

# A QUALITATIVE ANALYSIS OF AGGRESSIVE DRIVING BEHAVIOUR, AND RISK TAKING AMONG UNIVERSITY POPULATION.



by

**Humra Shoaib**

**BSP201058**

Department of psychology  
Faculty of Management and Social Science  
Capital University of Science & Technology  
Islamabad  
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BSP201058

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**Humra Shoaib**  
**BSP201058**

A Research Thesis submitted to the  
DEPARTMENT OF PSYCHOLOGY  
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**CERTIFICATE OF APPROVAL**

It is certified that the research thesis titled "Relationship between Aggressive driving behavior and risk taking". carried out by Humra Shoaib Reg. No. BSP201058, under the supervision of Dr. Sabahat Haqqani, Capital University of Science and Technology, Islamabad, is fully adequate, in scope and in equality, as research thesis for the degree of BS Psychology.



Supervisor: -----

**Dr. Sabahat Haqqani.**

**Associate Professor**

Department of psychology

Faculty of management and social sciences

Capital University of Science and Technology, Islamabad

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Population**

By

Humra Shoaib

Registration # BSP201058

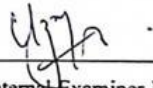
Approved By



Supervisor  
Dr. Sabahat Haqqani



Internal Examiner-I  
Dr. Anam Tariq



Internal Examiner-II  
Ms. Uzma Mushtaq



Thesis Coordinator  
Ms. Irum Noureen



Head of Department  
Dr. Sabahat Haqqani

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It is declared that this is an original piece of my own work, except where otherwise acknowledged in text and references. This work has not been submitted in education and shall not be submitted by me in future for obtaining any degree from this or any other University or Institution.

**Humra Shoaib**

**BSP201058**

**January, 2024**

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## ABSTRACT

The aim of this study was to conduct a qualitative analysis on aggressive drivers and risk behavior among university population. A study by Chapman and his colleagues (2017) found that a sign displaying a message about reducing speed and increasing safety significantly reduced the number of aggressive driving behaviors, such as cutting off other drivers. Schwebel and Severson (2014) found that the cars on which stickers are attached to the back mirror encourage safe driving behavior and reduced risky driving behavior, the drivers who drive speedily. The sample size included 16 participants from Capital University of Science And technology. the study incorporated qualitative research design and the sampling technique is random sampling. The instrument used was interview guideline. The objectives of this study were to conduct in-depth interviews for collecting information related to perception regarding road, traffic and driving experience. To conduct in-depth interviews for collecting information related to attitude, regarding road, traffic and driving experience. The rationale of this study was based on dual process model. Afterwards thematic analysis was done which had in vivo coding. In discussion all of the themes were discussed one after one with the relationship of theoretical background and literature review. The limitation of this study was that the coders were less so this may affect the findings of the study.

**Keywords: Aggressive driving, risk taking.**



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## Chapter 1

### INTRODUCTION

The term “aggressive driving” is used rather loosely by different people, and in some cases, it is used synonymously with “road rage”. The National Highway Traffic Safety Administration (NHTSA) distinguishes between them by classifying aggressive driving as a traffic offense and defining it as “the operation of a motor vehicle in a manner which endangers or is likely to endanger people or property” (Martinez, 2014). In contrast, road rage is classified as a criminal offense and is defined as “an assault with a motor vehicle or other dangerous weapon by the operator or passengers of one motor vehicle on the operator or passengers of another motor vehicle or vehicles precipitated by an incident which occurred on a roadway”.

Young drivers, particularly males, are at significantly higher risk of being involved in a road traffic accident compared to other age groups, according to research conducted in various nations (Panayiotou et al., 2008). In fact, teenagers have the highest crash rate per miles driven (Shope., 2006). This is a significant social problem since road traffic accidents are the main cause of death and disability for young people in various parts of the world including Europe (WHO, 2004, Cvijanovich et al., 2001). When it comes to young drivers, risky and aggressive driving appears to be the dominant human factor that places them at risk. 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).

Jackson and his colleagues during a study in 2015 discovered that giving drivers information about the fuel efficiency of various routes can influence their choice of route. Also, Patel and their colleague (2016) showed in their studies that

drivers who got feedback on their carbon emissions and fuel economy slowed down and increased their fuel economy. Aggressive driving behavior refers to a pattern of driving that involves engaging in hostile or dangerous actions on the road, such as excessive speeding, tailgating, frequent lane changes without signaling, running red lights, and displaying aggressive gestures or verbal outbursts towards other drivers.

The World Health Organization (WHO) published a series of global reports on road safety in 2009, 2013, 2015, and 2018. The final report, known as the WHO Global Status Report on Road Safety 2018 (WHO 2018), provides a comprehensive evaluation of road safety in 180 countries worldwide. The information was gathered through standardized surveys distributed to national governments. According to the GSRRS18, the global road traffic death rate is 17.4 per 100,000 people overall. However, there is a significant inequality in this rate across different income levels and regions. Low and middle-income countries (LMICs) have the highest yearly death rates, with 24.1 fatalities per 100,000 individuals, while money making countries (HICs) have a lower rate of 9.2 per 100,000. Additionally, more than half of all road traffic deaths involve pedestrians, cyclists, and users of motorized two-wheelers (MTWs). Traditionally, security and safety policies have primarily relied on legal frameworks, but recent developments indicate that governments are exploring alternative approaches to create safe and environmentally friendly environments (Schulenburg and Peters, 2015).

Aggressive driving behavior refers to a pattern of driving that involves engaging in hostile or dangerous actions on the road, such as excessive speeding, tailgating, frequent lane changes without signaling, running red lights, and displaying aggressive gestures or verbal outbursts towards other drivers. Risk taking refers to the tendency or willingness of an individual to engage in activities or

behaviors that have the potential for negative consequences or outcomes. It involves deliberately revealing oneself to uncertainty, risk, or dangers without proper consideration of the potential risks involved. In countries with high motorization rates, there is growing concern among drivers about aggressive driving behaviors, as reported by sources such as the AAA Foundation for Traffic Safety (2009) and Beirness et al. (2001). Studies conducted in the USA, UK, and Australia indicate a correlation between driver aggression and increased involvement in traffic accidents (Beirness, 1993; Wells-Parker et al., 2002).

However, the precise impact of driver aggression on crash incidence and risk remains uncertain, given variations in the definition of aggressive driving and the behaviors considered as such, as well as differences in operationalization across studies (Dula & Geller, 2003). Despite this uncertainty, the available evidence underscores the significance of the issue, highlighting substantial consequences for road safety (Mizell, 1997; AAA Foundation for Traffic Safety, 2009).

While severe incidents of driver violence, like murder or assault, are infrequent according to research and official data, less severe behaviors associated with driver aggression, such as being too close driver who is in front of them, horn-honking, and obscene gestures, seem to be much more prevalent (Galovski, Malta, & Blanchard, 2006). Self-report studies indicate that a majority of drivers in the US and UK experience or engage in these milder behaviors (Hemenway et.al, 2006). Australian surveys mirror UK figures, revealing that 82% of 2,380 surveyed drivers reported experiencing mild forms of driver aggression, and about 30% were followed or chased by another driver, with 57% admitting to initiating such behaviors (AAMI, 2007).

Additionally, a notable positive correlation exists between these roles, indicating that those who acknowledge engaging in aggressive driving behaviors are significantly more likely to report being risky drivers and vice versa (Asbridge et al., 2003).

A traffic accident (TA) occurs as a result of interaction of the human factor, technical design of the vehicle and the road; nevertheless, the significance of the human factor accounts for approximately 90% of traffic accidents (TA) (Evans., 1991). Risky driving including aggressive driving is one of the likely causes of a traffic accident which is why it is important to identify the factors that would allow explaining the inclination of a visual to deliberately drive in a risky and aggressive manner violating traffic rules (Anderson., B. 2002).

The Concept of Aggressive Driving Aggressive driving behaviour is commonly defined as “any behaviour intended to physically, emotionally, or psychologically harm another within the driving environment” (Hennessy & Wiesenthal., 2001). This definition is in accord with the general definition of aggressive behaviour as “any form of behaviour directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment” (Baron & Richardson., 2004).

Most of the authors claim that it is necessary to differentiate between aggressive driving behaviour or mild driver aggression (e.g., horn honking or hand gestures) and driver violence where the intent is to harm another road user (e.g., fighting or purposeful contact) or “road rage” (Hennessy & Wiesenthal., 2001; Tasca, 2000). Hennessy & Wiesenthal (2001) set mild driver aggression and driver violence against assertive driving, i.e., driving in a risky and selfish manner, which may entail harm to other drivers, but that harm is accidental rather than purposeful. Similarly, Lawton et al. (2007), using the concept of aberrant driving behaviour,

differentiate between hostile driving behaviors and violations, i.e., deliberate disregard for traffic rules. So, a more precise definition of aggressive driving would focus on deliberate and willful driving behaviors that, while not intended to physically harm another road user, show disregard for their safety and well-being (Tasca, 2000), show little respect for the rules of the road and are associated with willingness to take risks. These behaviors are motivated by impatience, annoyance, hostility and/or an attempt to save time. For example, according to Bone & Mowen (2006) “aggressive driving occurs when the operator of a motor vehicle drives under the influence of impaired emotions, resulting in the imposition of one’s own preferred level of risk on others” (Bone & Mowen., 2006).

Leo Tasca (2000) offered a reviewed formal definition of aggressive driving behaviour, stating that a driving behaviour is aggressive if it is deliberate, likely to increase the risk of collision and is motivated by impatience, annoyance, hostility and/or an attempt to save time.

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 manoeuvres and associate them with masculinity, as in most contemporary action films (Shope, 2006, Arnett, 2002).

## **Literature review**

As per the European Transport Security Council, there was a notable decrease in road fatalities within the European Union in 2020 compared to 2019, with around 3,900 fewer deaths (representing a 17% reduction). This decline can be attributed to the travel restrictions implemented due to the COVID-19 pandemic. However, data from the European Commission indicates that during the first half of 2021, the number of road accidents actually increased by 2% when compared to the same period in 2020, though it remained significantly lower than the three-year period from 2017 to 2019 (indicating a 19% decrease). While most fatalities occur in collisions involving cars and trucks, the European Commission has emphasized the importance of providing greater protection for vulnerable road users like pedestrians and cyclists. Moreover, statistics published by the European Commission in 2016 revealed that 90% of traffic accidents were a result of human errors, wherein speeding, driving under the influence of alcohol or drugs, and failure to use seat belts were the primary factors accounting for approximately 80% of traffic accidents and fatalities in Europe.

A study by Chapman and his colleagues (2017) found that a sign displaying a message about reducing speed and increasing safety significantly reduced the number of aggressive driving behaviors, such as cutting off other drivers. Schwebel and Severson (2014) found that the cars on which stickers are attached to the back mirror encourage safe driving behavior and reduced risky driving behavior, the drivers who drive speedily.

For encouraging safe driving behavior. Blaise and his colleagues in (2005) proposed that Risk-taking behavior refers to behavior that involves the potential for negative consequences, such as injury, financial loss, or social disapproval. Risk-



taking behavior can be influenced by a variety of factors, including personality traits, cognitive biases, and situational factors.

WHO has published four Global Status Reports on Road Safety, namely in 2009, 2013, 2015, and 2018. The most recent report, the Global Status Report on Road Safety 2018 (WHO, 2018), provides a comprehensive evaluation of road safety conditions in approximately 180 countries. These reports gathered data from national governments using a standardized survey form. According to the GSRRS18, the global road traffic fatality rate stands at 17.4 per 100,000 people; however, there are significant variations based on income and geographical regions. Low- and middle-income countries (LMIC) exhibit the highest annual road traffic fatality rates, with 24.1 fatalities per 100,000 individuals, while high-income countries (HIC) have the lowest rate at 9.2 per 100,000. Additionally, more than half of the individuals who lose their lives in road traffic accidents are pedestrians, bicyclists, and users of motorized two-wheelers (MTW). Traditionally, safety and security policies have been primarily governed by penal law. Nonetheless, recent developments indicate that governments are exploring alternative approaches to ensure a safe and secure environment (Schulenburg and Peters, 2015). A major public health concern in Cambodia (Dy, 2016; United Nations Development Program – Cambodia, 2021). In Cambodia, which has a population of approximately 17 million people, during the first 6-months in 2018 police stopped 102,995 vehicles for potential safety violations (World Health Organization, 2018). Most recently, in the first half of 2021 over 700 traffic fatalities were reported in over 1200 road accidents across Cambodia, with risky driving behaviors (e.g., speeding; careless driving; ignoring the right of way) responsible for the large majority of the accidents (Kimmarita, 2021).

