it requires acknowledgement that the human body is highly vulnerable to injury, and that humans make mistakes. A safe road

traffic system is one that provide returns for human susceptibility and unreliability *(*Haddon. W, 2017)

Each accident and its implications can be signified by its system of extra features as the components of the road and transport system interact, linkages seem amongst crash and trauma factors. For example, some road features or vehicle features may have influenced particular aspects of road users' behavior, and the special effects of some vehicle defect may have been compounded by particular road features. For the purpose of planning measures to avoid accidents, it is essential to understand the full compound causation process, as it provides vital information, and typically leads to a wide scope of possible areas of preventive action. There is a chance for intervention in all features of the transportation system, and related systems designated to reduce the risk of road traffic injuries and deaths (Lombardi, D. A. (2010). The key figure is that a road traffic crash or accident is the consequence of interaction among a number of factors and subsystems.

		FACTORS	
Phase	**Human**	**Vehicle & Equipment**	**Environment**

Pre-crash	Crash-Prevention	Information Attitude Impairment Police enforcement	Roadworthiness Lighting Braking Handling Speed management	Road design and road layout Speed limits Pedestrian facilities
Crash	Injury prevention	Use of restraints	Impairment Other safety devices Crash protective design	Crash-protective roadside objects
Post-crash	Life sustaining	First-aid skill facilities	Ease of access Rescue Fire risk	Access to medics Congestion

The Haddon matrix: Haddon Jr W

According to a study, which inspected the association between visual impairment and RTA among fifteen hundred drivers seen at the accident and emergency department of a hospital in the United Arab Emirates, also documented visual impairment, uncaring driving and speed violations to be significant risk factors. The significance of negligence and inattention as conflicting to mechanical fault in RTA causation was also well-known in a study by Oyemade. However, seventy-two of the drivers intricate in Oyemade's study were less than 30 years of age while fifty-five percent of the drivers from the United Emirates study were less than 40 years of age (Mirza, K et al, 2018) These people were much younger than those in our study (average age 50 years, with 1% less than 40 years of age) and consequently more likely to be involved in risk pleasing performance. We supposed a growth in the occurrence of RTA among older aged drivers. This may be associated to growing visual weakening with old age.

Davidson in his exploration of the interrelationship between British drivers' visual capabilities, age and RTA antiquities established strongest positive association between RTA variables and visual disabilities, among older drivers. As people age, optical purposes weaken due to increase in the occurrence of age-related ocular conditions such as cataract, macular degeneration, open-angle glaucoma, and diabetic retinopathy. Thus there are two fortune peaks in the life of an individual, in the young when one is prone to risk taking behavior and in the elderly when visual impairment avoids adequate visual function. It is consequently important to target both groups in preparation intervention programs for accident prevention (Lloberes, P, 2013). The drivers involved in part time jobs were more disposed to to RTA than those with no part time jobs.

This is perhaps because they are over worked and don't have enough rest, and are therefore disposed to RTA due to fatigue. Having part time jobs is related to the need to make sufficient money for their upkeep as well as the upkeep of their families. Adequate compensation packages for services rendered to the institutions are therefore optional as a way of preventing the seeking of part-time jobs that leads to fatigue related RTA. A borderline reduction in the risk of RTA was perceived amongst none users of social drugs such as kola nut, bitter kola, cigarette and alcohol (Thompson, 2002)

Chapter 2

Literature review

Road traffic injuries are one of the leading causes of rising disabilityadjusted life probability. We examine long-term care desires related with motor car accident-related disability in Spain and accomplish that needs attributable traffic injuries are most main during victims' mid-life years, they create an significant problem for both families and society as a whole given that public wellbeing programmers assistant, these victims need to be conserved over a long time frame (Alemany, Ayuso, & Guillén,. 2013). According to a study, elderly fluctuations significant to driving, even in normal aging there is a decline in many rational facilities that are applicable to performance compound tasks such as driving. Of specific consequence are age-linked changes in various features of visual consideration including selective attention, dispersed attention, constant deliberation and altering attention. Driving in traffic needs the ability to appear to related evidence and to disregard dissimilar information in regularly compound visual scenes with probable risks happening in any part of the visual field (Anstey, Wood, 2005**)**

A study was presented to evaluate the influence of cataract surgery in older age clients with cataract who practiced cataract surgery and intraocular lens ***establishment*** had half the rate of crash participation during the perseverance period associated with cataract patients who did not undergo surgery (Owsley et.al 2002).

According to study which explain risk of patients having diabetes have great driving risks may be suitable for certain diabetic drivers. Further research is needed to determine whether transient hypoglycemia or long-term problems explain these effects (Koepsell, et.al 1994). A study was conducted on adults on their aggressive behavior to know the effect of road traffic accidents which stated that personality effects on driving consequences were few, whereas personality had important relations with abnormal driving behavior, showing that behavior is a distal but major predictor of undesirable driving outcomes. These high danger behaviors appear to be at a peak among young male drivers. Thus, behavior is important in thoughtful potent and risky driving by young adults and requirements to be taken into consideration in planning directed accident anticipation policies (Constantine et.al 2011). A study was involved in Pakistan to evaluate the effect of Road Traffic Accidents (RTAs) to neurosurgical mortality in adults and study stated that Road traffic accidents are a main sponsor to neurosurgical mortality especially in adults. RTAs are one of the avoidable causes of neurosurgical deaths (Ghani et.al 2003).

A cross-sectional analysis of the Prospective Urban Rural Epidemiological (PURE) study was directed to assessing global risk factors for non-fatal injuries from road traffic coincidences and falls in adults in 17 countries to evaluate risk features linked with non-fatal injuries (NFIs) from road traffic accidents (RTAs) or completed study of persons

aged 35–70 years found that approximately risk factors for NFI vary according to whether the injury is connected to RTA or falls.

Alcohol reduces the central nervous system and therefore escalations the reaction time of the user, making him less receptive to the challenges of driving mainly to coping with emergencies on the road. It also causes suddenness and enlarged inclination to risk taking behavior. A study which assessed illegal drugs and fitness to drive in Spanish medical driving test centers found an important link between usages of illicit drugs including alcohol and RTA / traffic violations. Kola nut and bitter cola contain three percent caffeine which is a central nervous system stimulant just like nicotine in cigarette. These drugs are commonly used by drivers to avoid falling asleep, and often without adequate rest before embarking on the trip. Many commercial drivers drive for hours without sleep and food, until fatigue inevitably sets in and an accident may be the end result. Governments may use these alterations to guide the design of anticipation guidelines for RTA-related or fall-related NFI (Raina et.al 2016).

