

A Correlation Between the Types of Driving Distractions and Number of Accidents Encountered by Public Drivers in Danao City Terminal

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Abstract

Inexperienced drivers, in particular, may find it challenging to react in a crash if the brain is distracted when driving. This study determined the relationship between the types of driving distraction and the number of accidents public drivers encounter in the Danao City terminal. This study used descriptive quantitative research with 100 respondents using the survey questionnaire. The data were analyzed using percentage frequency, weighted mean, and Pearson Correlation Coefficient (r). The majority of the respondents have encountered accidents due to over speeding. Based on the result, the public drivers in Danao terminal were not affected by Cognitive driving distraction but were rarely affected by Manual and Visual distraction. This study uncovered that among the public drivers in Danao City, one probable cause of the increase in road accidents is Manual and Visual distraction.

Keywords: driving experience; driver's profile; mitigating accident.

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1. Introduction

This study investigated the driving performance of the most common driver distractions, visual, manual, and cognitive distractions encountered among public drivers in Danao City Terminal, which may be used as a reference to prevent road accidents.

1.1. The Rationale of the Study

“Eyes on the road, hands on the wheel”[2]. On the off chance that the brain is thinking about anything other than driving, it can make it troublesome to respond during a possible crash, particularly for inexperienced drivers. Talking or texting on a cell phone, changing the radio or music, eating or applying make-up are all perilous distractions when the driver ignores the road. Drivers' minds and brain aging may be vulnerable due to diminishing cognitive resources and control over attention. Several researchers have reported the common distraction among drivers as the most influential factor in road traffic accidents. Distracted driving is any activity that can divert a person's attention away from the primary task of driving. According to the authors in [20] that there are three driving distractions: visual, manual, and cognitive. In the case of visual distraction, a person takes their eyes off the roadway, while manual distraction occurs when a driver removes their hand from the steering wheel. When it comes to cognitive distraction, a person takes their mind off driving.

Based on the article in [26], the number of road accidents results in the deaths of approximately 1.3 million people each year. Non-fatal injuries affect between 20 and 50 million more people, with many becoming disabled due to their injuries. In the article by [13] entitled "The most common causes of distracted driving," people who use their cell phones to talk or text while driving is the most common reason for distracted driving accidents. In fact, according to the report in [5], approximately 300 road accidents happen every year in different places in Danao City. Road accidents are causing an increase in damage to property and physical injury. Driving safety is an ongoing and significant concern, as seen by the rise in fatalities.

Furthermore, their driving abilities will also be affected when a person gets older. Factors such as decreased vision, impaired hearing, slower motor reflexes, and worsening health conditions can be problematic. According to the authors in [20] that people think of being able to multitask while driving when the brain can only do one thing at a time. With these being said, accidents and extreme events will occur. On the other hand, young drivers are more likely to drive recklessly, commonly seen as speeding and drunk driving. The authors in [6] stated that drivers between 18 and 21 and those with less than a year of driving experience are more likely to be involved in risky driver behavior than other age and driving experience groups. Furthermore, drivers aged '18-21 years' with less than one year of driving experience are more concerned about risky driver behavior factors such as 'disregarding speed limit,' 'failing to use intelligent personal assistant,' and 'frequently changing lanes.' As the driver ages, these maturational characteristics become less significant.

In relevance, this research study seeks to determine the relationship between the number of accidents encountered by public drivers and the types of driving distraction to identify which type is the most common among public drivers in Danao City terminal. This study aimed to provide an overview of the different types of

driver distraction to all public drivers so that they can use it to reduce distraction while driving to prevent accidents. With this purpose in mind, there is a great need to complete this study.

1.2. Theoretical and Conceptual Background

Drivers' distraction is understood as a form of inattention. Drivers' distraction is defined as it involves a diversion of attention away from critical driving tasks towards competing activities, such as using a mobile phone, adjusting the radio, or eating while driving. These competing activities can interfere with a driver's ability to focus on the road, maintain situational awareness, and respond to changing driving conditions. The authors in [7] define drivers' distraction as a form of inattention that can lead to unsafe driving behavior and emphasizes the importance of avoiding competing activities while driving to ensure the safety of oneself and others on the road. In some ways, [1] noted that a driver's distraction can degrade his driving performance resulting in unplanned speed changes, hiccups in vehicle control, and drifting outside the lane edges, ultimately increasing the chance of a motor vehicle crash. There are two types of driver distraction: driver-initiated and non-driver-initiated. Driver-initiated distraction occurs when a driver voluntarily engages in a distracting activity, such as using a mobile phone, eating, or applying makeup while driving. Non-driver-initiated distraction, on the other hand, is caused by unpredictable actions of something or someone else, such as a sudden loud noise or a passenger's behavior. According to the authors in [12], other driving distractions include other occupants of the vehicle, eating, drinking, smoking, adjusting the radio, adjusting the environmental controls, reaching for an object in the car, and using a cell phone. Distractions like these can divert a driver's attention away from the road and lead to dangerous situations. For instance, eating or drinking while driving can lead to spills and cause the driver to take their eyes off the road, while using a cell phone can result in a driver taking their hands off the steering wheel and their eyes off the road.

The author in [15] discussed that distracted driving poses a serious threat to road safety. It results from driver inattention, which occurs when drivers shift their attention away from the driving task to focus on something else. As people age, their visual, motor, and cognitive skills change, making driving a more complex task for some individuals. For example, older drivers may have difficulty processing information quickly or reacting to unexpected situations while driving, which can increase the risk of accidents. Additionally, the author in [18] states that there is a common assumption across various disciplines that chronological age is equivalent to biological function and mental ability. In other words, as people age, their physical and mental abilities inevitably decline, leading to a deterioration of vision, hearing, coordination, reaction time, and mental processing. These changes are often used as identifiers of old age, typically around age 65 or older.

In relation, [17] states a significant increase in serious traffic accidents occurs after the age of 75. Several factors affect this phenomenon, including reduced vision, slower reaction times, and, for some, decreased cognitive abilities. Compared to their younger counterparts, older drivers have found that they respond more slowly when a decision must be made, perceive visual contrast in a worse way, and are less able to perceive road hazards. According to the authors in [20], their ability to handle a car safely changes as people age. Specific awareness training can help keep those drivers safe on the road. In addition to physical and health changes, our thinking and reaction patterns change as we age and changes brought about by external sources-medication. Reflexes

slow down. Some need help paying close attention to one situation or having difficulty doing two things simultaneously. As a driver, you must constantly take in and interpret information from many different sources and then act. You may find it harder to react to new or changing situations as you age.

Even though most drivers are under retirement age, certain conditions can affect an individual's ability to drive or operate in certain circumstances, even before retirement age. As people age, there are changes in their physical and cognitive abilities that can affect their driving skills. Reflexes can slow down, making it harder to react quickly to unexpected situations on the road. Vision may also decline, making it harder to see road signs, traffic lights, and other vehicles. In addition, cognitive abilities such as attention and memory may decline, making it harder to concentrate on driving tasks or to remember directions. Medical conditions such as diabetes and heart conditions can also affect driving abilities. For instance, diabetes can cause fluctuations in blood sugar levels that can lead to dizziness, confusion, or even loss of consciousness. Heart conditions can affect blood flow to the brain, which can impair cognitive function [22].

Moreover, this is considered distracted driving when a driver's attention is diverted from safe driving, whether inside or outside of the vehicle. Visual, manual, and cognitive distractions are all types of in-vehicle distractions. Distractions caused by visuals cause drivers' attention to be diverted from the road (e.g., using the navigation system or reading a text message). When drivers are distracted manually, they will likely lose grip on the steering wheel (e.g., while texting, eating, and drinking). A driver's cognitive processes are also affected by cognitive distractions, which prevent them from doing their work (e.g., talking to another person on the phone) [24]. In relation, smartphone usage while driving has been declared a global portent and admitted as a leading cause of crashes and accidents. The use of smartphones while driving can lead to distracted driving, which impairs a driver's ability to focus on the road, respond to traffic signals, and make quick decisions. Activities such as texting, browsing social media, making phone calls, or checking emails while driving can cause drivers to take their eyes off the road, their hands off the wheel, and their mind off the task of driving [10].

Furthermore, most novice drivers need to gain the necessary experience or knowledge for interpreting or prioritizing cues; they also do not pay attention to the environment as much as experts do. Drivers often need to recognize potential hazards and anticipate how risks will develop. Using several mechanisms, including mental models, schema, and goal-driven processing, drivers significantly reduce these problems as they gain experience and training, which enable them to better recognize potential hazards and anticipate how risks will develop [8]. According to the authors in [28], drivers aged 18–30 years are more likely to induce accidents; drivers with 6–10 years of driving experience have the highest risk to accidents, followed by drivers with 4-5 years of driving experience; and the driving style is also highly correlated with accident risk tendency.

Based on the number of fatalities and injuries related to the driving experience, it appears that with more driving experience, the number of accidents and fatalities decreases. In contrast, drivers with less experience are more likely to cause injuries, while those with more driving experience are more likely to cause fatalities and injuries. However, those with more driving experience resulted in fewer accidents and deaths. As drivers gain more experience, they become more proficient at recognizing potential hazards and responding appropriately. They are also more likely to follow traffic laws and drive defensively, reducing their risk of accidents and injuries.