Another limitation in this literature is that much of the research has focused on automobiles. Although automobile driving is clearly an important component of traffic safety, motorbike accidents are a particular public health concern due to the greater risk for the driver and passengers associated with motorbike as compared to automobile accidents; (i.e., the lack of protection provided by the body of the car for motorbike drivers and passengers; World Health Organization, 2018). In Cambodia, during the first 6-months of 2018 police stopped 77,795 motorbike drivers for violating driving safety laws. The present study focused on motorbike drivers, because of the high rates of motorbike road accidents throughout Cambodia and other LMIC (Dy, 2016; United Nations Development Program – Cambodia, 2021). The study focused on adolescents at least 16 years of age, which is the legal minimum for driving a motorbike, because of the increased risk of serious vehicle accidents among youth (World Health Organization, 2018).

Based on the literature review, the following hypotheses were made for the present study: (a) All four risky driving behaviors would load on one canonical variate; (b) Beliefs about Peers' Driving and Risk Perception would load on separate canonical variates; (c) the canonical correlation involving Beliefs about Peers' Driving would be significant; (d) the canonical correlation involving Risk Perception would be non-significant, given mixed evidence in the literature for effects of risk perception of driving; and (e) several of the Gender moderator effects would be significant, but given the complexity of the literature and the close links between Gender and culture (e.g., van de Water et al., 2016), more specific hypotheses regarding Gender were not made.

In 2013, Felson and colleagues conducted a research study that examined two distinct Categories and subconscious. The former category is particularly

intriguing as it involves decisions that are more genuine. The speed at which a vehicle is driven has a significant impact on the likelihood of an accident. Existing literature distinguishes between two types of speed-related risks: improper speed, which refers to driving too fast for specific circumstances even within the posted speed limit, and excessive speed, which involves driving faster than the posted speed limit. Driving too quickly reduces the time and distance available to detect and respond to potential hazards on the road, making it more difficult to maintain control of the vehicle. These factors increase the probability of a collision (Davis et al., 2001). Moreover, the severity of being in an accident is greatly influenced by the speed at which it occurs (Organization for Economic Co-operation and Development., 2006). Although this analysis primarily focuses on crash risks rather than crash severity, it recognizes the relationship between crash severity and speed limits, particularly in environments that accommodate vulnerable road users.

Furthermore, the severity of a collision is significantly influenced by the speed at which it occurs (Organisation for Economic Co-operation and Development, 2006). While this analysis primarily focuses on the risk of crashes rather than the severity of the accidents, it acknowledges the relationship between accidents and speed limits, particularly in environments that face the damages done by risky drivers.

Similarly, in another study it was found that the physical laws described above, increases in travel speed correlate with increases in crash risk. This relationship has been documented by a variety of studies for different road environments and crash types; in different countries; using different techniques including comparing the same road over time, comparing similar roads with different speed limits/travel speeds, and comparing individual speeds for vehicles

who crashed and control vehicles; and using various statistical methods including relative risk ratios, regression, and Bayesian analysis ( Davis et al., 2006). Changes in speed limits and enforcement would be expected to change travel speeds independently from the design/condition of the road, and studies investigating the results of such changes have found that crash rates follow accordingly (Patrick, & Francoise, 2005). A meta-analysis of several studies of increased speed limits found that a 15km/hr. increase in speed limits leads to an increase in average speed of 4.4km/hr. and a 26% increase in fatal accidents, while a 14km/hr. decrease in speed limits results in a 7.1km/hr. decrease in mean speeds and a 15% reduction in fatal accidents (Elvik & Vaa, 2004).

Similarly, a lot of research has been conducted to examine the relationship between travel speed and the probability of a crash, which aligns with the principles discussed earlier. Various studies have explored this association in different road environments, crash types, and countries. These studies employed diverse methodologies, including comparing the same road over time, contrasting roads with different speed limits or travel speeds, and analyzing the speeds of vehicles involved in crashes as well as control vehicles.

Statistical techniques such as relative risk ratios, regression, and Bayesian analysis were utilized (Aljanahi, Rhodes, et al 2002). Regardless of the design or condition of the road, it is expected that changes in speed limits and their enforcement would have an impact on travel speeds. This expectation is supported by research conducted by Davis et al. (2006), Transportation Research Board and Kern, Biloglav (2006). Consequently, alterations in speed limits and the enforcement thereof are anticipated to lead to corresponding adjustments in travel speeds. The impact of driving at a slower speed than the surrounding traffic on the risk of a crash

is a topic that has produced conflicting evidence. It could be expected that vehicles moving at a slower pace may be at a higher risk of rear-end collisions, as other drivers may not anticipate the disruption in traffic flow. Initial studies suggested that vehicles traveling below the average speeds were more susceptible to being involved in crashes. However, more recent research has revealed a linear relationship between speed and crash rates, which raises doubts about the validity of earlier findings (Davis et al., 2006). However, the available evidence indicates a correlation between speed variability and crash risk.

A study conducted by Liu and colleagues in 1997 examined provincial highways in Saskatchewan, while Aljanahi et al. (2000) focused on English highways, and both studies found that increasing speed variability had a greater impact on crash rates compared to increasing average speed. This suggests that factors contributing to greater speed differences between vehicles may have an equal or even greater influence on crash risks than factors influencing the overall speeds chosen by all drivers. It has been suggested that high speed differentials could be attributed to poor road conditions, where some drivers fail to adjust their speed appropriately to the conditions, resulting in both deviating from the mean speed and driving at an unsuitably high speed given the circumstances (Liu, Popoff, 1997).

On the other hand, heavy vehicles inherently contribute to a significant number of fatal crashes. In Iran, for instance, although trucks accounted for only 8.3% of all vehicles on the roads, they were involved in 20.5% of the reported crashes in 2014. Furthermore, 11% of the crashes involving trucks resulted in the death of Iranian truck drivers in 2015. However, these statistics tend to be lower in developed countries. For example, in the United States, truck drivers were associated with 2% of deadly crashes, while in England, the figure stood at 1%. Distraction and

inattention are significant and common factors contributing to road crashes. Previous research has consistently demonstrated that inattention has a detrimental impact on drivers' performance and plays a crucial role in road accidents other. Studies conducted in France and China have indicated that driver inattention leads to an increased number of crashes.

Additionally, a study conducted in the United States revealed that approximately 10–33% of crashes were a result of driver inattention. According to Haussmann and Welch (2010, 126), nudges are described as methods of influencing choices without restricting the available options or significantly increasing the costs in terms of time, effort, social consequences, and similar factors.

In another study, Johnson and Thompson (2020) investigated the efficacy of personalized feedback messages delivered through a smartphone application. Participants received real-time notifications about their aggressive driving behaviours, such as excessive speeding or sudden braking. The researchers found that these personalized feedback messages led to a significant decrease in aggressive driving incidents.

This study highlights the potential of technology-based interventions to curb aggressive driving behaviors effectively. Aggressive driving has been conceptualized and studied in the scientific literature as including a wide array of distinct behavioral, emotional and cognitive manifestations of varying intensity. These manifestations include extreme aggressive reactions of “road rage”, including criminal acts against persons and property, as well as more moderate aggressive road behaviours, e.g., gestures of disapproval and use of one vehicle to hinder traffic flow (Pouliot et al., 2007). The construct of aggressive driving often includes risky driving without hostile intent toward others, e.g., speeding and neglecting to comply

with mandatory stops. This lack of cohesion and specificity in the definition has hampered the study of aggressive driving in terms of understanding and developing effective strategies for countering it (Galovski et al., 2006). Some researchers focus on motivations and intentions underlying aggressive driving, while others focus solely on observable behaviours (Hennessy and Wiesenthal, 2002). To remedy these shortcomings, Dula and Ballard (2003) developed the Dula Dangerous Driving Index (DDDI), a research instrument to measure three distinct constructs often categorized under the label of aggressive driving and associated with dangerous driving. The authors included measures of aggressive driving, risky driving, and negative cognitive/emotional driving.

The following study presents a French version of the DDDI and aims to verify the theoretical structure of the scale and its psychometric properties in this translated version. Dangerous driving encompasses several types of road behaviours and states of mind that may result in collisions. Aggressive driving can be defined as any behaviour exhibited by a road driver with intent to physically or psychologically harm another driver and/or pedestrian (Dula and Geller, 2003).

Aggressive driving includes several forms of behavioral manifestations, namely those expressed verbally, physically, or through use of one's vehicle (Deffenbacher et al., 2002). Risky driving, on the other hand, constitutes deliberate risk-taking that endangers the safety of both the driver and other road users (Dula & Ballard, 2003, Malta, 2004). Risky driving differs from aggressive driving insofar as the driver does not intend to harm another person. In this respect, risky driving behaviour can have a function associated with sensation seeking, a need for self-accomplishment, or a desire to affiliate with peers (Arnett, 2000, Martha, 2002). Past studies have identified various types of dangerous drivers. For instance, there is a

category of drivers who react more aggressively to irritating events on the road and another category of drivers who deliberately take risks in the absence of a trigger, for example, by driving at very high speeds (Musselwhite, 2006, Vallières et al., 2008).

Dangerous driving also encompasses the concept of negative cognitive/emotional driving, which includes emotions associated with anger, frustration, irritation, and provocation related to automobile driving (Nesbit et al., 2007). Some studies have shown that individuals who report a higher incidence of negative emotions while driving are also more aggressive behind the wheel (Dahlen et al., 2005) and report more traffic violations (Dahlen and White, 2006). However, it remains unclear how negative emotional driving leads to aggressive driving (Galovski et al., 2006).

A meta-analysis indicates that anger experienced while driving is positively, but moderately, associated with aggressive behaviours behind the wheel (Nesbit et al., 2007). Certain mediating variables can influence the relationship between negative emotions and aggressive behaviour, for example, the cognitive processing and emotional regulation that enable one to reconsider a situation initially perceived as hostile. Some individuals are able to develop coping strategies to manage anger, enabling them to control their behaviours better (Galovski et al., 2006).

The term “aggressive driving” is used rather loosely by different people, and in some cases, it is used synonymously with “road rage”. The National Highway Traffic Safety Administration (NHTSA) distinguishes between them by classifying aggressive driving as a traffic offense and defining it as “the operation of a motor vehicle in a manner which endangers or is likely to endanger people or property” (Martinez, 20097). In contrast, road rage is classified as a criminal offense and is



defined as “an assault with a motor vehicle or other dangerous weapon by the operator or passenger(s) of one motor vehicle on the operator or passenger(s) of another motor vehicle or vehicles precipitated by an incident which occurred on a roadway”. Hence, negative cognitive/emotional driving may not always result in aggressive behaviours. However, the cognitions associated with negative emotions, e.g., rumination and hostility, constitute distractions that are likely to interfere with the attention needed for safe driving, thus increasing the risk of collision (Willemsen et al., 2008). The scientific concern with aggressive driving is very topical and the public concern with it is much greater than ever before.

The specific behaviours, which constitute aggressive driving, would include, tailgating, weaving in and out of the traffic, improper passing (e.g., cutting in too close in front of vehicle being overtaken), passing on the road shoulder, improper lane changes (failure to signal), failure to yield the right of way to other road users, preventing other drivers from passing, running stop signs, running red lights, driving at speeds far in excess of the norm and unwillingness to extend cooperation to motorists unable to merge or change lanes due to traffic conditions (Tasca, 2000; James & Nahl, 2000). Displays of annoyance and hostility which are not intended to physically harm other road users, but likely to intimidate, irritate, anger or provoke them may accompany these behaviours and serve as indicators of the underlying motivation and thus are commonly associated with aggressive driving. These behaviours would include: flashing headlights, sustained horn-honking, glaring at another driver to show disapproval, yelling and gesturing (Tasca, 2000; Bone & Mowen, 2006).