Globally, road traffic accidents (RTA) are collective public health challenging and documented as the eighth leading cause of death which have similar influence as other infectious and non-infectious diseases. About 2 million individuals have unusual deaths and 20 to 50 million people suffer with non-fatal damages due to road traffic injuries in the world. The worldwide tendencies of road traffic accidents will convert a fifth leading cause of death by 2030. The worldwide financial burden triggered by RTA was 518 billion USD. Moreover, hundred billion US

Dollar and one to two percent of their gross national product has predictable to financial defeat due to road traffic accidents in low and middle earnings nations alone. Approximately ninety-one percent of the world's fatalities due to road traffic accidents are recorded in developing countries worldwide. In emerging world, around (186,300) teen-agers under the age 18 decease due to Road Traffic Accidents per year, which is three times larger than developed countries. One of the orderly review on road traffic injuries in Nepal revealed that the death rate due to road traffic has design that four percent out of one lac population in 2001-2002 to seven percent in one lac in 2011-2012. Though, prominence paper on road safety in Nepal shows that casualty rate has released from twelve to seventeen percent in ten thousand registered vehicles from 2009 to 2012. According to WHO statement in 2011, damages due to RTA in Nepal founds two percent of total mortality. Likewise, the country has lost eight percent of GDP due to road traffic accident. In most of the non-established and established countries, Road Traffic Accidents are growing day by day foremost to damages, infirmities and deaths. The most common risk features linked with RTA are over speed, driving under influence, not using safety measures.

In order to integrate the driver perception into the analysis of the accident injury severity on Spanish roads, this study functional a latent group investigation and a multinomial to an entire sample of 1064 coincidences connecting only one vehicle in the period of 2006–2016. The record was considered ended and set depend on on regional, contact and organization factors. The numerical analysis discloses that factors such as

side crosstown roads, low path volumes, greater proportions of heavy vehicles, broader lanes, the non-existence of road designs, and lastly violations escalation the injury and brutality of drivers. On the other hand, factors such as a lower percentage of heavyweight automobiles, accidents occurring on weekdays and a lane breadth of less than 3.25 m, are associated with less severe injuries. Moreover, some variables that were not relevant in the analysis of the whole catalogue were documented and establish to be very significant in some of the cluster analysis.

In case of violations, numerical analysis outcomes have shown that violations committed by drivers play a very vital role in the accidents on crosstown roads and should be controlled when examining road safety. In this situation, the most common unity devoted by drivers have been uncaring driving and higher speed. The approach used in this research and the main results can contribution policy makers in transportation sectors to classify risky accident

Features and to apply safety measures. In view of the consequences acquired, the resulting measures are projected. In the first place, it would be essential to highpoint the fear over crosstown roads with less track volumes and those originate on the borders of towns, since they are more

Insecure from the point of view of injury severity. In addition, track rules and rules should be rested and required for those users who disrupt track guidelines, as well as authorizing procedures, which should be stricter in the case of speeding. Another conceivable solution could be refining and increasing the number of track signals along the driver route, or the

application of another track soothing devices. Another eye-catching substitute that should be measured is the application of crossroads which can decrease the crossing speed and the to come times. This type of circular connection also provides the decreasing of driver misperception related with perpendicular junctions and line up related with track lights. In the same way, new action policies are required in order to better contribute crosstown roads into the town material when they develop out-ofdate. For example, removing needless fixed objects to reduce the amount of fixed object cracks or cutting and clearance vegetation as required in relevant segments of crosstown roads. In addition, another countermeasure could be shoulder spreading in dangerous areas of crosstown roads and installing raised pavement markers on longer sections of the road. In regard to the high accident rate of pedestrians, it could be a good measure to consider protected routes and raised crossings, especially close to schools, or hospitals

On the other hand, to address the high accident rate of pedestrians in general, people who commit violations whilst walking should be prosecuted (obligatory crossings for zebra crossings, penalties, awareness raising on the main causes of road crashes at schools and through communication campaigns, etc.). Finally, considering the accidents involving older pedestrians, the actions should focus on studying the pedestrian routes that cross the main town road, giving special attention to the analysis of the levels of physical and activity reimbursement (recurrent trips to hospitals, supermarkets, schools, etc.). Another extent that could be elective is the implementation of track lights

with a longer crossing time for older pedestrians (frequent itineraries of older pedestrians), and with an auditory signal to better capture their attention. Additionally, it could be also useful to require driver re-testing and vision testing every few years for senior drivers. In present study it was found that maximum number of cases of Road Traffic accidents were in the age group of 21-30 years of age (30.53%), males (74.34%), educated up to primary school (29.77%) and laborer by occupation (51%). Similar observation was reported by Thompson L and Steiner D et al where drivers at fault are generally younger.[3] Huda N et al from Moradabad revealed that the majority of victims were in the age group of 11-44 years (81.89%) and males (71%).[4] Singh D et al from Chandigarh found that male preponderance (89.6%) was seen in the study. Similar results were seen in a study conducted by Ghaffar A, Hyder A, Masud TI et al from Pakistan that road traffic injuries were higher in males, those 16-45 years old and in labourers. Jha N et al from South India and Abhishek Singh et al from Haryana revealed that 21.4%, 31.02% were educated up to primary school respectively.

When enquired about risk factors causing Road Traffic accidents it was seen that majority of accidents occur in winter season (37.24%) and in night time (34.47%). Similar results were found in the study conducted by Chalya PL et al Tanzania where 34.8% accidents occurred at night.[9] logical to think that during night time, drivers are drowsy their awareness level is less. Driver fatigue (‘falling asleep at the wheel’) is a major cause of road accidents, accounting for up to 20% of serious accidents on motorways and monotonous roads in Great Britain. But Kiran ER et al in

2004 reported that the maximum number (48.5%) of RTAs occurred in rainy season, followed by 54(33.5%) in winter.

In this study defective road (19.68%) and poor lighting (18.54%) were found as a cause of accident among most of cases. Condition of vehicle is also an important risk factor for Road Traffic Accidents. Among victims majority (41.50%) were injured due to excessive speed at the time of driving and it was followed by overloading of vehicle (40.46%). In high-income countries, speed contributes to about 30% of deaths on the road, while in some low-income and middle-income countries, speed is estimated to be the main contributory factor in about half of all road crashes.

In the study 13.27% of victims had consumed alcohol at the time of accident. Study by Agarwal et al and Kiran ER et al showed that 26%, 13% of subjects had the history of alcohol consumption during driving. This study found that majority of victims was younger, males, less educated and labourer by occupation. Most of the RTAs were reported at night and in winter season. This is due to poor visibility at night and fog during winter. In the study most common vehicles associated with RTA were found motor Cycle and three wheelers which was most common mode of transport in Jhansi, includes Ape, Rickshaw, Vikram, etc. Orchha Road with 11.5% casualties in period of 19 months was hotspot for accidents in Jhansi Region. Among risk factors defective roads, poor lighting, excessive speed, overloading and alcohol consumption were found causing RTAs. Perinatal conditions with 316 deaths was ranked first in Jhansi

Region as cause of Death while RTAs ranking at 9th position with 97 deaths. RTA ranked at 1 position in all causes of Trauma/Accidents with respect to death. In this study we observed that road injuries were ranked at No. 9 among cause of deaths in Jhansi region. You can fathom the importance of road safety measures from it. Road accidents are an outcome of the interplay of various factors, some of which are the length of road network, vehicle population, human population and adherence/enforcement of road safety regulations.