While experienced drivers may be more likely to overestimate their abilities, take unnecessary risks, or engage in aggressive driving behaviors, leading to a higher likelihood of fatalities and injuries in accidents [23].

The author in [4] states that drivers often underestimate the dangers of distracted driving, despite understanding the risks associated with distracted driving. Some visual distractions cause drivers to take their eyes off the road. Most often, distracted driving involves visual distractions. Drivers must keep their eyes on the road and constantly scan their surroundings. If traffic suddenly slows down or a small child runs in front of the vehicle, looking away from the road is dangerous. Distracted drivers will not see these hazards and may not react in time. The problem arises in manual distraction when drivers are distracted to the point that their hands are taken off the wheel. If their hands are not on the wheel, they cannot maneuver the vehicle if a road hazard occurs. The car can lose control if drivers attempt to maneuver around a hazard by suddenly clutching the wheel too hard. It is common to overlook cognitive distractions, while visual and manual distractions are easily recognized. Drivers often underestimate the dangers of not paying attention, even though their eyes and hands are off the road and their hands are off the wheel. Cognitive distractions can take a driver's mind off the road. In reality, cognitive distractions are the leading cause of distraction crashes. One of the most common cognitive distractions is talking on a phone while driving a vehicle.

1.3. Review of Related Literature

This part presents the related literature and studies after the thorough research done by the researchers. The information included in this part helps familiarize which is relevant and similar to the present study, including driver distraction, global and local statistical data on road accidents, driver monitoring in their vehicle, types of distraction, a common cause of road accidents, and other information to reduced drivers' distraction.

Driver distraction has been a major concern for road safety professionals and other stakeholders for many years, as both significantly increase the risk of road accidents. According to article in [9], seventy-seven percent (77%) of road crash fatalities and injuries in the economically productive age groups fifteen (15) to sixty-four (64) years old and has a ratio of 3:1 (male to a female) fatalities with the fifteen (15) to forty-nine (49) year age group being most vulnerable to fatalities.

According in [25], the number of road accidents results in the deaths of approximately 1.3 million people each year, and non-fatal injuries affect between 20 and 50 million more people, with many becoming disabled as a result of their injury. However, WHO stated that vehicle safety is essential for preventing collisions and lowering the risk of serious injuries; a variety of UN regulations on car safety may save a lot of lives if they were implemented in countries' manufacturing and production standards. These include requiring automakers to make vehicles that adhere to front and side impact standards, have electronic stability control (to avoid over steering), and have airbags and seat belts installed in every vehicle. Without these fundamental requirements, there is a significantly higher risk of traffic injuries to persons inside and outside vehicles.

Driver distraction significantly contributes to accidents and is the most significant cause of fatalities in the Philippines. According in [14], approximately 1.35 million people die in road traffic accidents yearly. Road

accidents are causing an increase in mortality and morbidity in the Philippines. Risk factors such as drug use, alcohol use, and cell phone use are included in Transport and Vehicular Crash cases.

Furthermore, the proportion of secondary-task involvement and its effects on distraction and collisions may differ significantly depending on driver age. According in [16], young adults and teens are the most likely to be distracted by their smartphones while driving. A recent study published in *Traffic Safety Journal* shows drivers between the ages of fifteen (15) and nineteen (19) had the highest chance of being distracted while driving during fatal crashes. In their statistics, eight percent of drivers between the ages of fifteen (15) and nineteen (19) were distracted during the crash. It is stated in [6] that drivers between the ages of 18 and 21 and those with less than a year of driving experience are more likely to be involved in risky driver behavior factors compared to other age and driving experience groups. Furthermore, drivers aged '18-21 years' with less than one year of driving experience are more concerned about risky driver behavior factors such as 'disregarding speed limit,' 'failing to use intelligent personal assistant,' and 'frequently changing lanes.' As the driver ages, these maturational characteristics become less significant.

In relation, according in [11], the study found that drivers who drive a car 18 years or older are 71% more likely to die in a car accident. Based on the study, teens are far more likely to be involved in fatal crashes because they tend to buy cheaper, older cars. Drivers of older vehicles have far less protection than drivers of newer vehicles, and they are far more likely to lose control of their vehicle and cause an accident. Also, based in [26], young adulthood or also known as teenager generally defined as 18 to 22 or 18 to 25 years old, Adult (26-44 years old), Middle-age (45-59 years old), Old age or seniors (60 years and over).

Moreover, according in [20], when a person gets older, their driving abilities will also be affected, which includes factors such as decreased vision, impaired hearing, slower motor reflexes, and worsening health conditions can become a problem. Aging tends to reduce strength, coordination, and flexibility, impacting the ability to drive a car safely. It affects or changes the ways of driving, which includes altering the way of driving and addressing any physical issues that can interfere with driving. People think of having the ability to multitask while driving when the brain can only do one thing at a time. With these being said, accidents and unnecessary turn of events will occur.

According in [24], driving when distracted refers to diverting the driver's attention from the task of driving and toward other activities. Even though distraction is a cognitive state, studies continue to classify different types of driving distractions into different categories, such as manual, visual, and cognitive distractions. Among these, cognitive distraction is the most pervasive and the most challenging to assess. According to the input, cognitive distraction detection techniques typically fall into two categories: physiological-based and visual-based, with the driver acting as the main body. Physiological-based approaches primarily use drivers' physiological information as input data for distraction detection, such as heart rate and electroencephalogram (EEG). However, a simulated environment is usually used because raw data extraction requires complex and expensive intrusive equipment that significantly impacts drivers in real-world situations. On the other hand, visual-based approaches typically use eye trackers or other equipment to extract gaze information or cameras installed in the cab for driving data collection to extract features of the driver's face, eyes, body, and various joint points. Also,

according to the article of [21], visual driving distractions include anything that diverts one's attention from the road ahead. This could be an interesting billboard, street sign, car, pedestrian, map, passenger, radio broadcast, GPS, texting or browsing the internet, using social media, or any other activity while driving can significantly increase the risk of a crash. Road accidents continue to occur despite advances in vehicle technology such as backup cameras, adaptive headlights, and forward collision systems. According to the authors in [27], the common causes of car accidents are due to driver error. In fact, about 94% of all road accidents are caused by human error, such as, distracted driving, drunk driver, over speeding, violates the traffic light signal, risky driving, aggressive driver and drowsy driving. Distracted driving is one of the leading causes of car accidents. Contrary to popular belief, the brain cannot focus on more than one task at a time. This means that when a driver is texting, talking on the phone, grooming, reading, or even eating while driving, his or her brain is switching between tasks and is unable to focus on what's ahead. However, other factors of road accidents, including weather conditions, road conditions and defects in vehicle

Also, according to the article "The most common causes of distracted driving" [13], people who use their cell phones to talk or text while driving are the most common cause of distracted driving accidents. The National Safety Council estimates that cell phones are involved in 26% of all car accidents. Other causes of distracted driving include looking at GPS, adjusting music or controls, applying make-up, talking to passengers, not looking at the road, handling children or pets, and zoning out. Additionally, according in [19], the various means of transportation in the Philippines, which include taxis, buses, tricycles, pedicabs, and jeepneys. These modes of transportation are commonly used across the Philippines, and they provide a range of options for travelers. The article also emphasizes that there are numerous inexpensive travel options available to people in the Philippines. In particular, buses are the best option for long-distance travel on larger islands. This could be because buses typically offer more comfortable and reliable transportation for longer distances. They may also be a safer option than some of the other modes of transportation, such as tricycles and pedicab. This article provides a brief overview of transportation options in the Philippines, with a focus on affordable and practical travel options for tourists and locals alike.

1.4. Statement of the Problem

This study aimed to determine the relationship between the types of driving distraction and the number of accidents encountered by public drivers in Danao City Terminal. To obtain all the essential knowledge, data, and information, this study sought to answer the following questions:

1.4.1. What is the profile of the public drivers in terms of

- a. age,
- b. existing health condition,
- c. experience as a driver (number of years),
- d. type of vehicle driven, and
- e. age of vehicle?

1.4.2. What is the profile of accidents encountered in terms of

- a. number of accidents encountered, and
- b. reasons for the accidents?

1.4.3. What is the level of distraction encountered while driving according to type

- a. cognitive distraction,
- b. manual distraction, and
- c. visual distraction?

1.4.4. Is there a significance relationship between the type of distraction encountered while driving and the profile of the driver in terms of

- a. age,
- b. experience as a driver (number of years), and
- c. age of vehicle?

1.4.5. Is there a significant relationship between the number of accidents encountered and the profile of the driver in terms of

- a. age,
- b. experience as a driver (number of years), and
- c. Age of vehicle?

1.4.6. Is there a significant relationship between the number of accidents encountered and the type of distractions in terms of

- a. cognitive distraction
- b. manual distraction
- c. visual distraction?

1.4.7. Based on the findings, what proposals can be drafted to lessen the number of times of accidents?

1.5. Null Hypothesis

Ho₁: There is no significant relationship between the types of driving distraction encountered while driving and the profile of public drivers.