Drivers may also face anxiety, either stemming from environmental conditions or pre-existing due to personality traits and mood disorders (Scott-

Parker, under review). This anxiety can manifest as driver stress, as per the transactional model of stress (Lazarus & Folkman, 1984), where stress occurs when the demands of a driving task surpass the perceived coping ability (Kontogiannis, 2006; Matthews et al., 2001). Driver stress intensifies when faced with time constraints, unfamiliar driving conditions (such as unfamiliar roads, bad weather, or poor visibility), and is triggered by negative reactions or discourteous behavior towards fellow road users (Gulian et al., 2009). This discourteous behavior often provokes irritation in the recipient, escalating the likelihood of retaliatory aggressive driving, leading to poor road safety outcomes, including crashes (Gulian et al., 2009; Hennessy & Wiesenthal, 2005).

Many studies have been done to understand why drivers become aggressive and what happens as a result. Researchers have looked at different aspects of aggression, such as the characteristics of drivers, their traits, what motivates them, their anger, the environments that contribute to aggression, aggressive driving at work, and ways to reduce such behavior. These studies highlight the complex relationship between the qualities of drivers and the situations that make them angry, which ultimately increases the chances of accidents.

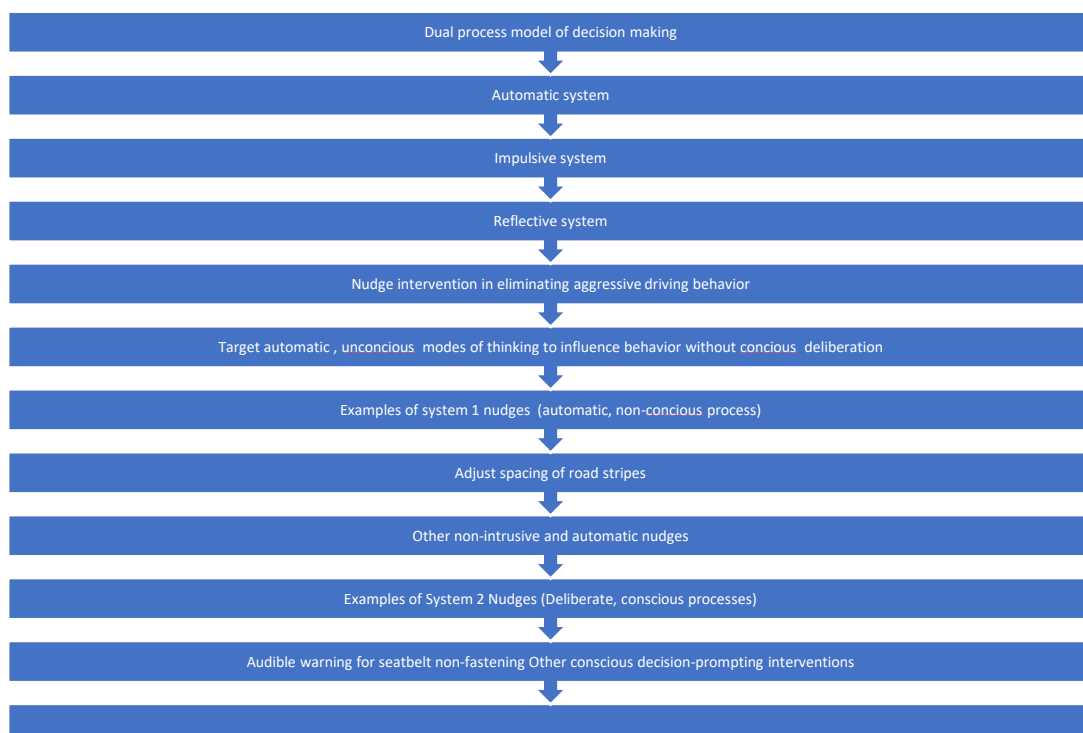
However, limited research has been devoted to understanding the potential rise in aggressive driving and the underlying reasons for such an increase. This inquiry holds significance due to the evolving landscape of global road networks and vehicle fleets. For instance, in Australia, the number of registered vehicles is on the rise, while infrastructure and alternative transport options lag behind. Consequently, travel congestion, a recognized trigger for anger and aggression, is escalating, presenting more occasions for frustration. Changes in the driving fleet, including a growing number of commercial drivers, an expanding mobile workforce, and

technological advancements, contribute to anger and aggression experiences. This shift implies that a higher proportion of the driving fleet is on the road more frequently, covering longer distances and encountering more anger-provoking events. Additionally, the increasing diversity among vehicle types on the road is likely to further fuel instances of anger and aggression. In conclusion, it is important to study on how to eliminate aggressive driving behavior and risk-taking for improving road safety.

## Theoretical framework

Below is the theoretical framework of this research with a pictorial representation. This theoretical background best suits to this study variables aggressive driving behavior and risk taking. It has two processes and systems conscious and unconscious.

### Dual Process Model



Dual process model of decision- making proposes that there are two distinct modes of thinking 1 is automatic, unconscious and the other is conscious, deliberative According to this model many of our decisions are automatic and unconscious.

**Reflective System:** The reflective system involves deliberate, conscious, and effortful thinking. It is characterized by rationality, logical reasoning, and the ability to consider long-term consequences. This system relies on slow and controlled cognitive processing. It allows individuals to evaluate options, weigh pros and cons, and make decisions based on careful analysis.

**Impulsive System:** The impulsive system, also known as the automatic or intuitive system, operates quickly and automatically. It is driven by emotions, habits, and heuristics. The impulsive system is associated with immediate gratification, emotional responses, and instinctive reactions. It often relies on shortcuts and biases to make decisions efficiently. These two systems interact and influence our decision-making in various contexts. The reflective system can override impulsive responses by considering long-term goals and evaluating consequences, while the impulsive system can lead to quick and intuitive decisions that may not always align with rationality.

The dual process model has been widely studied and applied in various fields, including psychology, behavioral economics, and consumer behavior. It provides valuable insights into understanding decision-making processes, biases, and the factors that influence human behavior.

## **Rationale**

The aim of this research is to do a qualitative analysis on aggressive driving behavior and risk-taking. For instance, feedback can make drivers more aware of

their driving behavior and encourage them to drive safely. According to a study by Chapman and his colleagues in 2017, it is stated that signboards that display messages about reducing speed reduce aggressive driving behaviors. Thus, this research can be a source of help in further appropriate interventions to be incorporated. Whereas, Cultural norms play a significant role in shaping driving behaviors. In certain cultures, aggressive driving may be perceived as a sign of assertiveness or dominance, leading individuals to engage in risky behaviors to establish their place on the road. Socialization processes, such as observing family members or peers engaging in aggressive driving, can also influence an individual's driving behavior. One of the main concerns is how gender and identity intersect with aggressive driving behavior. Studies have shown that male drivers are more likely to engage in aggressive behaviors compared to female drivers, which can be influenced by cultural expectations of masculinity and perceived social status on the road. In conclusion, this research provides valuable insights into addressing aggressive driving behaviour and risk-taking through the implementation of behavior influence strategies. The use of feedback mechanisms, such as signboards displaying messages about reducing speed, has been shown to effectively reduce aggressive driving behaviors.

## **Objectives**

Following are the objectives of this study and they are representing the relationships of variables.

1. To conduct in-depth interviews for collecting information related to perception regarding road, traffic and driving experience.
2. To conduct in-depth interviews for collecting information related to attitude, regarding road, traffic and driving experience.

## **Research question**

The following is the research question of this research.

1. What are the users' thoughts and experiences related to driving and road safety, and how do they interact with university environments?

**CHAPTER 3****METHOD****Introduction**

This chapter looks into the methodological decisions made in this research. The research design was qualitative. Data was collected by 16 participants, interviews were taken. Further a thorough analysis of the data collected was made in three steps. In this section, the selected methodological approaches are argued for and the choices made in the research are justified.

**Qualitative Approach**

A qualitative approach was chosen as the research method for this study. The process for research involves empirical work being carried out with the collection of interviews, from 16 participants. Purposive sampling technique was used, and data was collected in capital university of science and technology. A qualitative approach was considered more relevant to undertake this research as it allowed greater capacity to gain more depth and meaning based on an individual's driving experiences.

**Ethical Considerations**

The study adhered to APA guidelines, with prior approval obtained from the Capital University of Science and Technology and its psychology department. Informed consent was obtained before the commencement of the study, ensuring the confidentiality of participants' information and guaranteeing their privacy. Each participant had the right to withdraw from the study at any point, recognizing that incorrect responses could potentially impact the study's outcomes. Permission was also pursued for interviews involving 16 participants, assuring them that their audio

and video data would be kept confidential, and they retained the right to withdraw from the interview.

### **Inclusion criteria**

Following are the inclusion criteria for this study.

1. Age range was from 18 years and onwards.
2. Both males and females can participate

### **Exclusion criteria**

1. People with any physical or mental disability which hinders their ability to participate in this study were excluded.
2. Also, those who don't drive a car in capital university of science and technology were excluded.

### **Sampling procedure**

Below is the sampling technique for this research: The idea behind a specific sampling approach vary significantly, and reflect the purposes and questions directing the study. In choosing the sample of participants the researcher used a purposive sampling method. This form of sampling is essentially strategic and necessitates an attempt to establish a good correspondence between research question and sampling. (Bryman, 2004). Age range was from 18 years and onwards. Both males and females participated in this study

### **Demographic Questionnaire**

The demographic sheet for data sheet for aggressive drivers and risk takers was prepared to collect data information about name, age, gender, education, religion, language, years of driving.



## Procedure

Following is the procedure of this study. And the variables of this study were aggressive driving behavior and risk taking among university population which are contributing the main role in conducting this research. While taking interviews, interview purpose was defined then permission was taken from the participants that their data will be kept confidential, then interview structure was planned. Standardized interview guideline was created, introduction of yourself and rapport building, open ended questions were asked, then some probing questions were asked, then some candidate questions were allowed, present additional information was asked. At last feedback were given and the interview was ended. Some of the detailed questions like

اس انٹرویو کے اختتام پر آپ کچھ کہنا چاہتے ہیں۔

So that we get a more detailed answer. And this question was very much effective in getting detailed answers because a lot of people summarize the whole interview again in this last question.

## Data analysis

Once the data was transcribed, it was then coded, analyzed, interpreted, and verified. The process of transcribing the interviews can help the researcher to gain more understanding of the subject from repeatedly listening to and reading the transcribed interviews. Coding the data began once all the data was fully transcribed. There was only one coder who was coding all the transcribed interviews. The codes applied were keywords which are used to categorize or organized text and are considered an essential part of qualitative research (Sarandakos, 1998). The data was then analyzed, categorized and organized into themes and further sub- themes which

emerged through the coding process. The final stage involved data verification, this process involves a process of checking validity of understanding by rechecking the transcripts and codes again, thus allowing the researcher to verify or modify hypothesis already arrived at previously (Sarantakos, 1997).

## Chapter 4

### RESULT

#### Introduction

This chapter will draw upon the main themes and present the findings which arose out of the interview process and subsequent data analysis. The key themes that emerged following data analysis as a result of aggressive drivers and risk takers.