Jhansi is urban region but still it's in phase of development, so roads in Jhansi regions are not well maintained, the dividers, speed breakers are irregularly spaced and are very unpredictable. Also road lighting in Jhansi region is also very poor, road visually at night time is poor. The traffic in Jhansi region is not well guided, people do not care about traffic rules here. Such things should be monitored and controlled by government. In India personalized vehicles are increasing with the same growth rate. Projection of the present trend of vehicles usage reveals a rather ugly and unsustainable situation both in terms of traffic congestion and safety. Most important method to bring down accidents is strict enforcement of speed limits. Driving tests for issue of driving license is to be made more stringent and foolproof. Lower age limit for two wheeler and Heavy Vehicle license should be raised to 21. Helmet should be made compulsory by law in all countries and existing traffic rules should be strictly enforced.

Newspaper, Television and other media should be effectively used for Public Safety Awareness. The accident rate of the drivers since their employment was

11.1%. This was higher than the accident rate of 6.8% reported from a survey of Nigerian army drivers in Lagos. The causes of RTA were similar except that poor vision was not reported by any of our drivers as a possible cause. An increased risk of RTA amongst visually impaired drivers was however observed in the analysis suggesting an important role for poor vision in accident causation despite its denial by the drivers studied. A study, which examined the association between visual impairment and RTA among 1,428 drivers seen at the accident and emergency department of a hospital in the United Arab Emirates, also identified visual impairment, careless driving and speed violations to be significant risk factors. The importance of recklessness and negligence as opposed to mechanical fault in RTA causation was also noted in a study by

Oyemade. However, 72% of the drivers involved in Oyemade's study were less than 30 years of age while 55% of the drivers from the United Emirates study were less than 40 years of age. These populations were much younger than those in our study (average age 50 years, with 1% less than 40 years of age) and therefore more likely to be involved in risk taking behavior. We observed an increase in the prevalence of RTA among older aged drivers. This may be related to increasing visual impairment with old age.

Davidson in his examination of the interrelationship between British drivers' visual abilities, age and RTA histories found strongest positive association between RTA variables and visual disabilities, among older drivers. As people age, visual functions deteriorate due to increase in the

incidence of age-related ocular conditions such as cataract, macular degeneration, openangle glaucoma, and diabetic retinopathy Thus there are 2 accident peaks in the life of an individual, in the young when one is prone to risk taking behaviour and in the elderly when visual impairment prevents adequate visual function. It is therefore important to target both groups in planning intervention programs for accident prevention. The drivers engaged in part time jobs were more prone to RTA than those with no part time jobs. This is probably because they are over worked and don't have enough rest, and are therefore prone to RTA due to fatigue. Having part time jobs is related to the need to make enough money for their upkeep as well as the upkeep of their families. Adequate remuneration packages for services rendered to the institutions are therefore recommended as a way of preventing the seeking of part-time jobs that leads to fatigue related RTA. A marginal reduction in the risk of RTA was observed amongst none users of social drugs such as kola nut, bitter kola, cigarette and alcohol. Alcohol depresses the central nervous system and therefore increases the response time of the user, making him less responsive to the challenges of driving particularly to coping with emergencies on the road. It also causes dis-inhibition, impulsiveness and increased tendency to risk taking behaviour. A study which assessed illicit drugs and fitness to drive in Spanish medical driving test centres found a significant association between uses of illicit drugs including alcohol and RTA / traffic infractions. Kola nut and bitter cola contain 2.5% caffeine which is a central nervous system stimulant just like nicotine in cigarette. These drugs are commonly used by drivers to avoid falling asleep, and

often without adequate rest before embarking on the trip. Many commercial drivers drive for hours without sleep and food, until fatigue inevitably sets in and a crash may be the end result.

Road traffic accidents were most commonly attributed to mechanical faults. Regular maintenance of official vehicles is therefore advocated and would ensure that they are kept in good condition. Use of drugs while driving should be discouraged among drivers to prevent RTA. Drivers should be discouraged from keeping part

Problem Statement

The work need is to discuss favorable explanations of factors associated with roads traffic accidents among adults, with a specific focus on critical traits and research needs for risk assessment and management in this evolving field. Though, identification of associated factors, and risk description and probable risk management tactics for unprotected adults resulted still almost unexplored. Overall, this study highlights the significance to define suitable preventive risk management strategies for adults, and safety practices and policies, in order to develop a responsible accord in healthcare setting.

This study will target the adults who may become primarily exposed to road traffic accidents during their daily tasks. The work will discuss favorable explanations of associated factors, with a specific focus on

critical traits in this evolving field. It helps to cater future road traffic accidents and make best policy as per need of the region.

Operational Definitions

Road Traffic Accident: Road traffic accident involve person injury occurred in public road due to collision of vehicles or It will be vehicle in collision with pedestrian and got personal injury or causalities.

Lacking of driving skills

In appropriate understanding of something which violate the common rules

Risk factors: Those contributing factors which cause harm/ or death.

Objectives

- Determine the prevalence of risk factors associated with Road traffic accidents among adults.
- Identify the factors associated with road traffic accidents among adults.

Chapter 3

Material and

Methods

Study design:

This is Cross-sectional descriptive study in which a structured questionnaire of data collection form used to collect data about factors associated with road traffic accidents among adults. Data will be collected by a structured questionnaire comprise of close ended questions.

Study area:

It was community base study conducted in Lahore. This area selected as study site.

Duration of study:

The research collected throughout the study taken 6 months period.

Population and sampling Techniques:

Sample size is by convenient selection.

If total population is 350

If N=Population, n=Sample size, E= Margin of error

$n=N/1+ (N) (E)^2$

$n=350/1+ (350) (0.05)^2$

n=350/1+ (350) (0.0025) n=

350/1+0.75 n=350/1.75 n=

200 and my sample size is

200 **Study population:**

The study population were adults between the age of 20-40years' old who used vehicles for their daily transportation.

Sampling technique:

I have approached the study participant depending upon their availability and consent to participate in this study. The research questionnaire was distributed among participant through random sampling with purposely and conveniently.

Sample recruitment: Inclusion and Exclusion criteria:

Inclusion Criteria:

All adults who used vehicles for their daily transportation whom consent to participate.

Exclusion Criteria:

Adults who do not used vehicles for their transportation.

Data collection and Analysis Procedure

Data Collection Procedure:

Simple random sampling used. Wind shield survey done prior to data collection to gain an idea of the area. To gain reliability SPSS reliability testing conducted. Questionnaire had taken 5 to 10 minutes. Data collection form was distributed among participants to collect data.

Data collection tool:

Prepared self-administered questionnaire was used.