Ho₂: There is no significant relationship between the number of accidents encountered and the profile of the public drivers.

Ho₃: There is no significant relationship between the number of accidents encountered and the types of driving distractions encountered by public drivers.

2. Materials and Methods

This study used the Descriptive quantitative type of research wherein a survey questionnaire was used to gather data.

2.1. Research Respondents

The respondents of this research study were public drivers of Danao City Terminal. The target respondents were 100 public drivers, which is only a sample population of vehicles in Danao City Terminal — 25 for each kind of vehicle to sum up to 100, including motorcycles, tricycles, modern jeepneys/buses/vans, and multi-cabs.

2.2. Research Instruments

The researchers used a survey questionnaire to identify the correlation between the number of accidents encountered by public drivers and the types of driving distractions they have encountered while driving. The researcher used an interview guide to ask the respondents questions associated with the public drivers' profiles and types of driving distractions. The statistical tool used was Pearson r Correlation in analyzing the gathered data.

2.3. Procedures of Data Gathering

The researchers conducted a survey interview with the public drivers at the Danao City terminal last November 2022. The questionnaire was ready-made, and the researchers added some questions to further relate the questionnaire to the research topic. Foremost, the researchers asked for the respondent's approval to participate in the study. After the researchers explained the purpose of this study, the respondents were assured that the gathered information would be kept confidential and only used for educational purposes. The researchers interviewed each respondent, and the researchers were the ones who checked on the survey questionnaire during the interview. Only the tricycle drivers were interviewed on the first day of the interview. In the succeeding days, the researchers conducted a survey interview among motorcycle, multi-cab, and modern jeep/van/bus drivers. Quota sampling was used as a method of data gathering. Four target groups of the research study were motorcycle, multi-cab, modern jeepney/van/bus, and tricycle drivers. One hundred (100) public drivers from the Danao City terminal, 25 from each identified group, were the target sample of this research study. The data collected were the basis for the result of this study.

2.4. Scoring Procedure

The scoring procedure leverage data normalization based on the gathered responses from the Danao City terminal public drivers. A non-parametric scale will be used for the interpretation and evaluation to provide a basis for analyzing the data collected. The data gathered will be scored using the following categorical responses.

The range is calculated by $(5-1=4)$ and then divided by four as it is the greatest value of the scale $(5 \div 4=0.8)$.

Table 1: Rating Scale for the Types of Distraction among Public Drivers.

Scale	Range	Category	Description
5	4.21 - 5.00	Very Often	The respondents had always met this type of distraction.
4	3.41 - 4.20	Often	The respondents had frequently met this type of distraction.
3	2.61 - 3.40	Sometimes	The respondents had occasionally met this type of distraction.
2	1.81 – 2.60	Rarely	The respondents seldom met this type of distraction.
1	1.00 – 1.80	Never	The respondents had not met this type of distraction.

2.5. Treatment of Data

The statistical tool used to analyze data were percentage frequency, weighted mean, and Pearson Product Moment Correlation Coefficient to test whether there is a significant relationship between the number of accidents encountered and the type of distractions encountered by the public drivers in Danao City terminal.

3. Results and Discussion

The following tables show the data gathered during the 4-day survey interview in Danao Terminal. The data collected from the respondents are used for research purposes only.

Table 2: Percentage Frequency of Age.

Age (years)	Frequency	Percentage
25 – 59	87	87%
60 and above	7	7%
18 – 24	6	6%

The data in the table shows that the majority of the respondents fall under the age range of 25-59, which is considered the adult age group. This result indicates that the study has a significant number of adult participants, which could be important depending on the research's objectives.

Moreover, the data shows that only 6 percent of the respondents were teenagers (18-24), while the remaining percentage falls under the seniors category (60 and above). This information could suggest that the study might have some limitations when it comes to representing younger individuals' views and experiences, which could be important for certain types of research.

On the other hand, the table below presents the percentage frequency of existing health conditions among the public drivers in Danao Terminal. In the table 3, high blood pressure and impaired vision are the most prevalent health conditions among the respondents, with 39 percent and 24 percent respectively. It indicates that other health conditions are common among drivers, including vestibular disorders, impaired hearing, arthritis, high cholesterol, muscle pain, and slower motor reflexes, which could impact driving abilities. The result aligns with

the [20] observation that aging can affect driving abilities, particularly in areas such as vision, hearing, and motor skills.

Table 3: Percentage Frequency of Existing Health Conditions.

Existing Health Condition	Frequency	Percentage
High Blood Pressure	39	39%
Impaired Vision	24	24%
Vestibular Disorder	13	13%
Impaired Hearing	9	9%
Arthritis	8	8%
Diabetes	7	7%
High Cholesterol	4	4%
Muscle Pain	1	1%
Slower Motor Reflexes	0	0%
Others, specify	0	0%

Additionally, the result suggests that health problems such as diabetes and heart conditions can impact driving, and the medications used to treat these conditions can cause impairments. This finding is consistent with [22] observation that medical conditions can impact drivers, and medications can cause significant side effects.

Overall, the given results provide insights into the existing health conditions of drivers and their potential impact on driving abilities. The findings suggest that age-related changes and health conditions can affect drivers, and measures should be taken to address these issues to ensure safe driving. The information can be useful in designing appropriate interventions and education programs aimed at promoting safe driving among individuals with existing health conditions. Furthermore, the table 4 below shows that the majority of the respondents had more than 11 years of driving experience, with a percentage of 73 percent, while only 2 percent had less than a year of driving experience. It indicates that 4percent of the respondents had a driving experience of 8-10 years, 13 percent had a driving experience of 5-7 years, and 8percent had a driving experience of 2-4 years. These findings align in [28] observation that drivers with more experience are less likely to be involved in accidents, while those with less experience are more likely to cause road accidents.

Table 4: Percentage Frequency Driving Experience.

Driving Experience	Frequency	Percentage
11 years and more	73	73%
8 years - 10 years	13	13%
5 years - 7 years	8	8%
2 years - 4 years	4	4%
1 month - 1 year	2	2%

The result suggests that drivers with more experience are better able to recognize potential hazards and anticipate how hazards will develop. The author in [8] suggest that as drivers gain experience and training, they develop mental models, schemas, and goal-driven processing mechanisms, which help them reduce problems on the road.

Overall, the given results highlight the importance of driving experience in promoting safe driving. The findings

suggest that drivers with more experience are less likely to be involved in accidents, indicating the need to promote safe driving practices among novice drivers. The information can be useful in designing appropriate interventions and training programs aimed at promoting safe driving among drivers with different levels of experience.

Table 5: Percentage Frequency of Type of Vehicle.

Type of Vehicle	Frequency	Percentage
Modern Jeepney/Bus/Van	25	25%
Motorcycle	25	25%
Multi-cab	25	25%
Modern Jeepney/Bus/Van	25	25%

Table 5 shows that the respondents' vehicles were categorized as Modern Jeepney/Bus/Van, Motorcycle, Multi-cab, and Tricycle, with each category having an equal percentage of 25 percent.

The result provides an insight into the common types of vehicles used by the respondents, indicating the need to tailor interventions and safety measures accordingly. For instance, since motorcycles make up a significant proportion of the respondents' vehicles, there is a need to promote safe motorcycle riding practices, such as the use of helmets and other protective gear, to reduce the risk of accidents and injuries.

The given result aligns with the [19] observation that there are various means of transportation in the Philippines, including taxis, buses, tricycles, pedicabs, and jeepneys. The study highlights that buses are the best option for long-distance travel on larger islands.

Overall, the given result provides useful information for policymakers and stakeholders involved in promoting road safety in the Philippines. The findings can be used to design appropriate interventions and safety measures tailored to the common types of vehicles used by road users, contributing to the reduction of road accidents and injuries.

Table 6: Percentage Frequency of Age of Vehicle.

Age of Vehicle	Frequency	Percentage
5 years - 7 years	34	34%
2 years - 4 years	28	28%
8 years - 10 years	20	20%
11 years – and more	12	12%
1 month - 1 year	6	6%

The results in Table 6 indicate that the majority of the respondents have vehicles that are between 5 to 7 years old, which comprise 34 percent of the total vehicles.

This finding is consistent with the trend observed in many countries, where the average age of vehicles on the road is increasing due to the rising costs of purchasing new vehicles and improvements in vehicle durability and reliability. However, it is important to note that driving an older vehicle can pose safety risks, as older vehicles may lack modern safety features and have worn-out parts that increase the likelihood of accidents. The study in

[11] highlights that older vehicles pose a greater risk of fatalities, which should be a concern for drivers, especially those with more driving experience. To mitigate this risk, it is recommended that drivers with older vehicles should take extra precautions, such as regular maintenance checks, upgrades to safety features, and avoiding driving in hazardous conditions. Furthermore, drivers should consider purchasing newer vehicles with modern safety features that can provide better protection in case of accidents. Table 7 reveals that a significant proportion of the respondents have experienced accidents while driving, with only 7 percent reporting no accidents. The frequency of accidents increases with the number of times the respondents have encountered them, with the highest percentage of respondents reporting experiencing two accidents (32 percent). The findings suggest that accidents are a common occurrence among drivers in the area. According to the report from [5], road accidents are a significant problem in the city, leading to property damage and physical injury.