S.no	Themes	Sub theme
1	Aggressive driving behavior.	<ul style="list-style-type: none"> <li>• Reckless driving</li> <li>• Anger</li> <li>• Conflict between drivers.</li> <li>• Cursing of drivers</li> <li>• Temperament while handling tough situation.</li> </ul>
2	Risk taking behavior	<ul style="list-style-type: none"> <li>• Bumping of cars</li> <li>• Overtaking</li> <li>• Jam break.</li> </ul>
3	Considering the ethics of cars	<ul style="list-style-type: none"> <li>• Road rage incidents and their escalations.</li> </ul>

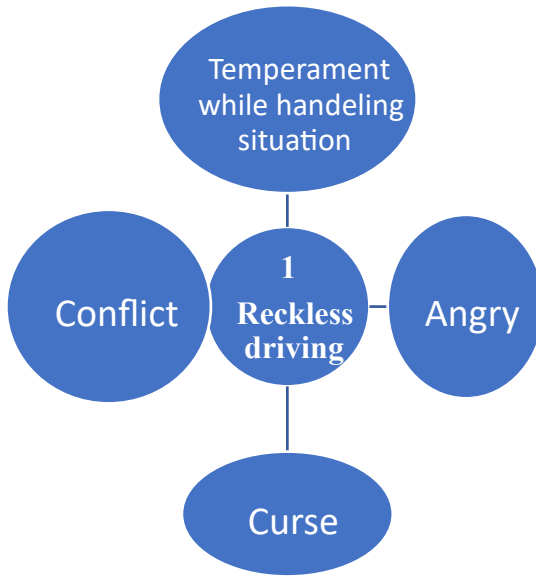
		<ul style="list-style-type: none"> <li>• Legal consequences and law enforcement response.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Rules and regulations.</li> <li>• No consistency.</li> <li>• No one follow</li> </ul>
<b>4</b>	parking	<ul style="list-style-type: none"> <li>• Easy to find parking.</li> <li>• Bad road conditions.</li> </ul>
<b>5</b>	Safety for travelling on road	<ul style="list-style-type: none"> <li>• Large vehicle.</li> <li>• Traffic related incidents.</li> <li>• Small vehicle.</li> </ul>
<b>6</b>	Religious perspective	<ul style="list-style-type: none"> <li>• Power of surah.</li> <li>• Power of words.</li> </ul>
<b>7</b>	Level of fear	<ul style="list-style-type: none"> <li>• Mental health for aggressive drivers.</li> </ul>
<b>8</b>	Traffic management	<ul style="list-style-type: none"> <li>• Planning for traffic.</li> <li>• Use of Cafe parking.</li> <li>• Ignoring safety.</li> </ul>

<b>9</b>	Driving experience	<ul style="list-style-type: none"><li>• Good experience.</li><li>• Bad experience.</li><li>• Average experience.</li><li>• Early leaving class to avoid traffic.</li></ul>
<b>10</b>	Condition of a road	<ul style="list-style-type: none"><li>• Very poor condition of the road.</li><li>• Traveling is hard for drivers.</li></ul>
<b>11</b>	Bad encounters	<ul style="list-style-type: none"><li>• Arguments.</li><li>• Solve calmly.</li></ul>

## THEMES

### Theme 1



### Aggressive driving behavior

Based on this research, (N= 12/16) it was found that aggressive drivers tend to behave badly, which can be dangerous. These drivers drive with high speed, ignore safety rules for their passengers, and don't care about other cars. They also often shout at other people on the road. Some of the participants say on being asked do you consider yourself aggressive and how much can you rate yourself on aggression out of 10. most of the participants rate themselves 10 out of 10 on being aggressive and due to their aggressive nature, they sometimes lose their control.

بیٹھے رش ہوتی ہے جب زیادہ تو غصہ تو آ ہی جاتا ہے نہ اور اس وقت غصہ برداشت سے باہر ہو جاتا ہے

( participant 7 ) .

جی بیٹھا، میں اپنے آپ کو ایگریسو سمجھتا ہوں اور 10 میں سے 10 دوں گا۔"

( participant 7 )

جی، میں تو ایسا ویسا ایگریسو ہوں، کیونکہ مجھے بہت زیادہ غصہ آتا ہے

( participant 5 )

## Sub themes

### ***Reckless driving (N=10/16)***

Based on this research, reckless driving happens when someone drives a car much faster than they should, losing control. It involves taking many risks, such as cutting off other cars or overtaking them dangerously.

اب جب پھر غصہ آتا ہے تو وہ گاڑی پہ ہی نکلتا ہے نہ، تیز بھی چلاتا ہوں اور ادھر ادھر لگ بھی جاتی ہے نا۔

***(participant 5)***

Some of the drivers from this research were reckless and rated them as 10 because they report that they lose their control while they are aggressive and also, they never care for their surrounding

### ***Anger (N=12/16)***

Based on this research, an angry person often speaks rudely, gets into fights, uses offensive language, and shows arrogant behavior. They don't consider how others might be feeling, as they have little control over their anger.

غصے میں تو بیٹھا، میں سب سے زیادہ آگے ہوں۔ مجھے بہت زیادہ غصہ آتا ہے۔

***(participant 7)***

### ***Conflict between drivers (N= 4/10)***

According to this research, while driving, disagreements often happen because people have different ideas about who should So first, aggressive actions, or not understanding each other. Heavy traffic and how roads are built can also make problems worse. Also, things like not paying attention while driving or not thinking clearly can be really dangerous.

میری تو روز ہی بہس ہوتی ہے، کیونکہ مجھے گاڑی کھڑی کرنی ہوتی ہے اور روز گارڈز مجھے کہتے ہیں کہ یہاں فیکلٹی کی جگہ ہے اور یہاں گاڑی کھڑی نہیں ہو سکتی، میں کہتی ہوں اپنی گاڑی کو کہاں لے کر جاؤں؟  
بابر کھڑی کرنا سیف نہیں ہے اور گارڈز کہتے ہیں بابر کھڑی کرو

*(participant 12)*

This shows conflicts can occur due to congested spaces.

### ***Cursing of drivers (N=2/16)***

Cursing on the road, often expressed through verbal outbursts or offensive language, can contribute to a hostile driving environment. Maintaining composure and avoiding aggressive language can help prevent conflicts on the road, fostering a safer and more courteous driving environment.

جی بیٹا، جو لوگ گاڑی غلط چلاتے ہیں، پہلے تو غصہ آتا ہے، پھر کبھی کبھی انہیں گالی بھی نکال دیتا ہوں جاتے جاتے۔

*(participant 7).*

It means cursing occur when you see a person driving a car from a wrong way.

### ***Temperament while handling tough situations (N=8/16)***

Some drivers stay calm and avoid conflicts while driving to prevent problems for everyone. Others aim to leave the busy traffic quickly. Some drivers manage tough situations well, but in this study, some drivers start using bad language, blaming others, and even get into fights.

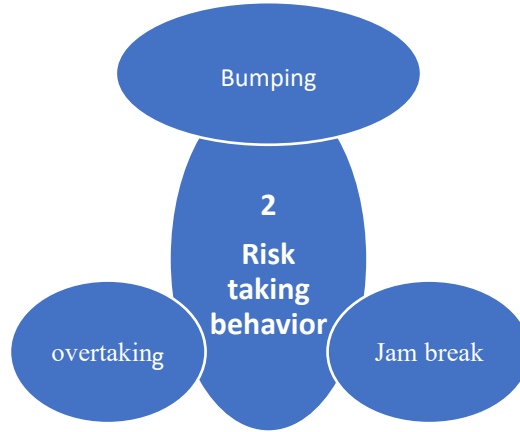
میں کالم ہوں ایک بار میرے ساتھ ایسا ہوا تھا، پتہ نہیں آپ کی یونیورسٹی کے پتہ نہیں کیا تھے، انہوں نے میرے ساتھ بہت زیادہ بتمیزی کی تھی لیکن اس وقت میری بیٹی میرے ساتھ تھی تو میں نے ان سے بحث نہیں کی، حالانکہ میں نے سوچا کہ میں جاؤں اور آپ کے وی سی سے بات کروں۔

*(participant 10).*



## Theme 2

### Risk taking behavior (N=16/16)



This research suggests that individuals who engage in risk taking behavior might be careless. They don't pay enough attention to the safety of themselves and others. They may drive too fast, overtake other cars aggressively, or take shortcuts through tight spaces.

جی بیٹا، رسک تو لینا پڑتا ہے نا، اب جلدی جانا ہو اور آپ کو جگہ مل رہی ہو تو آپ کو نکلنا ہی ہوتا ہے۔ تاکہ آپ اپنی جگہ پہنچ جائیں اور لیٹ نہ ہو۔

*(participant 15)*

This showed that if you get a space you just take risk and reach your destination as soon as possible.

### Sub themes

#### Bumping of cars (N=6/16)

This research suggested that an accident happens when cars hit each other. This can occur when one car turns in a small space and hits another from the front, back, or sides. It can change the shape of a car and make it unsafe to drive. After an accident, a car needs to be fixed by a mechanic urgently. In this study, only a few

people had serious accidents, but small bumps were more common. Some people in the interview mentioned.

ایک دفعہ ایسا ہوا تھا کہ میں یونیورسٹی میں گاڑی پارک کر رہا تھا تو جیسے ہی میں نے گاڑی پارک کی، تو کسی اور نے بھی آکر میری گاڑی پارک کر دی اور اسی طرح گاڑی ہلکی سی لگ گئی تھی۔

*(participant 05).*

These were some of the incidents on bumping.

### **Over taking (N=16/16)**

Overtaking means passing a car that's on your right or left side. Many participants in this study said they overtake when there's space or try to make space themselves. However, overtaking can be risky and might cause serious accidents or put lives in danger. Some of the participants say like.

اوورٹیکنگ تو کرنی پڑتی ہے کیونکہ کبھی کبھی آپ اتنے مایوس ہوتے ہیں کہ آپ کہتے ہیں کہ اوورٹیک کرو اور نکل جاؤ، اور کبھی کبھی ایسا بھی ہوتا ہے کہ آپ اتنی جلدی میں ہوتے ہیں تو بھی اور ٹیک کر لیتے ہی

*(participant 06)*

میں دور سے آتی ہوں اس لئے کبھی کبھی میری کلاس سے دیر ہو رہی ہوتی ہے تو میں اوورٹیک کر کے نکل جاتی ہوں۔

*(participant 12).*

### **Jam breaks (N=16/16)**

"Jamming on the brakes of a vehicle means applying them suddenly and strongly. It happens when a car or a bike unexpectedly appears, and you have to brake suddenly." In this study, researchers found that sudden braking, known as a jam brake, happened a lot. This was because there was often a lot of traffic and the drivers tended to be aggressive and take risks. The roads being broken or under construction also contributed to this issue.

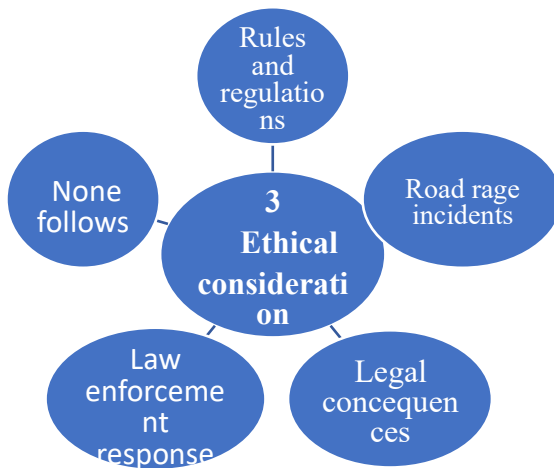
اس یونیورسٹی کے باہر اتنا خراب روڈ ہے نہ کہ جب آپ کے سامنے کوئی گاڑی آجائے اور روڈ پہ کوئی بمب ہو تو آپ بہت زیادہ سٹن بریک لگاتے ہیں

(participant 02).

### Theme 3

#### Considering the ethics of cars (N= 8/16)

Considering the ethics of cars includes looking at their impact on the environment, safety features, protecting data privacy in connected vehicles, and thinking about the effects of self-driving technology. It's important for the automotive industry to find a balance between convenience and these ethical concerns. Adhering to rules, laws, and regulations is essential.



In this study, many participants were found to break traffic rules, ignore safety measures, like running red lights, overtaking other cars at high speeds, and doing so from the wrong side. When driving, ethical considerations involve following traffic rules and putting safety first for oneself and others on the road.