Study Variables

Socio Demographic Variables:

- Gender (Male and Female)
- Ethnicity (Pakistani/ Non Pakistani)
- Education (Matric, intermediate, Bachelor, Master)
- Age (21-40 age group)

Other variables:

- Factors associated with road traffic accidents.
- Adults between the ages of 21-40years.

Data Analysis Procedure:

Data will be analyzed using SPSS and following procedures/tests carried out

- Frequency distribution
- Descriptive statistics

Ethical considerations

Written approval from the Govt. College University Faisalabad and community stake holders obtained. The Data

collected after approval of subjects through written informed consent.

Information obtained from the subjects kept confidential. Data only be utilized for the purpose of the study; there was no monetary compensation to the study participants. There was no direct benefit and harm to the individual participant during the study but there was benefit to the hospital in the long run.

Time Frame

The proposed study carried out according to the following schedule:

S#	Activity	Duration	Dates
1.	Introduction	3 days	6th to 8thApril
2.	Literature review	24 days	12th March to 5th April
3.	Data collection	15 days	13th April to 27th April
4.	Data entry and Analysis	5 days	28th April to 2nd May
5.	1st draft	1.5 month	12th March to 2nd May
6	Final Draft	Approx. 2 months	12th March to 5th May

CHAPTER-4

Data Analysis

This chapter focuses on data analysis. The below table show the statistical results and descriptive statistics.

NORMALITY TEST

Value of the data was assessed by analyzing normality. Normality was examined through skewness and kurtosis (Munro, 2005). The compute were normally distributed and were well in range +1 to -1 hence findings indicated normality of the data.

Skewness and Kurtosis

A general guideline for **skewness** is that if the number is greater than +1 or lower than –1, this is an indication of a substantially **skewed** distribution. For **kurtosis**, the general guideline is that if the number is greater than +1, the distribution is too peaked and here skewness of knowledge is -.088 and Kurtosis -.546

Table # 1

Compute Variable	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Accident	-.137	.241	-1.071	.478
Valid N (listwise)				

RELIABILITY ASSESSMENT

Presents Cronbach's alpha is a scales used in the study. Cronbach alpha is the most commonly used measure of scale reliability (Cortina, 1993). Cronbach alpha above 0.70 is considered to be the acceptable indicator of

internal consistency reliability

Table # 2

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.893	.326	10

Table # 2a

Standard Deviation of Compute Variable

	N	Mean	Std. Deviation
RTA	200	14.6000	2.79267
Valid N (listwise)	200		

All the questions were put in a compute statistics and make a compute variable (Road Traffic accident to analyze the standard deviations among mean of all questions which

is $\pm$ 2.7

Demographic analysis

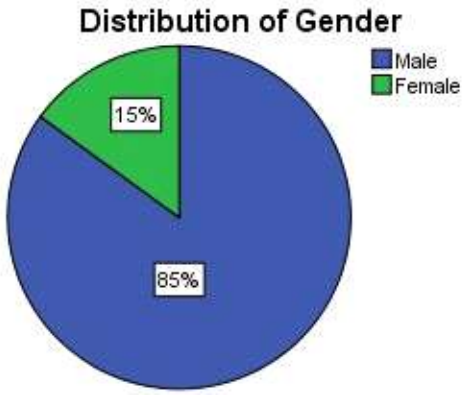
Classification of Gender

The below table and graph number 1 show that data was collected from both genders. The male respondents were 85% (n=170) and the female respondents were 15% (n=30).

Table # 3

Classification of Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	170	85.0	85.0	85.0
	Female	30	15.0	15.0	100.0
	Total	200	100.0	100.0	



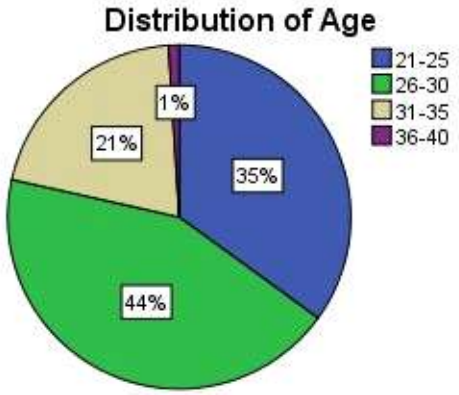
Classification of Age

The whole proportion of sample size comprised on male and nurses in (n=100). About 35% (n= 70) of the respondents were 21 to 25 years old 44% (n=87) between 26 to 30 years of age, 21% (n=41) were between 31 to 35 years age and 1% (n=2) were between 36 to 40 years of age.

Table #4
Classification of age

Distribution of Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-25	70	35.0	35.0	35.0
	26-30	87	43.5	43.5	78.5
	31-35	41	20.5	20.5	99.0
	36-40	2	1.0	1.0	100.0
	Total	200	100.0	100.0	



Marital Status:

Most the respondents were unmarried as 75% (n=151) and 25% (n=49) were married, which showed that most of the participants had motor cycle and between the age 20-25 years of age.

Table # 5

Distribution of Marital Status

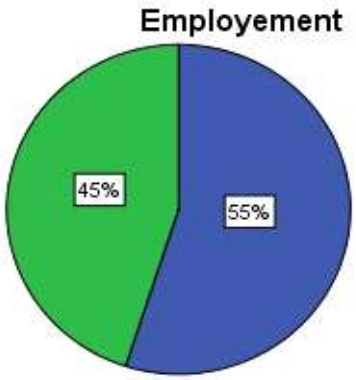
Valid	Married	49	24.5	24.5	24.5
	Unmarried	151	75.5	75.5	100.0
	Total	200	100.0	100.0	

Employment:

The employment status showed that most of the respondents were employed 55 %(n=110) and 45% (n= 90) were unemployed. The statistics showed that they were using their vehicle for their transportation

Table # 6
Employment of the Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employee	110	55.0	55.0	55.0
	Unemployed	90	45.0	45.0	100.0
	Total	200	100.0	100.0	



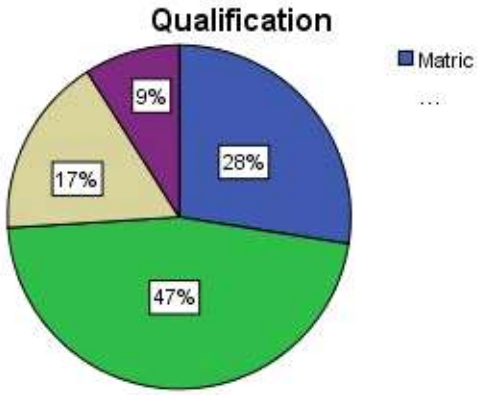
Qualification:

The participants were also categorized on the basis of education because it plays great role to follow the rules & regulation of traffic in which 46% (n=93) were intermediate level and 27 %(n=55) were in matric level. Moreover 17% (n=34) were graduate level and 9% (n=18) were illiterate.