Table 7: Percentage Frequency of Number of Accidents Encountered.

Number of Accidents Encountered	Frequency	Percentage
2	32	32%
3	23	23%
1	22	22%
0	7	7%
4	6	6%
5	5	5%
6	5	5%
7	0	0%
8	0	0%
9	0	0%
10 and more	0	0%

It is important to investigate the causes of accidents to prevent their occurrence and reduce their impact. Driver behavior, road conditions, and vehicle maintenance are among the factors that can contribute to road accidents. Identifying these factors and implementing measures to address them can help improve road safety and reduce the incidence of accidents. Additionally, educating drivers on safe driving practices and enforcing traffic laws can help reduce the number of accidents.

Table 8: Percentage Frequency of Encountered Accidents.

Encountered Accidents	Frequency	Percentage
Over Speeding	51	51%
Bad Overtaking	32	32%
Improper Turning	29	29%
Vehicle Defect	28	28%
Slippery Road	23	23%
Uneven Road	12	12%
Jaywalking	11	11%
Drowsy Driving	8	8%
Driving While Using a Phone	7	7%
Driving Under the Influence of Alcohol	6	6%
Other: (Bumped by tailing vehicle)	3	3%
Violates Traffic Lights	1	1%

Further, the results presented in Table 8 suggest that over speeding is the most common reason for road accidents among the respondents, with a percentage frequency of 51 percent. According to research, this

outcome indicates that over speeding plays a significant role in global traffic accidents.

The table also highlights other factors that contribute to road accidents, such as bad overtaking, improper turning, vehicle defects, slippery and uneven roads, jaywalking, drowsy driving, driving while using a phone, and driving under the influence of alcohol. These are well-known risk factors for accidents and have been the subject of numerous awareness campaigns and interventions to reduce their occurrence.

It is interesting to note that violating traffic lights has the lowest percentage frequency of 1 percent, indicating that it is the least common reason for road accidents among the respondents. It's crucial to remember, nevertheless, that even though violating traffic lights is not as frequent as other factors, it can still have severe consequences and lead to accidents, injuries, and fatalities.

Moreover, the table also indicates that some respondents had encountered accidents due to being bumped by a tailing vehicle or improper overtaking by another vehicle. These incidents are examples of accidents that can occur due to the behavior of other road users and highlight the importance of defensive driving and being aware of the actions of other drivers on the road. In fact, according to the authors in [27] that the common causes of car accidents are due to driver error. About 94% of all road accidents are caused by human error, such as, distracted driving, drunk driver, over speeding, violates the traffic light signal, risky driving, aggressive driver and drowsy driving. However, other factors of road accidents, including weather conditions, road conditions and defects in vehicle. Also, the author in [13] states that other causes of distracted driving including looking in GPS, adjusting music or controls, talking to passengers, not looking at the road, handling children or pets, and zoning out.

The results presented in Table 9 indicate that stress is the most significant factor that distracts drivers while driving, with a weighted mean of 2.64.

This conclusion is in line with earlier research that have shown stress to be a significant contributor to driver distraction and can lead to impaired driving performance and an increased risk of accidents. It is noteworthy that the least likely situation to distract drivers while driving was strong emotions such as happiness, sadness, anger, and frustration, with a weighted mean of 1.11. This finding suggests that emotional states do not significantly impact driver attention and focus.

However, it is essential to interpret the results cautiously as the overall weighted mean of cognitive distraction was 1.583, which indicates that cognitive distractions did not affect the drivers while driving based on the scale interpretation of "never." This result contradicts the study of [4] that cognitive distractions are the leading cause of distraction crashes.

Moreover, one of the most common cognitive distractions identified in the literature is talking on a phone while driving a vehicle, which was not included in Table 9.

Therefore, it is possible that the study did not capture all possible cognitive distractions that could affect driver attention and performance.

Table 9: Cognitive Distraction.

Section 1: Cognitive Distraction	Weighted Mean	Description
a. Daydreaming	1.28	The respondents had not met this type of distraction.
b. Stress	2.64	The respondents had occasionally met this type of distraction.
c. Calling using hands-free devices, e.g., earphones, air pods, etc.	1.2	The respondents had not met this type of distraction.
d. Quarreling	1.24	The respondents had not met this type of distraction.
e. Having strong emotions such as happiness, sadness, anger, frustration	1.1	The respondents had not met this type of distraction.
f. Talking with passengers	2.38	The respondents seldom met this type of distraction.
g. Screaming passengers	1.55	The respondents had not met this type of distraction.
h. Playing high-volume music	1.27	The respondents had not met this type of distraction.
Overall Weighted Mean	1.583	The respondents had not met this type of distraction.

Overall, the findings suggest that stress is the most significant factor that distracts drivers while driving, but it is essential to consider other cognitive distractions that could impact driver attention and performance.

The results presented in Table 10 suggest that helping passengers with car seats is the most common manual driving distraction among public drivers in Danao City, with the highest weighted mean of 2.44. This observation is consistent with earlier studies that public drivers often have to assist passengers with their luggage or seating arrangements, which can distract and affect driving performance. On the other hand, smoking while driving was considered the least manual driving distraction among drivers, with the lowest weighted mean of 1.21. This finding suggests that smoking does not significantly distract drivers or impact their driving performance.

Table 10: Manual Distraction.

Section 2: Manual Distraction	Weighted Mean	Description
a. Eating and Drinking	1.42	The respondents had not met this type of distraction.
b. Adjusting the setting of vehicle technology, e.g., radio channel, air conditioner, song, selection	1.42	The respondents had not met this type of distraction.
c. Smoking	1.27	The respondents had not met this type of distraction.
d. Helping passengers with car front seats	3.3	The respondents had occasionally met this type of distraction.
e. Rummaging through personal belongings	1.53	The respondents had not met this type of distraction.
f. Accepting fare while driving	1.9	The respondents seldom met this type of distraction.
g. Giving fare change while driving	1.93	The respondents seldom met this type of distraction.
Overall Weighted Mean	1.82	The respondents seldom met this type of distraction.

Overall, the results indicate that manual distractions exist among drivers in Danao City, with an overall weighted mean of 1.824, interpreted as "rarely." This finding suggests that manual distractions do not frequently occur but can still negatively affect driving performance, as mentioned in [3].

It is important to note that manual distractions, such as using a phone or adjusting controls, can lead to a decrease in driving speed, an increase in a collision, and deviations in lane position, which can be hazardous to both the driver and other road users. Therefore, increasing awareness and education regarding the risks of manual distractions and providing solutions to mitigate them, such as installing hands-free technology in vehicles, is crucial.

Table 11: Visual Distraction.

Section 3: Visual Distraction	Weighted Mean	Description
a. Texting	1.38	The respondents had not met this type of distraction.
b. Reading roadside advertisement	2.54	The respondents seldom met this type of distraction.
c. Looking at a billboard advertisement	2.55	The respondents seldom met this type of distraction.
d. Checking roadside accident scenes	2.22	The respondents seldom met this type of distraction.
e. Looking at GPS Navigation	1.3	The respondents had not met this type of distraction.
Overall Weighted Mean	1.998	The respondents seldom met this type of distraction.

The results presented in the table suggest that visual distractions rarely exist among public drivers in Danao City, based on the overall weighted mean of 1.998, interpreted as "rarely." However, it is important to note that reading roadside advertisements and looking at billboard advertisements were considered the most common actions that public drivers do while driving, with the highest weighted mean of 2.33.

Surprisingly, looking at GPS navigation was considered the least visual distraction among public drivers, with a weighted mean of 1.19, indicating that public drivers never practiced this action while driving. This outcome may have been caused by the fact that not all public vehicles are equipped with GPS navigation devices, or drivers may not use them while driving.

Overall, the results contradict the [13] article that cell phone use is the most common cause of distracted driving accidents. This difference could be caused by the current study only focusing on public drivers in Danao City and not including other types of drivers, such as private car owners. Moreover, the study did not include the passenger's point of view regarding driver distraction, which could provide valuable insights into the potential risks of visual distractions during public transportation. While the results suggest that visual distractions rarely occur among public drivers in Danao City, it is important to continue to educate drivers and passengers about the potential risks of distracted driving, including visual distractions such as reading advertisements. Further research that includes the passenger's perspective and a larger sample size of different types of drivers could provide a more comprehensive understanding of driver distractions and potential solutions to mitigate them.

Table 12: Overall Weighted Mean of the Types of Driving Distraction.

Type of Driving Distraction	Overall Weighted Mean	Description
Cognitive Distraction	1.583	The respondents had not met this type of distraction.
Manual Distraction	1.824	The respondents seldom met this type of distraction.
Visual Distraction	1.998	The respondents seldom met this type of distraction.