جی بیٹا، میں نے بہت زیادہ دفعہ توڑا ہے، کیونکہ نہیں توڑا ہے توڑا ہے نا۔ رولز تو ہر ایمرجنسی کے وقت میں توڑا ہی جاتا ہے۔

(participant 07).

## Sub theme

### Road rage incidents and their escalations (N=10/16)

Road rage can get worse sometimes when misunderstandings occur. starting with aggressive driving and turning into dangerous situations. It might start with tailgating, driving too fast, or using angry gestures. People might start yelling or using offensive language. In really bad cases, it can even lead to physical fights or dangerous driving moves, putting everyone at risk. To avoid this, it's important to control emotions, be patient, and not retaliate. This helps prevent things from getting worse and keeps the roads safe for everyone.

ایک دفعہ ایسا ہوا تھا کہ میں اپنی جگہ پہ جا رہی تھی اور اچانک ایسا ہوا کہ ایک انکل نے میری گاڑی کو پیچھے سے ہٹ کیا، اب غلطی بھی انکل کی اپنی ہی تھی کہ وہ اپنی گاڑی سے نکل کے آیا اور اگے مجھے کہتے ہیں کہ "یہ آپ نے کیا کیا ہے؟"، میں نے انہیں اچانک سے کہا کہ "آپ ٹھیک ہیں" اور وہ غصے میں سے باہر آگئے۔

*(participant 16)*

It means if you get soft hearted sometimes then the other person who is in aggression suddenly get soft hearted.

### Legal consequences and low enforcement response (N=7/16)

This research shows Breaking road rage laws can result in penalties like fines, losing your license, or even going to jail, depending on how serious the situation is. But it's hard to enforce these laws because proving someone's intentions or finding out who the aggressive driver was can be tough. Police have challenges like not having enough resources or witnesses.

To make things better, we can improve how people report these incidents, make more people aware of the issue, and encourage better driving behavior. It's safer and smarter to let law enforcement handle these disputes.

جب میں 20 سال کا ہوا تھا اپنی برتھڈے پے تو میں نے سگنل توڑا تھا اور مجھے چالان ہوا تھا۔ برتھڈے کی خوشی میں پہلا چالان

*](participant 11).*

### **Rules and regulations (N= 10/16)**

This research says that Following traffic rules and regulations is very important to keep roads safe and organized. These rules include things like how fast you can drive, who gets to go first, traffic lights, and how to drive properly. They also cover wearing seat belts, not using your phone while driving. Knowing and obeying these rules helps avoid accidents and keeps everyone on the road safe. It's really important for drivers to learn about the traffic laws where they drive and always follow them to make driving safer for everyone.

میں اپنی سواریوں کی حفاظت کے لئے ان سے کہتی ہوں سیٹ بیلٹس لگائیں اور ساتھ میں کہتی ہوں کہ لاکس لگا لیں اور ساتھ میں خود بھی گاڑی کو آہستہ چلانے کی کوشش کرتی ہوں

*(participant 03).*

### **No consistency (N= 6/16)**

The study highlights some of the aspects of driving with no consistency. It's common to see drivers acting differently on the roads, and this causes problems. These differences can be in how they drive, follow rules, or their attitudes toward driving. Things like how much experience they have, cultural habits, and personal ways of doing things affect how people drive. To make things more consistent, we can teach people more about traffic rules, make sure laws are followed more strictly, and encourage everyone to drive responsibly. It's hard to make everyone drive the same way, but by making people aware and committed to safety, we can make driving safer for everyone.

ہاں جی، میں ایسا کرتی ہوں کہ جیسے ہی میں گاڑی میں بیٹھتی ہوں تو میں گاڑی کو آرام سے نہیں چلاتی، سیدھے

سپیڈ میں چلاتی ہوں۔ اور کبھی کبھی یہ بھی ہوتا ہے کہ میں گاڑی کو آہستہ چلانے کی کوشش کرتی ہوں۔

*(participant no 1)*

### **No one follow (N= 0/16)**

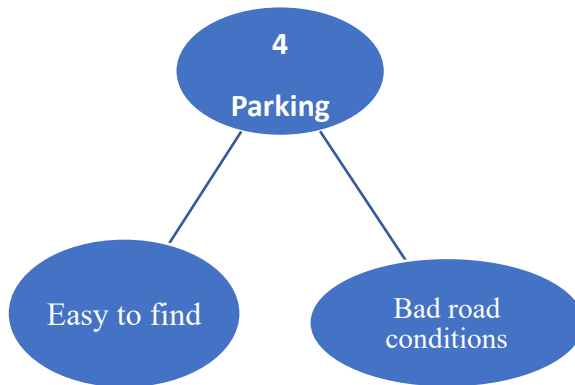
This research depicts some of the common aspects of drivers who do not follow rules. It's common to see drivers acting differently on the roads, and this causes problems. These differences can be in how they drive, follow rules, or their attitudes toward driving. Things like how much experience they have, cultural habits, and personal ways of doing things affect how people drive. To make things more consistent, we can teach people more about traffic rules, make sure laws are followed more strictly, and encourage everyone to drive responsibly. It's hard to make everyone drive the same way, but by making people aware and committed to safety, we can make driving safer for everyone.

وہسے تو میں فالو کرنے کی کوشش کرتا ہوں لیکن رات کو اگر میں گھر جا رہا ہوں اور دیر ہوں تو میں بریک کر لیتا ہوں۔ کیونکہ اس وقت بہت سے لوگ یہی کر رہے ہوتے ہیں۔

*(Participant 6)*

### **Theme 4**

#### **Parking (N= 16/16)**



This research shows that thinking about parking means following traffic rules, using the right spaces, and making sure others can also use them. If you park wrongly, you might get fined, and it can make things harder for other drivers. Parking the right way helps traffic move smoothly and keeps the community safe.

*(Participant no 13)*

## **Sub Theme**

### **Easy to find(N=1/16).**

This research showed that in the university spaces for traffic are congested for students but for faculty specific parking slots are a lot. and they are comfortable with this. but students and pick and drops service drivers face difficulty for parking their cars.

میں فیکلٹی سے ہوں اس کی مجھے گاڑی پارک کرنے کئی جگہ مل جاتی ہے گاڑی کی پارک کرنے کی کیونکہ جگہ الوت ہوتی ہے۔

*(participant 16)*

جی جی جگہ تو مل ہی جاتی ہے کیونکہ ہم جگہ بہنا لیتے ہیں۔ ہم نین بچیوں کو پک جو کرنا ہوتا ہے۔ صرف یونیورسٹی والوں کی مہربانی ہو کے ہمیں ایک جگہ دے دیں تاکہ ڈرائیورز کے پاس بارش میں دھوپ میں بیٹھنے کی جگہ ہو

participant 15

### **Bad road conditions (N=16/16)**

This research shows that If the road is in bad shape, it can be dangerous and harm your vehicle. You should let the local authorities or the department in charge

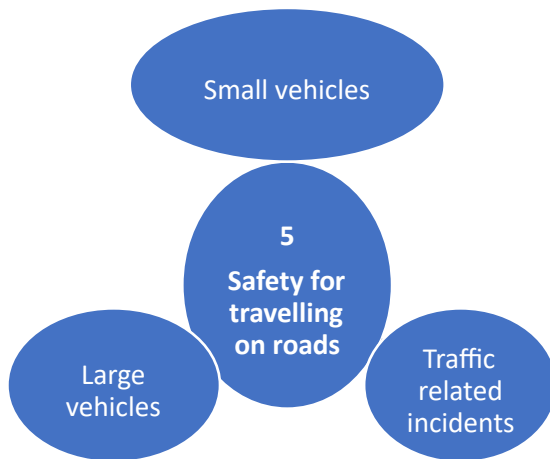
of road repairs know about it. In the meantime, drive carefully, follow speed limits, and watch out for possible dangers to stay safe and keep others safe while driving.

یونیورسٹی کے باہر کا روڈ بہت ہی زیادہ خراب ہے۔ اور یہاں سے نکل کے جانا بہت ہی زیادہ مشکل ہو جاتا ہے۔ اور گاڑی کی جو حالات ہوتی ہے وہ میں آپ کو نہیں بتا سکتی میں نے نئی گاڑی لی تھی اور جب بیچی تو وہ کہتے تھے کہ اس کے ساتھ کیا کیا ہے۔

(participant 05)

## Theme 5

### Safety for travelling on road (N= 0/16)



According to this research there is no safety of road, no car is safe, no space for parking a car.

اس روڈ ہے آپ کا کوئی تحفظ نہیں ہے اور آپ کی گاڑی بھی محفوظ نہیں ہے۔ اپنی گاڑی کو خود ہی آرام سے چلائیں اور ہمیں سے بچائیں۔

(participant no 09)

The road is uneven, and everyone feels very frustrated because of it. Additionally, the cars aren't safe. because of the bumpy road and also the nearby roads are also not safe.



## Sub theme

### Large Vehicles (N=4/16)

According to this research trucks and other big vehicles make people anxious and worried as they block roads, causing students, faculty, and other drivers nervous and anxious and restless. These big vehicles need a lot of space to maneuver, making it hard for them to pass through tight spots. Standing close to these heavy vehicles also feels unsafe. A little touch from heavy vehicles to small vehicles give small vehicles big loss.

یہ تو ٹرالے اور ڈمپر ہوتے ہیں نہ یہ صبح سے زیادہ کما خراب کرتے ہیں۔ اور روڈ بھی یہی لوگ بلاک کرتے ہیں ان سے ڈر بھی بہت زیادہ لگتا ہے۔ خود تو اپر زیادہ اونچا بیٹھے ہوتے ہیں تو انہیں نیچے والی گاڑیاں جیسے نظر ہی نہیں نہ اتی ہے۔

*(participant 07)*

### Traffic-Related Incidents (N=4/16).

According to this research Accidents happen more often because of traffic. Traffic makes people act aggressively, take risks, use bad language, blame others, and cause collisions. It's really hard to drive during heavy traffic, and this frustration leads to risky behavior like breaking traffic rules.

میرے ساتھ ایسا ہوا تھا میں ایک بار اندرون پنڈی ہے تھی اور وہاں ایسا ہوا تھا کہ بہت ہی زیادہ رش تھی اور میں پھنس گئی اب یہ تھا کہ ٹریفک فل جام تھا میرا نکلنا بہت زیادہ مشکل تھا خیر میں نے بہت زیادہ کوششوں کے بعد کسی طرح اپنی گاڑی کو باہر نکالا تھا۔

*(participant 12)*

### **Small Vehicles (N=4/16)**

According to this research Sometimes, smaller cars can go unnoticed and get caught among bigger vehicles, causing small accidents. However, these smaller cars also create major accidents by trying to pass large vehicles like buses or trucks. Despite this, their small size allows them to take risks and overtake other cars easily.

یہ چھوٹی گاڑیاں جب گاڑیوں کو کراس کرتی ہیں تو سب سے بڑا مسئلہ ہی ایکسیڈنٹ ایسے ہی ہوتے ہیں اور اسی طرح 10 10 گاڑیوں کا ایکسیڈنٹ ہو جاتا ہے۔

*(participant 10)*

### **Theme 6**

#### **Religious perspective (N=16/16)**

According to the interviews conducted it was transparent that people feel grateful for never encountering any of minor or major accidents, thanking Allah. Majority of the participants thank and be grateful for not being in any sort of accidents.

کیا آپ کا اس یونیورسٹی میں کبھی ایکسیڈنٹ ہوا ہے؟

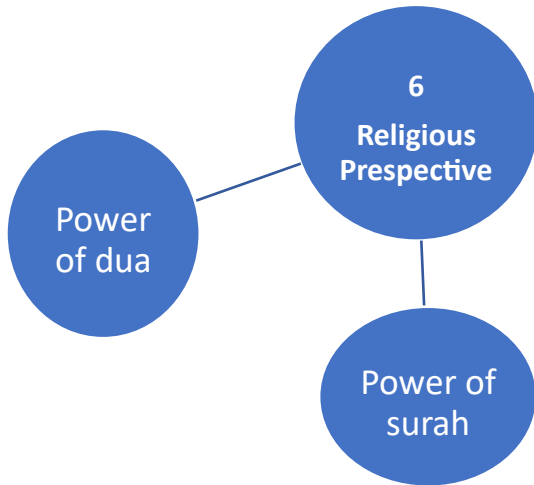
The majority of participants, predominantly followers of Islam, shared that they find solace by reciting Surah Yaseen in their cars, experiencing a sense of calmness. Others mentioned beginning their car journeys by reciting Ayat ul Kursi and invoking the name of Allah. Some participants expressed that they can effectively handle challenging situations through these practices, expressing gratitude with "Alhamdulillah."