Table #7

Qualification of the participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Matric	55	27.5	27.5	27.5
	Intermediate	93	46.5	46.5	74.0
	Bachelor/Master	34	17.0	17.0	91.0
	Illiterate	18	9.0	9.0	100.0
	Total	200	100.0	100.0	



Mode of Transportation

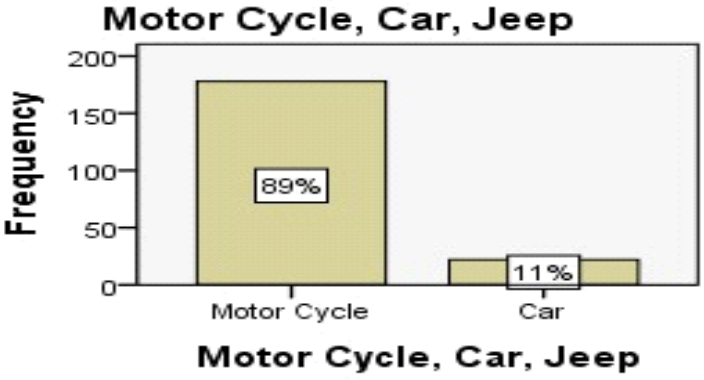
The respondents who were asked about the mode of transport they used in which Motorbike, car and jeep were added. The answers showed that most of the subjects were used motor bike and car and jeep were not used by anyone.

The statistics are 89% (n= 178) were bike and 11% (n=22) were car.

Table # 8

Mode of Transport

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Motor Cycle	178	89.0	89.0	89.0
	Car	22	11.0	11.0	100.0
	Total	200	100.0	100.0	



Driving License

The respondents were asked about the driving license and most of the respondents had not driving license which was 84% (n=169) out of 200 and only

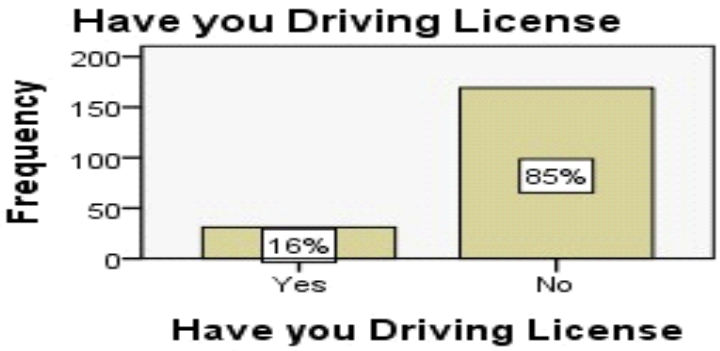
15% (n=31) have driving license.

Table #9

Driving License

Have you Driving License

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	31	15.5	15.5	15.5
	No	169	84.5	84.5	100.0
	Total	200	100.0	100.0	



Length of Driving

The participants were asked about their driving experience in which most have 1-2 years of experience 37% (n=74) and 3-4 years were 43% (n=86), 15% (n=30) were between 5-6 years and 0nly 5% (n=10) have 7 and above experience.

Table # 10

Length of driving

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 years	74	37.0	37.0	37.0
	3-4	86	43.0	43.0	80.0
	5-6	30	15.0	15.0	95.0
	7 0r above	10	5.0	5.0	100.0
	Total	200	100.0	100.0	

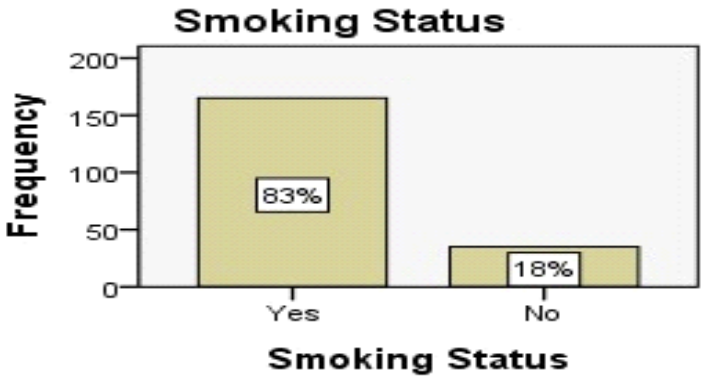
Smoking Status

The smoking history was asked from each participant in which most of the participants has history of smoking in which 82% (n=165) were smoker and 17% (n=35) were non-smoker.

Table # 11

Smoking Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	165	82.5	82.5	82.5
	No	35	17.5	17.5	100.0
	Total	200	100.0	100.0	



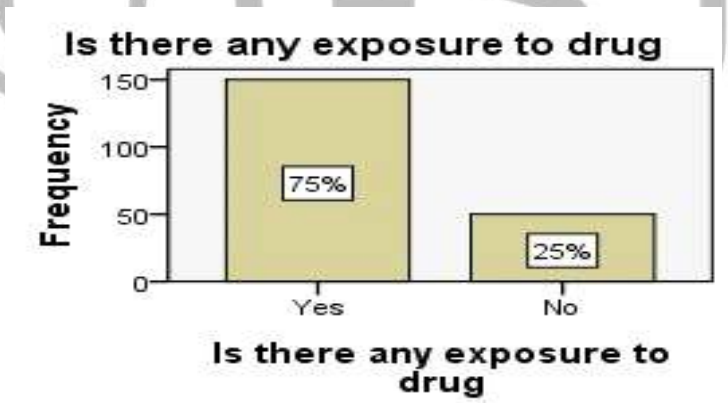
Exposure to drugs

The participants were asked about drug addiction in which 25 %(n=50) were taking drugs for sleep and 75% (n=150) have no history of drug addiction.

Table # 12
Exposure to drug

Is there any exposure to drug

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	150	75.0	75.0	75.0
	No	50	25.0	25.0	100.0
	Total	200	100.0	100.0	



Question 1: The participants responded to this question, in which 90% (n=180) had not yet got any accident in their life and 20% (n=10) were got accident. When this question was asked the ratio of participants were greater in those who ride motor cycle (bike) which is 20%

Table # 13

Have you ever got an accident?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	10.0	10.0	10.0
	No	180	90.0	90.0	100.0
	Total	200	100.0	100.0	

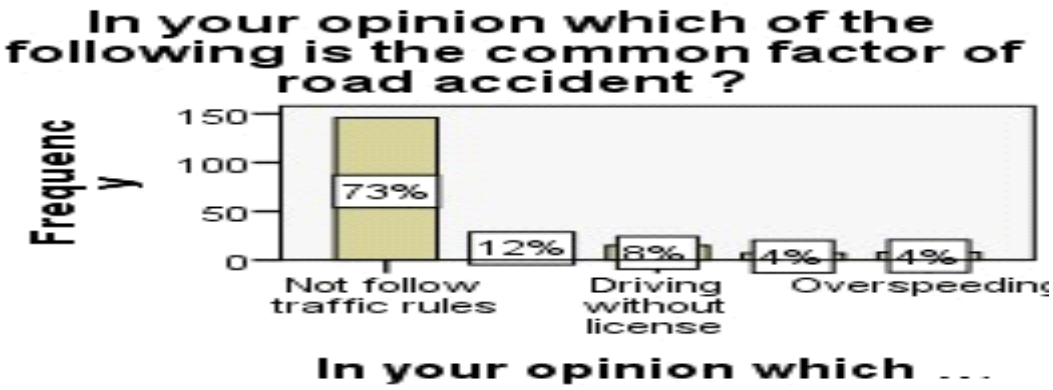
Question 2: According to these responses the ratio is higher in those drivers who did not follow the traffic rules were 73% (n=146) and then second higher ratio were 12% (n=24) who were lacking of driving skills, 7.5% (n=15) were

those who have not yet driving license and 3.5%(n=7) were those who drive with carelessness and 4% (n=8) drive with speed