The results suggest that Danao City's public drivers are rarely affected by manual and visual driving distractions, which is positive news for road safety. Although the weighted mean for cognitive distractions is low, it still exists. Any distraction can lead to a dangerous situation on the road. In order to minimize distractions while driving, drivers must maintain concentration. In fact, according to the author in [21], visual driving distractions include anything that diverts one's attention from the road ahead. This could be an interesting billboard, street sign, car, pedestrian, map, passenger, radio broadcast, GPS, texting or browsing the internet, using social media, or any other activity while driving can significantly increase the risk of a crash. On the other hand, the authors in [24] states that when drivers are distracted manually, they will likely lose grip on the steering wheel (e.g., while texting, eating, and drinking).

Moreover, the study highlights the need for passenger input in assessing driving distractions. Passengers may have a different perspective on what they consider distracting while riding in a public vehicle, and their feedback could provide valuable insights for improving road safety.

Finally, the study reinforces the importance of avoiding manual and visual distractions while driving. Drivers should be aware of potential distractions such as billboards, cellphones, and passengers and avoid engaging in activities that take their eyes or hands off the road. By doing so, they can reduce the risk of accidents and ensure safer roads for everyone. The findings in table 13 indicate no significant relationship between the type of driving distraction and the profile of public drivers in terms of age, number of driving experiences, and vehicle age. This finding implies that driving distractions are equally distributed among drivers regardless of their age, experience, and vehicle age. While it contradicts the study of [17] that serious driving accidents increase notably after the age of 75 years, it is significant to note that the current study did not focus on the relationship between age and driving accidents but rather the relationship between driving distractions and driver profiles.

Table 13: Significance Relationship Between the Type of Distraction Encountered while Driving and the Drivers Profile in terms of Age, Number of Driving Experiences, and Age of Vehicle.

Variables	Computed r value	Tabulated value	Level of Significance	Decision on H ₀
Type of distraction and driver's age	0.0732960603043478	0.205	0.05	Accept
Type of distraction and number of driving experience	0.149663023900035	0.205	0.05	Accept
Type of distraction and age of the vehicle	0.0748501044019046	0.205	0.05	Accept

Moreover, it is essential to consider that distractions may affect drivers differently based on their characteristics and circumstances. For example, an experienced driver may be less affected by cognitive distractions, such as stress, than a less experienced driver. Similarly, a driver with a newer vehicle may be less prone to manual distractions, such as vehicle defects, compared to a driver with an older vehicle.

Overall, the study's results suggest that driver distraction is a significant issue among public drivers in Danao City, regardless of their age, experience, and vehicle age. Thus, it is important to raise awareness among public drivers about the different types of distractions and their potential impact on driving performance to minimize driving accidents.

Table 14 results suggest that driving experience and the vehicle's age can potentially affect the number of accidents encountered by public drivers in Danao City. In fact, the article in [23] states that the number of fatalities and injuries related to the driving experience, it appears that with more driving experience, the number of accidents and fatalities decreases. In contrast, drivers with less experience are more likely to cause injuries, while those with more driving experience are more likely to cause fatalities and injuries. Drivers must understand these factors and take appropriate measures to prevent accidents from happening. For example, drivers can improve their driving skills and knowledge through training and education programs and make sure their vehicles are well-maintained and up-to-date.

Additionally, drivers must prioritize safety at all times while on the road. This includes avoiding distractions, following traffic rules and regulations, and being aware of their surroundings. By doing so, drivers can reduce the risk of accidents and ensure the safety of themselves, their passengers, and other road users.

Table 14: Significance Relationship between the Number of Accidents Encountered and the Driver' Profile in terms of Age, Number of Driving Experiences, and Age of Vehicle.

Variables	Computed r value	Tabulated value	Level of Significance	Decision on H ₀
Number of accidents encountered and driver's age	0.17555804606686	0.205	0.05	Accept
Number of accidents encountered and number of driving experience	0.457199710221706	0.205	0.05	Reject
Number of accidents encountered and age of the vehicle	0.300243718742949	0.205	0.05	Reject

Overall, the study's findings provide important insights into the factors influencing road safety among public drivers in Danao City. All road users can benefit from increased safety and well-being by being aware of these problems and taking the necessary action to address them. Moreover, the results in table 15 suggest that manual and visual distractions play a significant role in causing road accidents among public drivers in Danao City. The positive correlation between the number of accidents encountered and manual and visual distractions indicates that drivers must be more attentive to their surroundings while driving and avoid any manual or visual distractions while on the road.

The low relationship between cognitive distraction and the number of accidents encountered suggests that drivers distracted by their thoughts or mental preoccupations are less likely to cause accidents.

However, it is still important for drivers to maintain their focus while driving and avoid any distractions that could lead to accidents.

The study's findings highlight the need for public awareness campaigns and education programs to promote safe driving practices and discourage using mobile devices while driving. It is also essential for public transportation companies to ensure that their drivers receive adequate training on safe driving practices and to implement policies that discourage distractions while on the road.

Overall, the study offers insightful information about the factors contributing to road accidents among public drivers in Danao City and underscores the importance of promoting safe driving practices to reduce the incidence of road accidents and fatalities. Based on the statistics of traffic road accidents in Danao City in 2022 [5], the record showed only the number of accidents that took place and the results of that particular accident. It did not contain the cause of road accidents in Danao City.

Table 15: Significance Relationship between the Number of Accidents Encountered and the Types of Driving Distraction in terms of Cognitive, Manual, and Visual Distraction.

Variables	Computed r value	Tabulated value	Level of Significance	Decision on H ₀
Number of accidents encountered and cognitive distraction	0.0876570718029888	0.205	0.05	Accept
Number of accidents encountered and manual distraction	0.285873113340534	0.205	0.05	Reject
Number of accidents encountered and visual distraction	0.424363500571212	0.205	0.05	Reject

Since the focus of this research study was to identify the most common driving distraction among public drivers, with information from the Traffic Management Office (TMO), the researchers needed help to make a detailed comparison between the results of this research study and the data from the TMO.

According to data in [5], 303 road accidents occurred in the year 2022 in Danao City, not limited to public drivers. The cause of these accidents could be the different types of driving distractions. As identified in this research study, visual and manual distractions among public drivers are among the most common causes of road accidents in Danao City.

4. Conclusion

Therefore, there is indeed a correlation between visual and manual distraction to the number of accidents encountered. The results clearly expressed that visual and manual driving distraction exists among the drivers in Danao City Terminal.