نہیں جی الحمدللہ کبھی نہیں ہوا ہے ایکسیڈنٹ۔ میں الحمدللہ سے ابھی تک بچ ہوا ہوں

*(participant no 15)*

### Sub Theme

#### Power of Surah (N=1/16)



According to this study, when the participants feel angry or stressed, they recite or listen to Surah Rahman. As indicated here

جب مجھے دباؤ پریشانی یہ بے چینی کا سامنا کرنا پڑے تو میں سورہ یسین لگا لیتی ہوں گاڑی میں

*(participant no 12).*

#### Power of words (N=16/16)

Majority of the participants in this research were Muslims and mentioned how they say certain wor

• انشاء اللہ • ماشاء اللہ • الحمدللل ہ •

These words possess a protective quality, serving as a source of beauty that safeguards us from potential dangers in our locality.

## Theme 7



### Level of Fear (N=16/16)

This study showed that when experiencing fear while driving, it is crucial to identify the specific cause of your fear. Common factors include traffic, poor road conditions, or navigating unfamiliar areas. To alleviate these fears, consider pre-planning your route, driving with caution, and maintaining focus. If the fear persists, seeking guidance from a driving instructor or expert can be beneficial in building confidence on the road.

جب سے میرا ایکسیڈنٹ ہوا تھا تب سے میں گاڑی چلاتے ہوئے ڈرتی ہیں ڈرائیو نہیں کر سکتی۔ اور  
اگر چلاؤں تو عجیب سا در لگا رہتا ہے۔

*(participant 01)*

### Sub Theme

#### Mental Health for Aggressive Drivers (N=16/16)

According to this research Driving aggressively can affect the mental health of the people who do it. Always being stressed, angry, and impatient while driving might make them feel more anxious, easily annoyed, and generally unhappy. Getting

help to manage anger or stress and dealing with the reasons behind these feelings can help aggressive drivers feel better mentally.

اکثر ایسا ہوتا ہے کہ ڈرائیونگ کرتے ہوئے دباؤ پریشانی یہ بے چینی کا سامنا تو کرنا ہی پڑتا ہے ساتھ میں فرسٹریشن بھی ہو جاتی ہے بہت ہی زیادہ غصہ آ رہا ہوتا ہے تو اس وقت گاڑی چلانا مشکل ہو جاتا ہے۔

(participant 14)

## Theme 8



### Traffic Management (N=14/16)

The findings of this research emphasize the importance of facilitating smooth and safe traffic flow on roads. This involves implementing various plans and strategies to regulate the number of vehicles, preventing traffic congestion. Additionally, it stresses the necessity of planning the allocation of vehicles and making lane management a mandatory aspect of traffic control.

## Sub Themes

### Planning for Traffic (N=16/16)

Creating road networks and structures that handle traffic well. also, this research says that the guards who are managing the traffic are not from the traffic police and they cannot manage this much traffic because they are not professionals.

مجھے تو سب سے زیادہ دکھ ہوتا ہے گارڈز پے کے وہ لوگ ٹریفک پولیس سے تو بے نہیں کے وہ بیچارے یہاں پے کھڑے ہو کے ٹریفک کو مینج کر رہے ہوتے ہیں۔ جو کے آسان کام نہیں ہے کیونکہ وہ لوگ ٹریفک پولیس سے نہیں ہیں اور نہ ہی ٹرینڈ ہیں۔

*(participant 16)*

### Café Parking (N=14/16).

According to this research Providing parking spaces for customers who visit cafes. cafes have large parking space but due to large population there is still no space for parking a car, so customers need to follow rules set by the café or local authorities. although we have two parking areas in our university but still sometimes there is no space in university.

یونیورسٹی میں سب سے زیادہ مسئلہ ہی یہ ہے کہ آپ ٹائم سے پہلے اجاؤ تو ہی آپ کو جگہ ملے گی نہیں تو آپ کو باہر ہی گاڑی کھڑی کرنی ہوگی کیونکہ رش بہت ہی زیادہ ہوتی ہے

*(participant 14 )*

### Ignoring Safety N( 1/16

This research depicts some of the key aspects according to ignoring safety. Not caring about safety while driving can make people speed a lot, not wear seat belts,

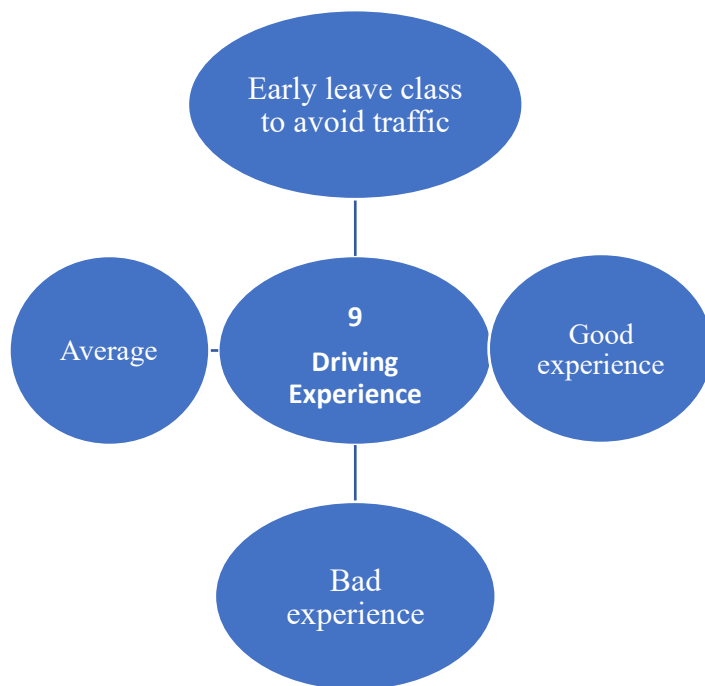
use phones while driving, and go through red lights. These actions aren't just dangerous for the driver but also for their passengers and others on the road.

میں تو اپنی سواریوں کی حفاظت کے لیے کوئی بھی اقدامات نہیں لیتی۔ اور گاڑی بھی فل سپیڈ سے

چلاتی ہوں

*(participant no 12)*

### Theme 9



### Driving experience (N=16/16)

According to this research Driving experience encompasses a person's skill, knowledge, and comfort level while operating a vehicle. It evolves over time as individuals encounter diverse road conditions, traffic situations, and challenges. A positive driving experience often involves a combination of proper training, adherence to traffic rules, and the ability to adapt to different driving scenarios.

میرا گاڑی چالانے کا تجربہ 20 سال کا ہے۔ *(participant 10)*

## Sub Themes

### Good experiences (N=4/16)

A few participants shared that they have been driving in Pakistan for nearly two decades and find joy in it. Notably, some participants mentioned they have not experienced any accidents, and others stated they have not been involved in fights or broken any laws while driving.

میرا گاڑی چلانے کہ تجربہ بہت اچھا ہے۔ میں ساری زندگی ہو گئی ہے گاڑی چلا رہا ہوں۔ 20 سال ہو۔

*(Participant no07)*

### Bad experiences (N=4/16)

A few participants shared that they have been driving in Pakistan for nearly two decades and find joy in it. Notably, some participants mentioned they have not experienced any accidents, and others stated they have not been involved in fights or broken any laws while driving.

میرا پاکستان میں گاڑی چلانے کا تجربہ بالکل اچھا نہیں ہے کیونکہ میں امریکہ میں بھی گاڑی چلاتی ہوں۔ تو وہاں تو بہت زیادہ اسموتھ ہے کیونکہ وہاں اتنا رش نہیں ہوتا یہاں پاکستان میں زیادہ ہوتا ہے۔

*(participant 13).*

### Average experience (N=8/16)

According to this research a lot of participants have average experience and they are satisfied with their driving experience because of they have not face that much difficulties in driving a car



میرا گاڑی چلانے کہ تجربہ بس صحیح ہے نہ بہت اچھا ہے نہ بہت برا ہے۔

*(participant no 15)*

### **Early leaving class to avoid traffic (N=6/16)**

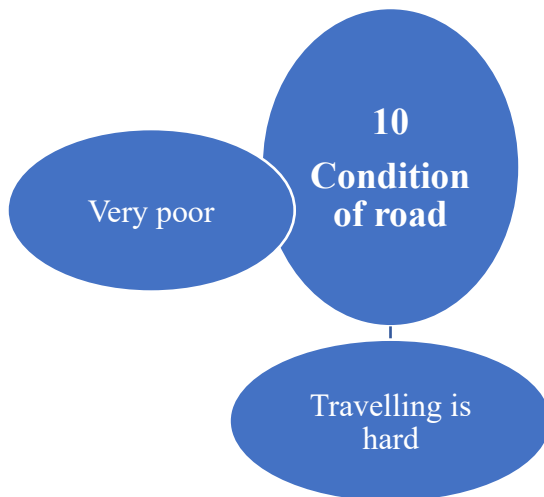
According to this research many of the participants who are students and from the faculty try to leave class early to avoid traffic. as they wanted to leave university as soon as possible until the traffic flow increases.

میں کوشش کرتی ہوں جیسے ہی کلاس ختم ہو ساتھ ہی میں یونیورسٹی سے نکل جاؤں کیونکہ پھر

بعد میں رش حد سے زیادہ ہو جاتا ہے۔

*(participant no 12).*

### **Theme 10**



### **Condition of a road (N=16/16)**

According to this research the condition of a road is worst because of the road is bumpy and a lot of vehicles got disbalance due to this issue. due to the

condition of a road a lot of cars need a mechanic for the detail check because of the cars make noises which are not safe.

اس روڈ کی وجہ سے مجھے ہر مہینے گاڑی کو چیک کرانے کے لیئے لے کے جانا پڑتا ہے۔

*(participant 16)*

## **Sub Theme**

### **Very poor condition of a road (N=16/16)**

According to this research the condition of road is very poor and we face difficulty on the road. due to the poor condition of road dust pollution increases. The timings aren't good either, it gets so crowded and by the time we reach home it gets so late and dark as well.

روڈ کی حالت بہت زیادہ خراب ہے۔

### **Travelling is hard (N=4/16)**

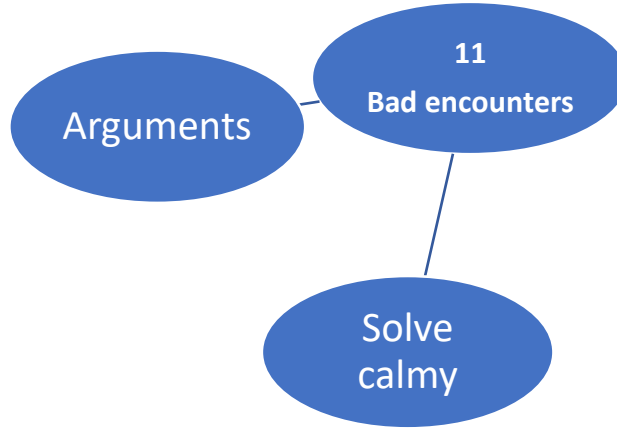
According to this study Traffic gets the best of us. It is one way, and that's why so many of the accidents occur. Many people wait in the line for hours. Sometimes travelling is hard because we are frustrated some times while travelling this makes driving a trouble and in this situation accidents. Some of the time due to the condition of road travelling is hard and also due to anxiety, stress, restlessness, nervousness travelling is hard.