Table # 14

In your opinion which of the following is the common factor of road accident?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not follow traffic rules	146	73.0	73.0	73.0
	Lacking of driving skills	24	12.0	12.0	85.0
	Driving without license	15	7.5	7.5	92.5
	Carelessness driving	7	3.5	3.5	96.0
	Overspeeding	8	4.0	4.0	100.0
	Total	200	100.0	100.0	

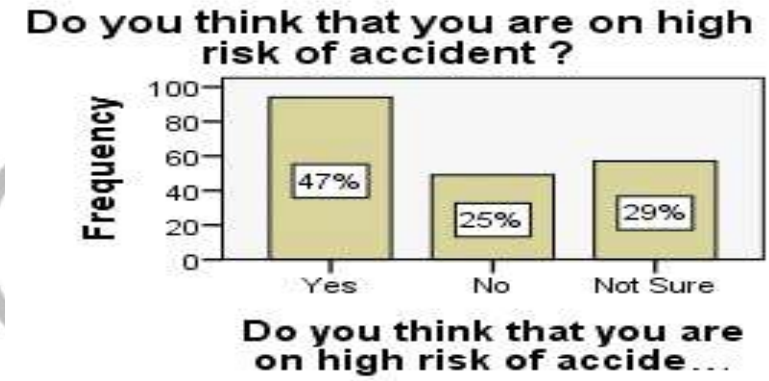


Question 3: The participants were responded to this question were mostly not sure as 29 %(n=57) and 47% (n=94) were responded positive and 25% (n=49) were replied negative. The question responses showed that large amount of people are still not sure that we are at risk of accident.

Table # 15

Do you think that you are on high risk of accident?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	94	47.0	47.0	47.0
	No	49	24.5	24.5	71.5
	Not Sure	57	28.5	28.5	100.0
	Total	200	100.0	100.0	

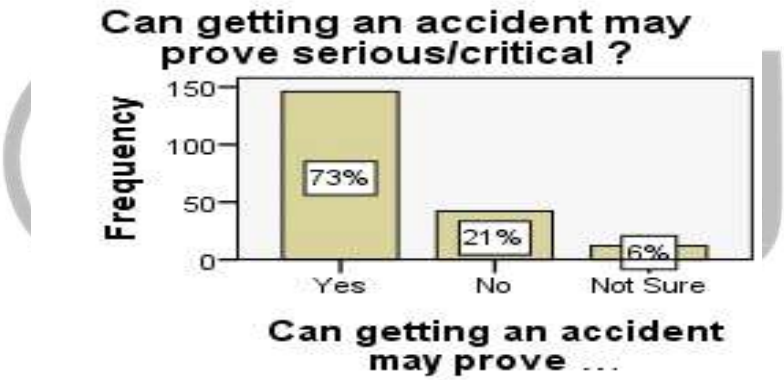


Question 4: The responses toward this questions were more positive as 73% (n=146) was aware that accident can cause serious/dangerous harm and 21% (n=42) believed that accident cannot cause serious/critical condition and 6% (n=12) were not sure.

Table # 16

Can getting an accident may prove serious/critical condition?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	146	73.0	73.0	73.0
	No	42	21.0	21.0	94.0
	Not Sure	12	6.0	6.0	100.0
	Total	200	100.0	100.0	

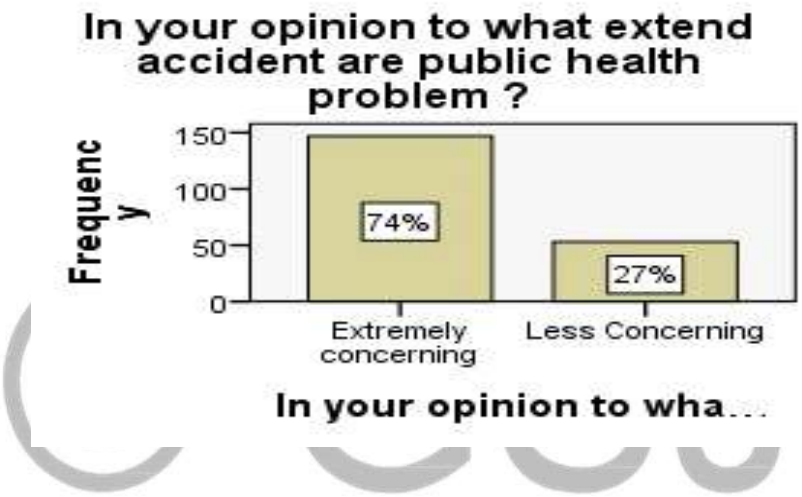


Question 5: In this question asked to the respondents about their opinion toward accident that could concern in their point of view as accident is concerning problem or not, so 73% (n=147) were agree and 26 %(n=53) were not agree toward this question. Although the accident is globally issue and affected the people by its mortality and morbidity worldwide

Table #17

In your opinion to what extend accident are public health problem?

	Frequency	Percent	Valid Percent	Cumulative Percent
Extremely concerning Valid	147	73.5	73.5	73.5
Less Concerning	53	26.5	26.5	100.0
Total	200	100.0	100.0	



Question 6: The responses were 86% (n=173) to wear helmet, 6% (n=12) were not sure and 7.5% (n=15) were not agree to wear helmet. In this study most of the participants were those who were using the motor cycle for their transport but most of them had not helmet, which is a great concerning issue for them and for others as well.

Table # 18

Is it necessary to wear helmet while riding bike?

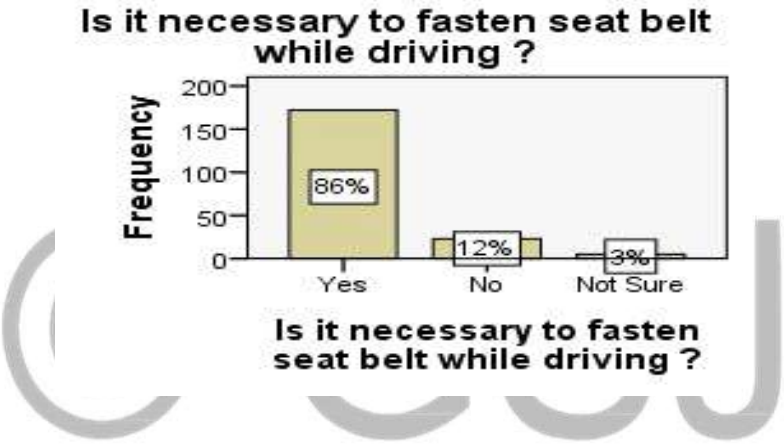
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	173	86.5	86.5	86.5
	No	15	7.5	7.5	94.0
	Not sure	12	6.0	6.0	100.0
	Total	200	100.0	100.0	

Question 7: The table showed all the responses toward this question are 86% (n=172) agree to fasten seat belt and 12% (n=23) were not agree and 2.5% (n=5) were not sure. Those who were most drive car and they were agree to fasten but most of the respondents were not agree who were riding the motorcycle.