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6. Appendix

6.1 Letter of Request

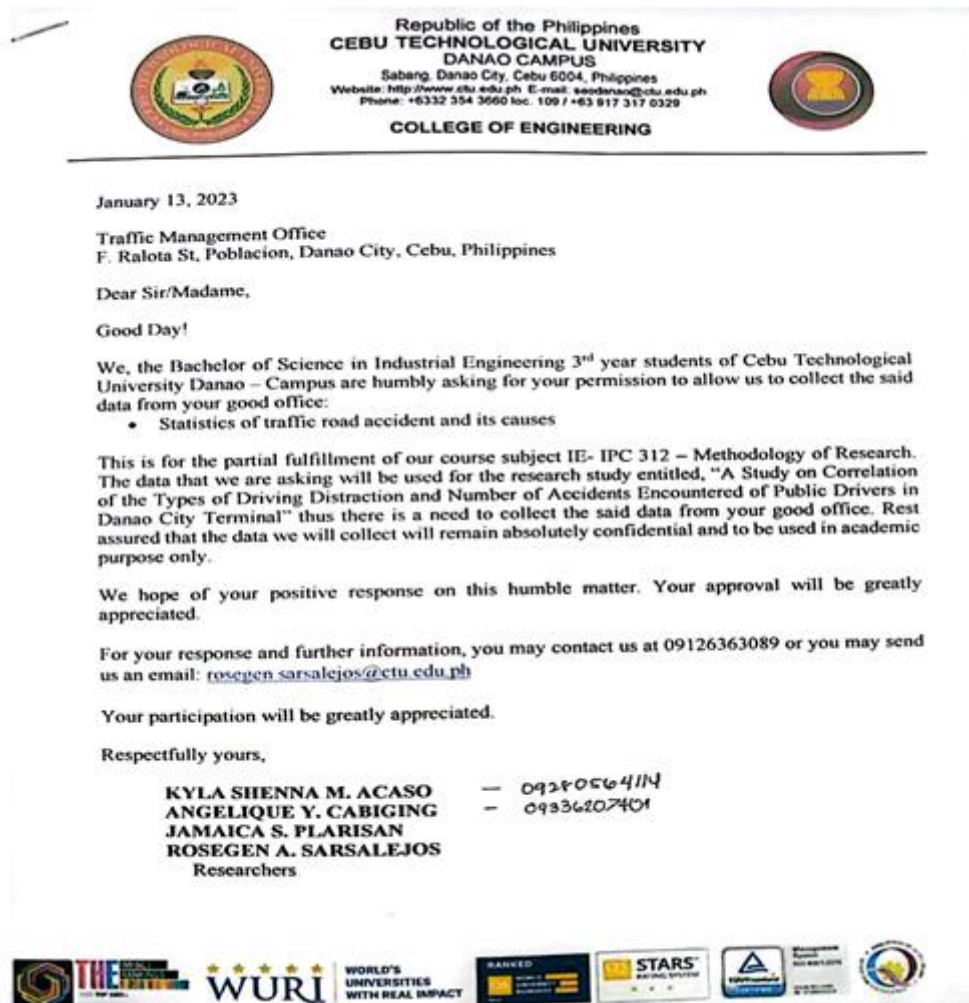


Figure 1

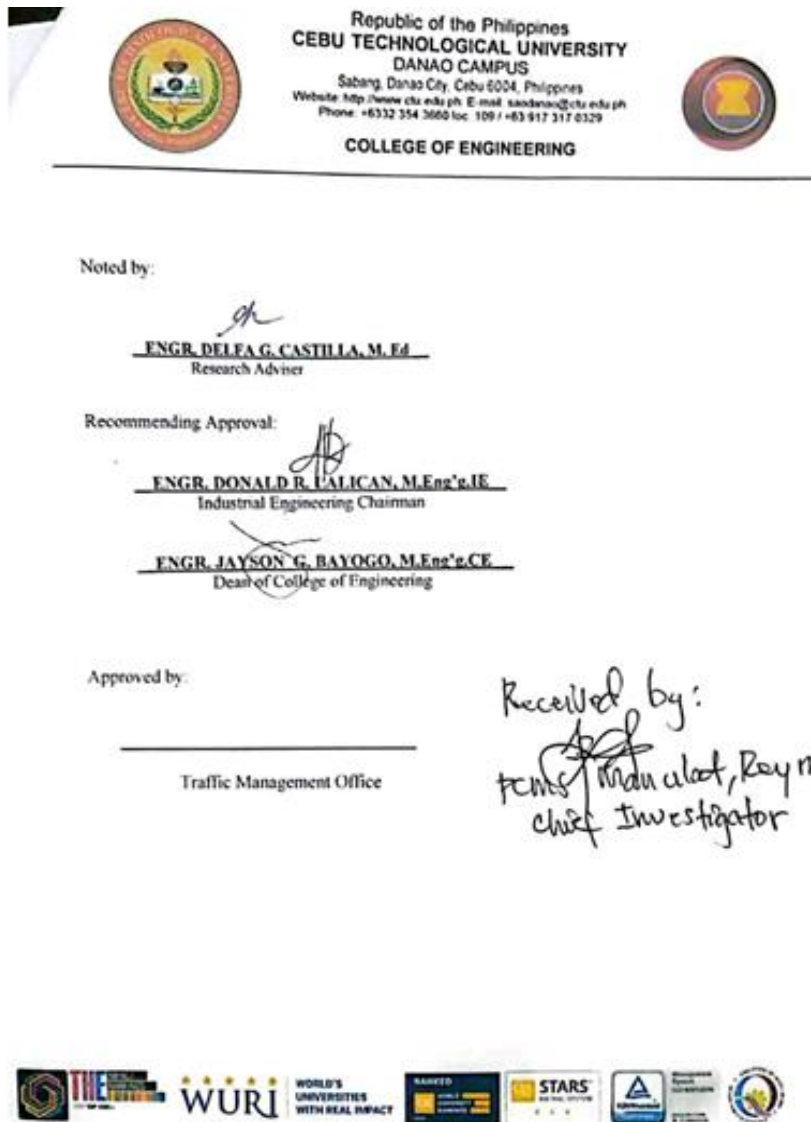


Figure 2

6.2 Statistics of Traffic Road Accidents in Danao City in the Year 2022

Traffic Accident Month of January 2022

Table 16

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	6	5					11
2. Sabang	4	1	1		1		7
3. Guinsay	2	3		1			6
4. Maslog	1	2				1	4
5. Dungga				1			1
6. Taytay	1	3	1				5
7. Cabungahan		1					1
8. Ilaya Cogon Cruz				1			1
9. Upland		1					1
10. Quarry Looc	1			2			3
11. Looc		2					2
12. Taboc Looc		1					1
13. Taboc Camaligbato		1					1
14. Ilaya, Guinacot		1					1
15. Baliang				1			1
16. Dunggo-an		2					2
Total							48

Traffic Accident Month of February 2022

Table 17

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	5	2					7
2. Sabang	1	2	2				5
3. Guinsay		1					5
4. Maslog	1	1					2
5. Taytay		1					1
6. Dunggo-an		1			1		2
7. Taboc Looc		1					1
8. Ilaya Cogon Cruz			1				1
9. Upland		1					1
Total							25

Traffic Accident Month of March 2022

Table 18

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident /Stray Dog	Hit & Run	Total
1. Poblacion	3	1						4
2. Sabang	3	1				1		5
3. Guinsay	1							1
4. Maslog								0
5. Taytay		1	1					2
6. Dunggo-an					1	1		2
7. Looc		1						1
8. Ilaya Cogon Cruz	1							1
9. Upland		1	1					2
10. Cambanay	1							1
Total								19

Traffic Accident Month of April 2022

Table 19

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	3	2	1		1			7
2. Sabang	1	3				1	1	5
3. Guinsay		1						1
4. Maslog		2						2
5. Taytay	1							1
6. Quarry Looc		1	1					2
7. Looc					1			1
8. Ilaya Cogon Cruz	1							1
9. Highway Looc		1				1		2
10. Cambanay	1							1
11. Tuburan Sur		1						1
12. Guinacot			1					1
Total								25

Traffic Accident Month of May 2022

Table 20

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	7			2	1			10
2. Sabang	3	3	2					8
3. Guinsay	1			1				2
4. Maslog	1			1				2
5. Cogon Cruz	1	1						2
6. Quarry Looc	1	1						2
7. Looc	2	1						3
8. Quisol				2				2
9. Dunggo-an		1						1
10. Cambanay		1						1
11. Taboc Looc	1	1	1					3
12. Guinacot		2						2
13. Cambubho				1				1
14. Taboc Camaligbato				1				1
15. Cabungahan	2							2
Total								42

Traffic Accident Month of June 2022

Table 21

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	1			3				4
2. Sabang			2					2
3. Guinsay		1						1
4. Maslog		1	1				1	3
5. Quarry Looc	1							1
6. Looc							1	1
7. Taytay	1							1
8. Dunggo-an		1			1			2
9. Taboc Looc		1						1
Total								16

Traffic Accident Month of July 2022

Table 22

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	5	3			1			9
2. Sabang	1	1				1		3
3. Guinsay	1	2	1					4
4. Maslog	2	2	1					5
5. Looc				1				1
6. Ibo		1						1
7. Cambanay					1			1
8. Dunggo-an	1							1
9. Tuburan Sur	1							1
10. Masaba		1						
11. Lower Quisol				1				1
Total								28

Traffic Accident Month of August 2022

Table 23

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Poblacion	5	1	1					7
2. Sabang	2		2	1				5
3. Guinsay		2	1					3
4. Maslog	1	1						2
5. Looc			1	1				2
6. Taytay	2	2				1		5
7. Taboc Camaligbato				1				1
8. Highway Looc	1							1
9. Taboc Looc	1							1
10. Upland		1				1		2
Total								29

Traffic Accident Month of September 2022

Table 24

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Dunggo-an	1				1			2
2. Sabang	1		1					2
3. Maslog			1					1
4. Taytay				1				1
5. Poblacion	2	2			1			5
6. Guinacot					1			1
7. Guinsay			2		1			3
Total								15

Traffic Accident Month of October 2022

Table 25

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Sabang	2	2						4
2. Tuburan Sur	1							1
3. Guinsay	1		1	1				3
4. Poblacion	5				1	1		7
5. Looc	1							1
6. Quarry Looc	1	1						2
7. Dunngo-an		1		1				2
8. Maslog		2						2
9. Caputatan		1	1					2
10. Taboc Camaligbato			1					1
11. Suba	1							1
Total								26

Traffic Accident Month of November 2022

Table 26

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Sabang	3	2			1			6
2. Dunggo-an	1							1
3. Guinsay	1							1
4. Poblacion		2						2
5. Looc		2						2
6. Cambanay		1						1
7. Guinacot						1		1
8. Maslog		1						1
9. Cabungahan		1						1
Total								16

Traffic Accident Month of December 2022

Table 27

Place of Accident	Damage to Property	Physical Injury with Damage to Property	Physical Injury	Self-Accident	Homicide	Self-Accident/ Stray Dog	Hit & Run	Total
1. Looc	1	1						2
2. Maslog		3						3
3. Poblacion	3		1					4
4. Guinsay	1	1						2
5. Sabang		2						2
6. Upland		1						1
Total								14

6.3 Questionnaire

Detect Driver's Distraction

Dear Respondents,

This study entitled, " A Correlation Between the Types of Driving Distractions and Number of Accidents Encountered by Public Drivers in Danao City Terminal" aims to identify the most common driver distraction and determine the relationship between the types of driving distraction and the number of accidents encountered among public drivers in Danao Terminal. We sincerely invite you to participate in this study by being one of the survey respondents by answering the survey questionnaire below. This questionnaire has three sections and will not take more than 10 minutes of your time to be completed. The information accumulated from this survey will greatly help the researcher's study and will also benefit the safety of public drivers.

This research study is solely for academic purposes, and your assistance in completing the following questionnaire will be greatly appreciated. By the consent given by answering this survey, your participation and information will be kept and remain confidential and will only be used for the following research purposes.