اس روڈ کی حالت بہت زیادہ خراب ہے اسکی وجہ سے سفر کرنا مشکل ہو جاتا ہے یونیورسٹی میں

انا بہت زیادہ مشکل ہے۔

*(participant no 6)*

## Theme 11



### Bad encounters (N=2/16)

According to this research drivers face various challenging situations on the road, such as aggressive drivers, road rage, distracted driving, adverse weather conditions, and unexpected obstacles. Accidents, near misses, and encounters with reckless or impaired drivers can lead to stressful and potentially dangerous situations. Poorly maintained roads, lack of proper signage, and congested traffic can also contribute to negative driving experiences. Additionally, encounters with law enforcement, such as traffic stops or violations, can be distressing for drivers. Staying calm, practicing defensive driving, and adhering to traffic rules can help mitigate these challenges.

آپ کی پتہ نہیں کیا پتہ نہیں ہیں جو سکیورٹی میں انہوں نے بتامیزی کی تھی میں میں کچھ نہیں کہا  
ورنہ میں آپ کے یونیورسٹی کے سربراہ کے پاس جا رہا تھا۔

*(participant number 10)*

## Sub Themes

### Arguments (N=4/16)

According to this research arguments between drivers often arise from misunderstandings, aggressive behavior, or disputes over the right of way. Common triggers include lane merging, cutting off, or perceived violations of traffic rules. Road rage incidents can escalate tensions, leading to confrontations that may compromise safety. Effective communication, staying calm, and avoiding aggressive gestures can help defuse potential conflicts. It's crucial for drivers to prioritize safety, refrain from retaliatory actions, and, if necessary, involve law enforcement to mediate and address the situation.

آپ کی یونیورسٹی میں تو میرے ساتھ نہیں ہوا کبھی پر باہر میں ایک دفعہ پنڈی گیا تھا وہاں پے رش کی وجہ سے میری بحث ہو گئی تھی وہ مجھے جگہ نہیں سے رہے تھے۔

*(Participant 5)*

### Solve calmly (N=12/16)

Many participants claimed that once they encounter any problem, they try to solve it calmly rather than blowing things up. Every once in a while, they do get involved in problematic situations, for instance as said by;

ایک دفعہ ایسا ہوا تھا کہ یونیورسٹی میں مجھے پارکنگ کی جگہ نہیں مل رہی تھی تو میری تھوڑی سی بحث ہو گئی تھی۔ کیونکہ اس نین میری جگہ پارک کر دیا تھا۔

*(participant number 6)*

## CHAPTER 4

### DISCUSSION

This study was done on aggressive driving and risk taking behaviours. This study was conducted on adults, aged 18 and above who had an experience of driving. The participants were both male and female. It was collected by convenient sampling. The sample size was 16. This study was qualitative. First interviews were taken and then transcribed. After the interviews were transcribed, themes and codes were made by only one coder. The coding done was in-vivo coding which is known as the true verbatim of the participants with no changes. The main objective of this research was to study the aggressive behavior and risk-taking behaviours of driving that certainly has a role on accidents caused on road.

Traffic accidents pose a significant global issue, with the World Health Organization (WHO) consistently reporting for more than a decade that over one million people die annually in road accidents worldwide, and up to 50 million suffer nonfatal injuries (WHO, 2018). Among various risky behaviors on the road, speeding is widely recognized as the most critical factor contributing to traffic accidents (European Transport Safety Council, 2011; National Highway Traffic Safety Administration, 2010). Numerous studies, including those by Ma et al. (2015) and Mergia et al. (2013), support the assertion that speeding is strongly linked to the occurrence of traffic accidents.

Now discussing the themes, theme 1 revealed a concerning prevalence of aggressive driving behavior among participants, with 12 out of 16 individuals displaying traits such as high-speed driving, disregard for safety rules, and verbal aggression towards other road users. Many participants self-rated their aggression level at 10 out of 10, underscoring the severity of the issue. Subsequently, sub-

themes emerged, including reckless driving reported by 10 participants, involving speeding, loss of control, and risky maneuver. Additionally, 12 participants expressed struggles with anger while driving, leading to rude behavior and conflicts. Four participants highlighted conflicts arising from disagreements, especially in congested areas, while two participants mentioned the use of offensive language or cursing on the road. Lastly, eight participants discussed varying temperaments when handling challenging situations, with some maintaining composure and others resorting to blame and confrontations. Overall, the findings emphasize the urgency of addressing aggressive driving behaviours to foster safer and more considerate driving environments.

Theme 2 focuses on risk-taking behavior among drivers, involving 16 participants. Findings indicate that individuals engaging in such behavior may display carelessness by not paying enough attention to their safety and others'. This includes driving too fast, aggressive overtaking, and taking shortcuts through tight spaces. Sub-themes include bumping, overtaking, and jam braking, highlighting instances of accidents and sudden braking due to aggressive and risky driving practices.

In Theme 3, the study delves into the ethics of cars, emphasizing the importance of considering environmental impact, safety features, and data privacy. Participants discussed breaking traffic rules, overtaking at high speeds, and disregarding safety measures. Sub-themes like road rage incidents and their escalations, legal consequences, and law enforcement responses were identified, shedding light on the potential dangers and challenges in enforcing road safety laws.

Theme 4 focuses on the parking behaviors, involving 16 participants, highlights the significance of adhering to traffic rules and utilizing proper parking

spaces to ensure smooth traffic flow and community safety. Participants expressed concerns about parking issues on university campuses, with specific challenges faced by students and pick-and-drop service drivers. Sub-themes like the ease of finding parking spaces, the impact of bad road conditions on vehicles, and the perceived lack of safety on roads were identified.

In Theme 5, the study explores the safety of traveling on roads, with participants expressing concerns about uneven roads, large vehicles causing anxiety, and frequent traffic-related incidents. Small vehicles were noted for their tendency to go unnoticed and create accidents. The research emphasizes the need for improved road conditions, especially in university settings.

Theme 6 delves into the religious perspective, with all 16 participants expressing gratitude for not encountering accidents. Participants shared practices such as reciting Surah Yaseen or Ayat ul Kursi, listening to Surah Rahman, and invoking phrases like "In sha Allah," "Masha Allah," and "Alhamdulillah" for protection and calmness during stressful driving situations. Overall, the study underscores the multifaceted nature of parking issues, road safety concerns, and the role of religious practices in promoting a sense of security among drivers.

Theme 7 explores the level of fear experienced by drivers, with all 16 participants acknowledging instances of fear while driving. The study suggests that identifying the root causes, such as traffic, bad roads, or unfamiliar routes, is crucial. Strategies to address fear include planning routes in advance, driving carefully, and maintaining focus. Subsequently, the research delves into sub-themes, emphasizing the impact of aggressive driving on mental health and the importance of seeking help to manage stress and anger.

In Theme 8, the focus shifts to traffic management, involving 14 out of 16 participants. The study advocates for effective strategies to ensure smooth and safe traffic flow, emphasizing the need for planning and professional management.

Participants express concern about non-professional guards managing traffic and highlight challenges faced due to cafe parking issues and safety negligence. The study underscores the necessity of well-designed road networks, professional traffic management, and adherence to safety measures for a more efficient and secure driving experience.

In Theme 9, the research explores the driving experiences of 16 participants, encompassing skills, knowledge, and comfort levels while operating a vehicle. Participants share diverse experiences, with some expressing joy in driving for nearly two decades, while others note challenges faced on Pakistani roads. Subthemes include good, bad, and average experiences, reflecting satisfaction levels and the impact of driving conditions on individual perceptions. Additionally, the research notes a practice among students and faculty, leaving classes early to avoid traffic, highlighting the significant influence of road conditions on daily routines.

Moving to Theme 10, the study investigates the condition of roads, emphasizing the poor state of roads causing difficulties and the need for frequent car check-ups. Participants express frustration due to bumpy roads and dust pollution, impacting travel times and overall driving experience. The subthemes of very poor road conditions and challenges faced during travel shed light on the struggles caused by road quality, ranging from inconvenience to increased anxiety and stress.

Finally, Theme 11 delves into bad encounters on the road, including arguments, disputes, and challenging situations. Participants recount instances of misunderstandings, aggressive behavior, and confrontations, emphasizing the need



for calm resolution and communication. Some share experiences with law enforcement, highlighting potential distress during traffic stops. Strategies for handling arguments calmly and prioritizing safety underscore the importance of effective communication and maintaining composure on the road.

The themes discussed in the study offer valuable insights into the dynamics of driver behavior through the lens of the Dual Process Model of Driving. In Theme 1, the prevalence of aggressive driving behaviors, characterized by high-speed driving and verbal aggression, underscores the role of automatic processes where drivers impulsively react to perceived threats on the road. The self-rated aggression levels further emphasize the intensity of these automatic responses. Reckless driving and conflicts arising from disagreements serve as sub-themes highlighting the impulsive nature and loss of control, aligning with the characteristics of automatic processes.

In Theme 2, which focuses on risk-taking behaviors, the study aligns with the Dual Process Model as individuals engaging in aggressive overtaking may rely on automatic processes, neglecting full consideration of potential consequences. Subthemes of accidents and sudden braking suggest instances where automatic responses override controlled processes, leading to risky driving practices.

Theme 3 delves into the ethical considerations of driving, emphasizing the conscious evaluation of environmental impact, safety features, and data privacy. This aligns with the controlled processes of decision-making and evaluation, demonstrating how drivers consciously consider ethical aspects during their driving experiences. The sub-themes of road rage incidents and legal consequences shed light on how controlled processes play a pivotal role in assessing potential dangers and legal implications associated with driving behaviors.

Themes 4 to 11 further illustrate the interplay between automatic and controlled cognitive processes. Theme 4, focusing on parking behaviors and traffic flow concerns, indicates a blend of both automatic responses, demonstrated through adherence to traffic rules, and controlled processes, reflected in concerns about the impact of bad road conditions on vehicles. Theme 5 introduces the safety of traveling on roads, revealing a combination of automatic processes such as anxiety caused by large vehicles and controlled processes where drivers consciously advocate for improved road conditions. Theme 6, exploring the religious perspective, showcases the coexistence of automatic processes, seen in the instinct to recite protective verses, and controlled processes, where individuals consciously engage in religious practices for a sense of security.

Themes 7 to 11 further demonstrate the duality of cognitive processes in driving experiences. Theme 7, addressing fear experienced by drivers, involves both automatic responses to fear-inducing stimuli and controlled processes, where planning routes and maintaining focus are deliberate actions to manage fear. Theme 8, focusing on traffic management, highlights the importance of planning and professional management, emphasizing controlled processes in organizing and navigating traffic. Theme 9, exploring driving experiences, encompasses both automatic responses to diverse driving scenarios and controlled processes, where drivers consciously evaluate their skills and adaptability. Theme 10, investigating the condition of roads, involves automatic responses to frustration caused by poor road conditions and the controlled process of planning frequent car check-ups. Finally, Theme 11, dealing with bad encounters on the road, underscores the reliance on controlled processes to manage conflicts and stressful situations through effective communication and calm resolution. In summary, the study offers a nuanced

understanding of how drivers navigate the complex road environment, engaging in a dynamic interplay of automatic and controlled cognitive processes, as outlined by the Dual Process Model of Driving. The dual process theory, rooted in cognitive psychology, posits that human cognitive processing involves two distinct systems: the automatic (intuitive) system and the reflective (controlled) system. These systems operate simultaneously, influencing decision-making and behavior. The automatic system functions rapidly, effortlessly, and unconsciously, generating instinctive responses to stimuli. It relies on heuristics and intuition, drawing from past experiences and cognitive shortcuts. Evolutionarily rooted, this system is associated with survival instincts.

In contrast, the reflective system engages conscious thought, deliberate reasoning, and analytical processing. It requires effort and attention, enabling thoughtful consideration, logical reasoning, and decision-making based on careful analysis. The reflective system can override automatic responses and considers long-term consequences.

There are several reasons for using dual process theory as a theoretical background. Firstly, it provides a comprehensive framework for understanding decision-making processes by acknowledging the influence of both automatic, intuitive responses and reflective, controlled reasoning. The dual process model is instrumental in explaining variations in behavior, recognizing that individuals may exhibit different decision-making patterns based on the interplay between automatic and reflective processes.