Table # 19

Is it necessary to fasten seat belt while driving?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	172	86.0	86.0	86.0
	No	23	11.5	11.5	97.5
	Not Sure	5	2.5	2.5	100.0
	Total	200	100.0	100.0	



Question 8: The responses showed that there were huge number of participant did not attend any course of road safety which was 94% ($n_{= 188}$) and only 6% (n=12) were attend course about road safety. The 5 years' duration was given and they were totally unaware about the safety instructions and having no proper knowledge.

Table # 20

In last 5 years, did you attend any educational course of road safety?

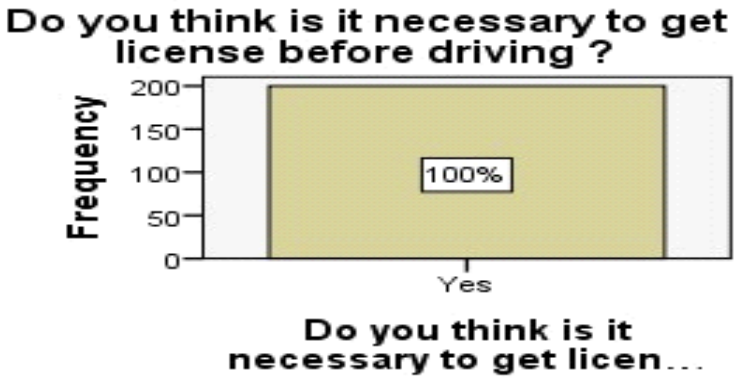
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	6.0	6.0	6.0
	No	188	94.0	94.0	100.0
	Total	200	100.0	100.0	

Question 9: The table showed the responses of participants in which 100% (n=100) were agree that license is necessary before driving but more of the subjects don't have any license for driving when asked them accordingly.

Table # 21

Do you think is it necessary to get license before driving?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	200	100.0	100.0	100.0

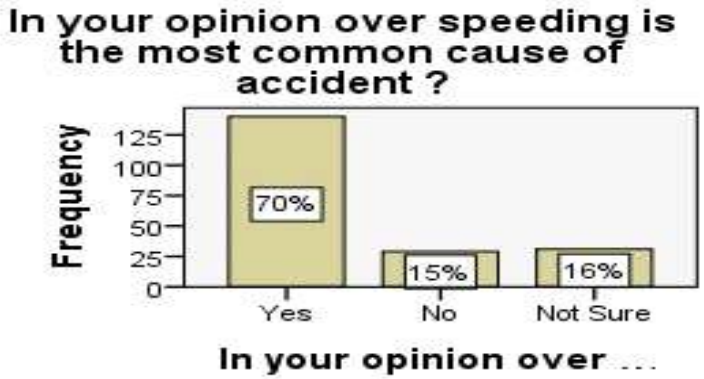


Question 10: The responses showed that most of the participants had idea that over speeding can cause accident which were 40% (n=40) and 31% (n=31) were not sure which is a concerning point and 29% (n=29) were totally disagree that was most dangerous.

Table # 22

In your opinion over speeding is the most common cause of accident?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	140	70.0	70.0	70.0
	No	29	14.5	14.5	84.5
	Not Sure	31	15.5	15.5	100.0
	Total	200	100.0	100.0	



Discussion

The current cross-sectional study revealed about the factors that contributed toward road traffic accident among adults in Lahore Pakistan that there are many factors which are the leading causes of RTA that are ***Violation of traffic rules, lacking of driving skills*** and most of the participants were unaware about these factors. According to my finding the prominent factor which contributed to RTA is violation of traffic rules as according to these responses the ratio is higher in those drivers who did not follow the traffic rules were 46% (n=46) and then second higher ratio were 24% (n=24) who were lacking of driving skills, 15% (n=15) were those who have not yet driving license and 7%(n=7) were those who drive with carelessness and 8% (n=8) drive with speed. Moreover, the leading factor of RTA was highlighted in a study, completed in Iran (2019) that emphasized that there were 153 cases of RTA in which 90 cases had poor prognosis and then died, so when they studied and find out the root cause, most of the cases were examined that they violated the

traffic rules.

Another study titled “Risk factors for road traffic accidents among drivers of public institutions in Ibadan, Nigeria” completed in 2019 stated that along with many factors the leading and prominent factor is lacking of driving skills and the same finding of my study in which 24% (n=24) responses, which showed the second leading factor.

Moreover, the participants showed that most of the participants had idea that over speeding can cause accident which were 40% (n=40) and 31% (n=31) were not sure which is a concerning point and 29% (n=29) were totally disagree that was most dangerous.

According to a study which was completed in a medical Institution of Iran in 2019, in which the authors revealed that there are 13 risk factors identified. Older age, male gender, low educational level, consumption of alcohol, drugs, drowsiness, not wearing seatbelt, presence of pedestrian/occupant, severe accidents, high speed, adverse weather, rural and wet roads, were considered as the risk factors for fatal traffic accidents, although they can vary somewhat between different regions. Although most of these factors can prevent If we started the awareness campaign because most of the factors are linked with knowledge/awareness as the current study responses showed that there were huge number of participant did not attend any course of road safety which was 88% ($n_=$ 88) and only 12% (n=12) were attend course about road safety. The 5 years’ duration was given and they were totally unaware about the safety instructions and having no proper knowledge.

The whole proportion of sample size comprised on male and nurses in

(n=100). About 35.5% (n= 38) of the respondents were 21 to 25 years old 41.1% (n=44) between 26 to 30 years of age, 15% (n=16) were between 31 to 35 years' age and 1.4% (n=2) were between 36 to 40 years of age.

Moreover, age is also a leading factor of RTA including young and old aged people. According to a study findings, there are higher mortality due to RTA,s in young age between 25-30, and old age have not yet higher mortality but If there are other impairment exist e.g. visual impairment and body weakness etc., then it may lead to accident.

Road traffic crash results from a mixture of causes related to the modules of the system including roads, the environment, vehicles and road users, and the way they interrelate. Some factors give to the incidence of an accident and are therefore part of crash causality. Other factors worsen the effects of the accident and thus contribute to trauma severity. Some factors may not appear to be directly related to road traffic injuries. Some causes are immediate, but they may be underpinned by medium-term and long-term structural causes. Identifying the risk factors that contribute to road traffic crashes is important in identifying interventions that can reduce the risks associated with those factors. This unit is devoted to discussing risk factors for road traffic injuries. The first part of the unit provides frameworks that can be used to identify and analyses risk factors. The second part discusses the key risk factors.