Please check here to indicate your informed consent to participate in this study.

Part I. Profile

Name: _____ Age: _____ Gender: _____

1. Do you have any existing health conditions? Yes No

If yes, what are the health conditions?

- Impaired Vision
- Impaired Hearing
- High Blood Pressure
- Slow Motor Reflexes
- Arthritis
- High Cholesterol
- Diabetes
- Vestibular Disorder, e.g., dizziness

- Muscle Pain
- Other Health Condition, specify: _____

2. Number of Experience

- 1 month - 1 year
- 2 years - 4 years
- 5 years - 7 years
- 8 years - 10 years
- 11 years and more

3. Type of Vehicle

- Motorcycle
- Tricycle
- Modern Jeepney/Bus/Van
- Multi-cab

4. Age of Vehicle

- 1 month - 1 year
- 2 years - 4 years
- 5 years - 7 years
- 8 years - 10 years
- 11 years and more

5. Did you encounter any accidents while driving? Yes No

5.1 If yes, how many times did you encounter road accidents?

- 4 times
- 5 times
- 6 times
- 7 times
- 8 times
- 9 times or more than

- 1 time
- 2 times
- 3 times

5.2 What are the reasons?

- Over Speeding
- Driving Under the Influence of Alcohol
- Driving While Using a Phone
- Bad Overtaking
- Drowsy Driving
- Improper Turning
- Jaywalking
- Vehicle Defect
- Slippery Road
- Uneven Road Surface
- Violates Traffic Light Signal
- Other, specify; _____

Part II. Type of Distractions

Please check the corresponding field of your answer depending on the given situation or scenario.

Table 28

Section 1: Cognitive Distraction					
When driving, you experience:	Never	Rarely	Sometimes	Often	Very Often
a. Daydreaming					
b. Stress					
c. Calling using hands-free devices, e.g., earphones, air pods, etc.					
d. Quarreling					
e. Having strong emotions such as happiness, sadness, anger, and frustration.					
f. Talking with passengers					
g. Screaming passengers					
h. Playing high-volume music					

Table 29

Section 2: Manual Distraction					
When driving, you experience:	Never	Rarely	Sometimes	Often	Very Often
a. Eating and Drinking					
b. Adjusting the setting of vehicle technology, e.g., radio channel, air-conditioner, and song selection.					
c. Smoking					
d. Helping passengers with car seats					
e. Rummaging through personal belongings					

Table 30

Section 3: Visual Distraction					
When driving, you experience:	Never	Rarely	Sometimes	Often	Very Often
a. Texting					
b. Reading roadside advertisement					
c. Looking at a billboard advertisement					
d. Checking roadside accident scenes					
e. Looking at GPS Navigation.					

6.4 Frequency and Weighted Mean of the Types of Distraction encountered by Public Drivers in Danao Terminal

Table 31

Cognitive Distraction	5		4		3		2		1		Total f	Total W	WM	Description
	f	W	f	W	F	w	f	w	F	w				
A	1	5	0	0	4	12	16	32	79	79	100	128	1.28	Never
B	5	25	18	72	35	105	20	40	22	22	100	264	2.64	Sometimes
C	1	5	0	0	6	18	4	8	89	89	100	120	1.2	Never
D	0	0	0	0	4	12	16	32	80	80	100	124	1.24	Never
E	0	0	1	4	1	3	5	10	93	93	100	110	1.1	Never
F	1	5	7	28	33	99	47	94	12	12	100	238	2.38	Rarely
G	0	0	1	4	14	42	24	48	61	61	100	155	1.55	Never
H	2	10	0	0	3	9	13	26	82	82	100	127	1.27	Never

Table 32

Manual Distraction	5		4		3		2		1		Total F	Total W	WM	Description
	f	W	F	W	F	w	F	w	f	w				
A	0	0	1	4	6	18	27	54	66	66	100	142	1.42	Never
B	0	0	2	8	7	21	22	44	69	69	100	142	1.42	Never
C	0	0	0	0	7	21	13	26	80	80	100	127	1.27	Never
D	35	175	11	44	16	48	25	50	13	13	100	330	3.3	Sometimes
E	8	40	1	4	2	6	14	28	75	75	100	153	1.53	Never
F	10	50	14	56	0	0	8	16	68	68	100	190	1.9	Rarely
G	12	60	12	48	0	0	9	18	67	67	100	193	1.93	Rarely

Table 33

Visual Distraction	5		4		3		2		1		Total F	Total w	WM	Description
	f	W	f	w	F	w	f	w	F	w				
A	0	0	3	12	7	21	15	30	75	75	100	138	1.38	Never
B	7	35	14	56	23	69	38	76	18	18	100	254	2.54	Rarely
C	8	40	13	52	25	75	34	68	20	20	100	255	2.55	Rarely
D	5	25	8	32	18	54	42	84	27	27	100	222	2.22	Rarely
E	0	0	2	8	4	12	16	32	78	78	100	130	1.3	Never

6.5 Tally and Calculation

Table 34

Part I: Driver's Profile													
Respo ndent No.	Existing Health Condition												
	Age	Y e s	N o n e	Impai red Visio n	Impa ired Hear ing	High Bloo d Pres sure	Slow Mot or Refl exes	Arthr itis	High Chole sterol	Diab etes	Vesti bular Disor der, e.g., dizzin ess	Mus cle Pain	Other Health Conditio ns, specify
	1	54	/				/						
2	46	/		/									
3	45	/		/		/							
4	43	/				/							
5	48	/		/									
6	50		/							/			
7	48	/		/									
8	45		/										
9	50	/											
10	39		/										

11	51	/			/							
12	49	/	/									
13	48	/	/									
14	49	/					/					
15	45	/			/							
16	52	/							/			
17	47	/						/				
18	48	/			/							
19	39		/									
20	47	/					/					
21	44		/									
22	45		/									
23	53	/	/		/		/					
24	49	/			/							
25	41	/						/				
26	47	/	/		/							
27	35	/	/									
28	41	/					/					
29	34	/	/		/							
30	49	/							/			
31	27	/	/									
32	27		/									
33	28		/									
34	36	/			/							
35	35	/	/									
36	30		/									
37	40	/	/									
38	39	/	/									
39	21		/									
40	22		/									
41	18		/									
42	23		/									
43	19		/									
44	36	/							/			
45	33	/								/		
46	19		/									
47	51	/			/					/		
48	32	/	/									
49	47	/			/							
50	45	/					/					
51	52	/	/		/							
52	43	/			/							
53	36		/									
54	54	/			/							
55	41	/	/									
56	50	/					/					

57	49	/			/							
58	52	/		/								
59	45	/					/					
60	54	/	/						/			
61	47	/			/							
62	40		/									
63	62	/						/				
64	44		/									
65	52	/			/							
66	48	/									/	
67	42	/			/							
68	43		/									
69	52	/			/							
70	51	/	/									
71	46	/			/							
72	40		/									
73	47	/			/							
74	42	/					/					
75	45	/			/							
76	50	/	/									
77	47	/							/			
78	49		/									
79	61	/	/		/							
80	54	/		/								
81	36	/								/		
82	49	/						/				
83	69	/	/	/					/			
84	58	/		/								
85	46	/			/					/		
86	52	/		/	/							
87	51	/			/					/		
88	53	/	/									
89	66	/			/					/		
90	37	/			/							
91	46	/			/					/		
92	32	/			/					/		
93	51	/		/						/		
94	78	/	/	/	/							
95	62	/			/					/		
96	48	/			/					/		
97	63	/		/	/							
98	62	/		/	/							
99	54	/			/					/		
100	58	/			/					/		

Table 35

Part I: Driver's Profile		
Driving Experience	Type of Vehicle	Age of Vehicle
23	Multicab	7
11	Multicab	5
15	Multicab	8
18	Multicab	4
15	Multicab	8
21	Multicab	7
19	Multicab	5
18	Multicab	6
25	Multicab	7
12	Multicab	4
17	Multicab	8
18	Multicab	8
19	Multicab	5
16	Multicab	7
23	Multicab	5
30	Multicab	6
17	Motor cycle	5
17	Motorcycle	8
13	Motorcycle	5
7	Motorcycle	7
15	Motorcycle	4
24	Motorcycle	6
28	Motorcycle	8
14	Motorcycle	6
16	Motorcycle	11
11	Motorcycle	3
9	Motorcycle	4
15	Motorcycle	9
17	Motorcycle	5
20	Motorcycle	4
7	Motorcycle	6
8	Motorcycle	4
7	Motorcycle	4
12	Motorcycle	2
10	Motorcycle	5