In the context of studying risk behaviors and aggressive driving, the dual process theory is particularly relevant. Aggressive driving may result from automatic, impulsive reactions to perceived threats or stressors. Understanding the

interplay between automatic and reflective processes sheds light on the cognitive mechanisms behind aggressive driving tendencies.

Moreover, dual process theory informs intervention design, allowing strategies to target both automatic and reflective processes. Interventions may focus on changing automatic reactions through repeated exposure to alternative responses, while also promoting reflective thinking to enhance self-control. The theory has demonstrated predictive value in various domains, facilitating a more accurate prediction of behaviors in high-stakes situations. Applying dual process theory to the study of aggressive driving enables the development of targeted interventions. Practically, understanding dual processes informs strategies for improving road safety. Interventions may aim to enhance reflective decision-making skills through educational programs or encourage the development of habits aligning with safe driving practices.

In conclusion, the dual process theory offers a nuanced understanding of the cognitive mechanisms underlying decision-making, making it a valuable theoretical background for studying risk behaviors and aggressive driving. Its incorporation allows for a holistic approach to intervention and prevention strategies in the context of road safety.

In a study conducted by Smith and Johnson (2018), key factors contributing to aggressive driving were identified, including traffic congestion, anonymity, and perceived disrespect on the road. These findings align with prior research by Brown et al. (2016), emphasizing the role of environmental stressors in triggering aggressive behaviours among drivers. Various interventions have been proposed and evaluated to tackle this issue. Patel and Lee (2017) explored the efficacy of educational programs in reducing aggressive driving tendencies, emphasizing the

need for targeted interventions addressing specific triggers. Additionally, technology-driven solutions, such as advanced driver assistance systems, were examined by Wang et al. (2018) as potential tools for mitigating aggressive driving behaviors.

The literature extensively discusses the consequences of aggressive driving. Jones et al. (2019) highlighted an increased risk of accidents and injuries associated with aggressive driving tendencies. Examining the psychological toll on drivers, Garcia and Williams (2020) underscored the importance of addressing aggressive behavior to enhance overall road safety.

## **Conclusion**

In conclusion, the study on aggressive driving and risk-taking behaviors delved into the complex interplay of automatic and controlled cognitive processes, as outlined by the Dual Process Model of Driving. The research provided valuable insights into the prevalence of aggressive driving behaviors, risk-taking tendencies, and various factors influencing driving experiences. The application of dual process theory offered a nuanced understanding of the cognitive mechanisms behind decision-making on the road.

Themes such as aggressive driving prevalence, risk-taking behaviors, ethical considerations, and the impact of religious practices highlighted the multifaceted nature of driver behaviors. The study also touched upon concerns related to traffic management, parking behaviors, road conditions, and encounters on the road, offering comprehensive insights into the challenge's drivers face. Moreover, the literature review reinforced the importance of addressing aggressive driving behaviors, with various interventions proposed, including educational programs and technology-driven solutions. The consequences of aggressive driving, such as

increased accident risks and psychological toll on drivers, further underscored the significance of promoting road safety. The study not only contributes to our understanding of the cognitive processes involved in driving behaviors but also emphasizes the urgency of addressing aggressive driving for the overall well-being of drivers and road safety.

### **Suggestions and Limitations**

The study was conducted only in Capital University of Science and Technology. Sample size: the suggestion is that the sample size was too short that from the next time when ever who want to do this study should take more participant. Time was too short so from the next time, time should be given more to the students so their findings should be accurate. Coders should be 2 or more than 2 so the thematic analysis should be more in-depth. This research solely lies on the interpretation of coder which is why the results can't be generalized. The future researchers should incorporate different types of coding. To curb aggressive driving behavior and risk taking include promoting awareness campaign on road safety, implementing stricter traffic laws and penalties, providing driving education programs, and encouraging the use of advanced safety features in vehicles. Limitations may include challenges in enforcing regulations, addressing deep rooted attitudes, and the need for a comprehensive approach involving law enforcement, education, and societal changes

### **Implication**

- Insights from such studies can help in formulating preventive strategies to reduce the likelihood of accidents resulting from aggressive driving. This may involve educational campaigns, stricter law enforcement, and infrastructure improvements.

- In addressing aggressive driving behavior and taking include the difficulty of consistently enforcing traffic regulations, cultural factors influencing driving norms.
- Aggressive driving can have psychological and physiological impacts on drivers and passengers. Research in this area can shed light on the mental health implications and guide the development of support services for affected individuals.

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## APPENDIX

اجازت نامہ

میرا نام حمرا شعیب ہے۔ میں کیپٹل یونیورسٹی آف سائنس اینڈ ٹیکنالوجی کی طالبہ ہوں۔ میں یہاں سے بس سائنکولوجی کر رہی ہوں۔ یہاں سے میں ریسرچ کر رہی ہوں اسی سلسلے میں میں یہاں موجود ہوں۔ میری ریسرچ کا ٹاپک ریلیشنشپ بٹ وین آگریسیو ڈرائیونگ بہویور اینڈ رسک ٹیکنیک امنگ یونیورسٹی پاپولیشن۔ آپ کے پاس یہ رائٹ ہے کے آپ اس انٹرویو کو وڈ ڈرا کر سکیں۔ کیا آپ مجھے اجازت دیتے / دیتی ہیں کے میں آپ کا انٹرویو شروع کروں۔

سائن

آپ کا نام کیا ہے

2. آپ کی تعلیم کیا ہے؟
3. آپ کی عمر کیا ہے؟
4. آپ کون سے مذہب سے تعلق رکھتے ہیں؟
5. آپ کون سی زبان بولتے ہیں؟
6. آپ پچھلے کتنے سالوں سے گاڑی چلا رہے ہیں .
7. آپ کا گاڑی چلانے کا تجربہ کیسا ہے آپ کچھ بیان کر سکتے ہیں۔
8. آپ کو اس یونیورسٹی میں داخل ہوتے ہوئے آرام سے گاڑی پارک کرنے کی جگہ مل جاتی ہے؟
9. آپ کس قسم کی گاڑی چلاتے ہیں۔ آٹو یہ مینوئل.
10. آپ گاڑی چلانے کے متعلق قانون کو اچھی طرح جانتے ہیں؟
11. کیا آپ کی گاڑی روڈ پر چلنے کے لیے محفوظ ہے۔ اگر محفوظ ہے تو ک ی
12. آپ اپنی گاڑی کو 0 سے 10 تک کیا نمبر دینگے جس سے میں اندازہ لگا سکوں کہ آپ کی گاڑی محفوظ ہے یہ نہیں۔
13. کیا آپ مجھے کوئی ایسی رش کے مطابق ایک مثال دے سکتے ہیں جس میں سے آپ نے اپنی گاڑی کو نکالا ہو۔ اور آپ نے غصہ بھی نہ کیا ہو؟
14. کیا آپ سے اس یونیورسٹی میں کبھی اپنی گاڑی کا ایکسیڈنٹ ہوا ہے۔ اگر ہوا ہے تو آپ نے اپنے آپ کو اس میں سے کیسے نکالا ہے ۔
15. آپ اپنے آپ کو ایگریسو سمجھتے ہیں۔

16. آپ اپنے آپ کو 10 میں سے کیا نمبر دینگے؟
17. کیا آپ اس یونیورسٹی کے رش والے ماحول سے اپنے آپ کو نکال لیتے ہیں اگر نکال لیتے ہیں تو کیسے؟
18. آپ کو اگر غصہ آجائے تو آپ اپنی گاڑی کو چلانے پر توجہ کیسے دیتے ہیں؟
19. کیا آپ نے کبھی رسک لیا ہے۔ لیا ہے تو کیسے؟
20. آپ اپنی سواریوں کی حفاظت کے لیے کیا اقدامات لیتے ہیں؟
21. کیا آپ نے کبھی قانون کو توڑا ہے؟
22. کیا آپ اپنی گاڑی کو چلانے سے پہلے اس کی چیکنگ کر لیتے ہیں؟
23. آپ کوئی ایسی مثال دے سکتے ہیں جس میں آپ سے کسی انسان نے بد تمیزی سے بات کی ہو اور آپ نے سے حل کر لیا ہو؟ اسے آرام
24. اس یونیورسٹی کے لوگوں کے ساتھ آپ کا سلوک کیسا ہے؟
25. کیا آپ اس یونیورسٹی کے قوانین سے خوش ہیں؟
26. کیا آپ اس میں کچھ تبدیلیاں چاہتے ہیں؟
27. اگر آپ کچھ تبدیلیاں چاہتے ہیں تو مجھے بتا سکتے ہیں
28. کیا آپ کو اس یونیورسٹی کے آنے اور جانے والے راستے صحیح لگتے ہیں
29. کیا آپ کو کبھی گاڑی چلاتے ہوئے دباؤ، پریشانی، یہ بے چینی کا سامنا کرنا پڑا ہے؟
30. کیا آپ گاڑی کے چھوٹے موٹے تکنیکی کام کر لیتے ہیں؟
31. اچانک آپ کی گاڑی کے سامنے کوئی گاڑی آجائے اور آپ کو جلدی ہو تو آپ کیا کرتے ہیں؟ غصہ یہ رسک لیتے ہیں؟
32. جیسا کہ آپ گاڑی چلاتے ہیں تو آپ کے ساتھ ایسا کبھی ہوا ہے کے آخری وقت پر آپ کا شیڈول تبدیل کر دیا جائے اور آپ کو کہیں اور جانا پڑھ جائے تو آپ کو کیسا محسوس ہوتا ہے؟
33. کیا آپ اس یونیورسٹی کے گارڈز کی ڈیوٹیز پر خوش ہیں۔
34. کیا جہاں گاڑیاں پارک ہوتی ہیں آپ کو وہاں جگہ مل جاتی ہے۔ کوئی مشکل کا سامنا تو نہیں کرنا پڑھتا۔

35. اور آپ کو گاڑی کے پارک کرنے کی جگہ صحیح لگتی ہے۔
36. کیا آپ کو یونیورسٹی کی یہ والی ٹائمنگ صحیح لگتی ہے یہ پہلے والی -
37. اگر یہ والی 10:5 والی اچھی لگتی ہے تو کیوں۔
38. اور اگر پہلے والی 50:4 والی لگتی تھی تو کیوں۔
39. کیا آپ کو یہ لگتا ہے کہ رش کے ہونے کا کوئی خاص مقصد ہے۔
40. جیسا کہ گاڑی کو پارک کرنے کے 2 راستے ہیں۔ آپ کو کیا لگتا ہے اس سے رش پر کوئی کمی آئی ہے۔
41. اس انٹرویو کے اختتام پر آپ کچھ کہنا چاہتے / چاہتی ہیں۔



Capital University of Science and Technology  
Islamabad

Islamabad Expressway, Kahuta Road,  
Zone - V, Islamabad, Pakistan  
Telephone : +92-(51)-111-555-666  
              : +92-51-4486700  
Fax: : +92-(51)-4486705  
Email: : info@cust.edu.pk  
Website: : www.cust.edu.pk

Ref. CUST/IBD/PSY/Thesis-596  
August 7, 2023

**TO WHOM IT MAY CONCERN**

Capital University of Science and Technology (CUST) is a federally chartered university. The university is authorized by the Federal Government to award degrees at Bachelor's, Master's and Doctorate level for a wide variety of programs.

**Ms. Humra Shoaib**, registration number **BSP201058** is a bona fide student in BS Psychology program at this University from Spring 2020 till date. In partial fulfillment of the degree, she is conducting research on "Development and feasibility testing of behavioral insight intervention: a study of eliminating aggressive driving behavior and risk taking". In this continuation, the student is required to collect data from your institute.

Considering the forgoing, kindly allow the student to collect the requisite data from your institute. Your cooperation in this regard will be highly appreciated.

Please feel free to contact undersigned, if you have any query in this regard.

Best Wishes,

**Dr. Sabahat Haqqani**  
Head, Department of Psychology  
Ph No. 111-555-666 Ext: 178  
sabahat.haqqani@cust.edu.pk