According to *World report on road traffic injury prevention*, Research has identified a number of risk factors for road traffic injuries and these are discussed in the recently published. Provides a summary of these factors.

Factors influencing exposure to risk

Movement of people and goods on the road is necessary for social, economic and political reasons, but this need to travel leads to a risk of road traffic damages. A range of factors determine who uses different parts of the transport system, how they use them and why, and at what times. It may not be possible in practice to completely eliminate all risk, but it is possible to reduce exposure to the risk of severe injury and to minimize its intensity and consequences.

Factors influencing exposure to risk

- Economic factors such as level of economic development and social deficiency
- Demographic factors such as age and sex
- land-use planning practices which influence length of trip and mode of travel;
- Mixture of high-speed motorized traffic with vulnerable road users;
- Insufficient attention to integration of road function with decisions about speed limits

At present, motor vehicle growth in low-income and middle-income countries is taking place against a background of associated problems. Only a small number of people in these countries can afford cars, while the costs of roads, parking spaces, air pollution and road traffic injuries are borne by the whole society. Despite the rapid growth in motorized traffic, most families in low-income and middle- income countries are unlikely to own a car within the next 25 years. In terms of exposure to risk, the main modes of travel in these countries in the foreseeable future are likely to remain walking, cycling and

public transport. This emphasizes the importance of planning for the needs of these road users, who, as was seen in Unit 1, bear a high proportion of the burden of road traffic injuries. Buses and trucks are a major mode of travel in low-income and middle-income countries. High volumes of passengers being transported have an impact on the safety, not only of the passengers themselves, but also of vulnerable road users.

Conclusion

The study aimed to determine the factors that cause Road traffic accidents (RTA), which was completed among 100 people of different age group and different gender. The study findings revealed many prominent and

contributing factors that linked with RTA, s are violating the traffic rules, lacking of driving skill, over speeding, sleepiness and many more. The Independent variable was road traffic accident (RTA) for this and factors were dependent variable. Descriptive cross-sectional study design was used for the completion of this study.

The finding revealed that Pakistan is at high risk of death rate due to RTA in young age (26-30) and most of the Post-RTA cases remain disable (rehabilitative) so the study aimed to determine the factors and then explore that assist the stack holders to minimizes the factors through possible road traffic policies and ensure its implementation among public and to start the awareness campaign among people of communities.

Furthermore, the study revealed that most of the people had not yet driving license which was indirectly link that they had lacking of driving and leading factor to these type of accidents.

Risk factors influencing crash involvement

- Inappropriate and excessive speed
- Presence of alcohol, medicinal or recreational drugs
- Fatigue
- being a young male
- having youths driving in the same car
- being a vulnerable road user in urban and residential areas
- travelling in darkness
- Vehicle factors – such as braking, handling and maintenance
- defects in road design, layout and maintenance
- One of the main factors contributing to the increase in global road crash injuries is the growing number of motor vehicles. The problem is not just the growth in numbers and increase in exposure to the risk but also ensuring that appropriate road safety measures accompany this growth. The motor vehicle, along with the subsequent growth in the number of motor vehicles and in road Infrastructure, has brought societal benefit but it has also led to societal cost, to which road traffic Injury contributes significantly. Without proper planning, growth in the number of motor vehicles can lead to problems for pedestrians and cyclists. In fact, where there are no facilities for pedestrians and cyclists, increasing numbers of motor vehicles generally lead to reductions in walking and cycling.

Limitations of the study were following

- Less sample size 200 due to which we cannot generalize this study on whole population.
- One of limitations of this study was lack of time
- Non serious behavior of the participant to participate in study was also a big obstacle
- Convenient sampling technique was used which often suffer from biasness

Recommendations:

- All the concern departments should take strict action against those, who

violate the traffic rules.

- Every person should take driving license and fulfilled all the requirements for driving
- Limit the speed and obeys all the crossing over symbols
- In case of any physical deformity e. g vision impairment, sleepiness or other physical/mental factors must be find out to reduce hazard during driving.

Limitations of the study were following

- Lees sample size 100 due to which we cannot generalize this study on whole population.
- One of limitations of this study was lack of time
- Non serious behavior of the participant to participate in study was also a big obstacle
- Convenient sampling technique was used which often suffer from biasness

Consent form

My name is Aatqa Ishtiaq, I am student of Master of Science in public from Afro-Asian Institute affiliated with GC University, Faisalabad, Pakistan. I am conducting a study on **Determination the prevalence of risk factors associated with Road traffic accidents among Adults**. Regarding this study, I will ask you a few questions this will take 10 -15 mints of your time. I want you to answer these questions to the best of your knowledge. If you have any queries about these questions you can ask to elaborate. There is no risk in this study except your valuable time, and you might be directly benefited by it; however, the result of the study may help to formulate guideline.

The information provided by you will remain highly confidential nobody except principal investigator will have an access. Your name and identity will remain confidential and will not be disclose at any time, however the data may be seen by ethical review committee and may be published in journal and elsewhere without disclosing your name and identity.

If you understood the purpose of risk and benefit of the study, please sign below to confirm that you are willing to participate in study.

Name of Research participant…….

---------- ……/……/……..

Signature Date

Signature of researcher I believe the participant is giving informed consent to participate in this study:

Signature of researcher Date:

---------- ……/……/……..

Signature Date

QUESTIONNAIR

Section One: Socio-demographic Data:

Name _____ Contact no: _____

- **Gender:**

Male Female

- **Age:**

18-22 23-27
28-32 33 and above

What is your Mode of transportation ……?

Have you driving license?

(a) No (b) Yes

Length of driving (years)?

<3 4-7

8-11 12 and above

Is there any exposure of drug?

(a) No (b) Yes

Smoking status

(a) No
(b) Yes

Have you ever got an accident?

(a) No (b) Yes

In your opinion which of the following is the most common factor of road traffic accident?

- Drug exposure

- Lack of driving skills
- Driving without license
- Carelessness driving

Do you think that you are on high risk of accident?

(a) No (b) Yes

Can getting an accident may prove serious /critical?

(a) No (b) Yes

In your opinion to what extent accidents are public health problems.
Perceptions regarding Hepatitis B and C and its risk factors in ward boys working in tertiary care hospitals Islamabad.

(a) Severe problem (b) High problem

(c) Moderate problem (d) No problem

Is it necessary to wear helmet while driving?

(a) No (b) Yes

Do you think is it necessary to get license before driving?

(a)No (b) Yes

Is it necessary to wear seat-belt while driving?

(a) No (b) Yes

In last 5 years, did you attend any educational course road safety?

(a) No (b) Yes

In your opinion over speeding is the most common cause of accident?

(a) No (b) Yes

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