9	Motorcycle	2
18	Motorcycle	3
12	Motorcycle	2
4	Motorcycle	1
3	Motorcycle	1
1	Motorcycle	1
5	Motorcycle	3
2	Motorcycle	3
20	Motorcycle	3
7	Motorcycle	5
1	Motorcycle	1
21	Motorcycle	5
12	Motorcycle	2
22	Motorcycle	4
13	Motorcycle	3
28	Modern Jeepney/Bus/Van	3
15	Modern Jeepney/Bus/Van	6
10	Modern Jeepney/Bus/Van	8
20	Modern Jeepney/Bus/Van	8
7	Modern Jeepney/Bus/Van	4
18	Modern Jeepney/Bus/Van	4
11	Modern Jeepney/Bus/Van	4
19	Modern Jeepney/Bus/Van	6
11	Modern Jeepney/Bus/Van	1
20	Modern Jeepney/Bus/Van	6
12	Modern Jeepney/Bus/Van	6
17	Modern Jeepney/Bus/Van	5
11	Modern Jeepney/Bus/Van	11
14	Modern Jeepney/Bus/Van	5
15	Modern Jeepney/Bus/Van	14
19	Modern Jeepney/Bus/Van	10
18	Modern Jeepney/Bus/Van	18
10	Modern Jeepney/Bus/Van	5
20	Modern Jeepney/Bus/Van	20
13	Modern Jeepney/Bus/Van	13
15	Modern Jeepney/Bus/Van	10
10	Modern Jeepney/Bus/Van	5
15	Modern Jeepney/Bus/Van	15
10	Modern Jeepney/Bus/Van	8
9	Modern Jeepney/Bus/Van	9
22	Ticycle	6
8	Ticycle	5
6	Ticycle	4
20	Ticycle	7
20	Ticycle	11
7	Ticycle	1

11	Ticycle	8
25	Ticycle	11
18	Ticycle	4
6	Ticycle	4
16	Ticycle	4
14	Ticycle	7
18	Ticycle	8
18	Ticycle	4
5	Ticycle	5
9	Ticycle	5
4	Ticycle	1
13	Ticycle	8
29	Ticycle	8
15	Ticycle	8
17	Ticycle	10
22	Ticycle	15
18	Ticycle	7
16	Ticycle	8
14	Ticycle	6

Table 36

Part II: Accidents Encountered														
Did you encounter an accident?		Number of Accidents Encountered	Reasons of Accident			Reasons of Accident							Reasons of Accident	
Yes	None		Overspeeding	Driving Under the Influence of Alcohol	Driving While Using a Phone	Bad Overtaking	Drusy Driving	Improper Turning	Jaywalking	Vehicle Defect	Slippery Road	Uneven Road Surface	Violates Traffic Light Signal	Other, specify
	/	0												
/		2			/	/								
/		2				/			/					
/		3								/	/	/		
/		2	/						/					
/		4	/					/		/				
/		5			/			/		/		/		

/		4				/		/						
/		3			/	/				/				
/		2				/				/				
/		4	/			/				/				
/		3	/			/		/						
/		1					/							
/		5	/			/		/						
/		3	/			/		/						
/		6	/							/	/			
/		2				/							/	
/		6	/		/	/	/			/				
/		5				/				/	/	/		
/		3	/						/		/			
/		6	/	/		/	/			/				
/		3	/					/						
/		5				/				/	/			Bumped by tailing vehicle
/		2								/	/			
/		3				/				/				Bumped by tailing vehicle
/		1	/											
/		1	/											
/		2				/		/						
/		3				/	/		/					
/		3	/			/			/		/			
/		1		/										
/		1												
/		2								/	/			
/		3	/		/			/						
/		2		/			/							
/		1	/											
/		6	/				/		/	/	/	/		
/		1								/				
/		2	/	/										
/		2	/							/				
/		1	/											
/		2	/							/				
/		1								/				
/		3	/	/						/				

/		2	/			/								
	/													
/		3	/							/	/			
/		2	/		/									
/		3	/	/							/			
/		2						/			/			
/		4	/					/		/				
/		1	/											
/		2	/			/								
/		2	/			/								
/		1								/				
/		3				/		/	/					
/		3	/					/		/				
/		2	/					/						
/		1	/											
/		3	/			/		/						
/		2	/							/				
/		2	/			/								
/		3	/			/		/						
/		1												Colli sion due to over takin g by anot her vehi cle
/		3	/					/			/			
/		2	/				/							
/		4	/			/				/	/			
/		2	/							/	/			
/		6	/			/		/						
/		2						/			/			
/		3	/							/				
/		2						/	/					
/		5	/			/		/		/	/	/		
/		2						/		/				
/		3	/					/						
/		1				/								
/		1						/						
	/	0												
/		2				/				/				
/		1				/								
	/	0												
	/	0												
/		2								/	/			

/		1							/				
	/	0											
/		3	/										
/		1						/					
/		3	/					/					
/		2						/		/			
	/	0											
/		2	/										
/		1	/										
/		1				/							
/		2						/			/		
/		2						/	/				
/		1								/			
/		3	/							/	/		
/		2				/							
/		1	/					/					
/		4			/			/	/	/			

Table 37

Part III: Type of Distraction							
Cognitive Distraction							
a. Daydreaming	b. Stress	c. Calling using hands-free devices, e.g., earphones, AirPods, etc.	d. Quarreling	e. Having strong emotions such as happiness, sadness, anger, frustrations	f. Talking with passengers	g. Screaming passengers	h. Playing high-volume music
2	2	1	2	1	3	2	2
1	2	1	2	1	3	2	1
1	2	1	2	1	4	1	1
1	1	2	3	1	2	2	1
1	1	1	2	1	2	2	2
1	2	1	1	1	4	1	2
1	3	1	1	1	3	1	3
1	3	1	1	1	3	1	1
1	4	1	1	1	3	1	2

1	4	1	1	1	2	1	2
1	3	1	1	1	2	1	1
1	4	1	1	1	2	2	1
1	4	1	1	1	2	2	1
1	3	1	1	1	1	2	1
1	4	1	1	1	2	2	1
1	3	1	1	1	1	4	1
1	4	1	1	2	3	1	2
1	3	1	2	2	4	1	5
2	2	1	2	1	3	3	1
5	5	1	2	2	5	3	1
1	4	1	1	1	3	1	2
1	3	1	1	1	3	1	1
1	4	1	1	1	2	1	2
1	2	1	1	1	2	1	1
1	3	1	1	1	2	1	1
1	3	1	1	1	2	1	1
2	3	2	1	3	3	1	2
2	2	1	1	1	2	2	1
1	2	1	1	1	2	1	1
1	2	1	1	1	1	1	1
1	1	1	1	1	3	1	1
1	2	1	1	1	2	1	1
1	2	3	1	1	3	2	1
1	2	3	1	1	2	1	1
1	3	1	1	1	3	1	1
1	2	3	1	1	3	2	3
1	3	3	1	1	2	2	1
1	3	1	1	1	3	1	1
1	3	3	1	1	2	1	1
2	2	1	1	1	2	1	1
1	1	1	1	1	4	1	1
1	3	1	1	1	2	1	1
1	1	1	1	1	2	1	1
2	3	2	1	1	3	2	1
2	2	1	1	1	3	1	1
1	1	1	1	1	2	1	1
2	3	1	1	1	3	1	1
1	1	2	1	1	2	1	1
1	3	1	1	1	2	1	1
1	1	1	1	1	4	1	1
1	1	1	1	1	1	1	2
1	1	1	3	1	3	2	1
2	2	1	2	1	4	2	5
1	1	1	1	2	3	1	1
1	4	1	1	1	2	2	1

1	3	1	1	1	2	2	1
1	4	1	1	1	2	2	1
1	5	1	1	1	3	3	1
1	4	1	1	1	1	1	1
1	3	1	1	1	1	1	1
1	4	1	1	1	1	1	1
1	3	1	1	1	3	1	3
1	3	1	1	1	3	1	2
1	3	1	1	1	2	1	1
1	3	1	1	1	3	1	1
1	3	1	1	1	2	1	1
1	3	1	1	1	2	1	1
1	4	1	1	1	3	3	1
1	2	1	1	1	2	1	1
1	2	1	1	1	2	1	1
1	3	1	1	1	3	1	1
1	3	1	1	1	3	1	2
1	3	1	1	1	2	1	1
1	4	1	1	1	2	1	1
2	1	1	2	1	2	1	1
1	1	1	1	1	2	2	1
1	4	1	1	1	2	2	1
1	1	1	2	1	3	3	1
1	3	1	1	1	1	3	1
1	1	1	3	1	2	1	1
1	3	1	1	1	2	3	1
3	5	1	3	1	2	2	1
1	3	1	1	1	2	2	1
1	1	1	1	1	3	1	1
2	3	1	2	1	2	3	1
3	3	1	1	1	3	1	1
1	2	1	2	1	2	2	1
1	3	1	2	2	2	3	1
1	3	5	2	1	2	1	1
2	4	1	1	1	1	1	1
2	4	1	1	1	4	3	2
2	2	3	2	1	3	3	1
2	1	1	1	1	2	2	1
2	1	1	1	1	3	1	1
1	1	1	1	1	1	1	1
3	5	1	1	4	1	3	1
1	1	1	1	1	3	1	1
3	4	1	1	1	1	3	1
1	1	1	2	1	2	3	1

Table 38

Part III: Type of Distraction						
Manual Distraction						
a. Eating and drinking	b. Adjusting the setting of vehicle technology, e.g., radio channel, air-conditioner, and song selection.	c. Smoking	d. Helping passengers with car seats	e. Rummaging through personal belongings	f. Accepting fare while driving	g. Giving fare change while driving
1	1	1	3	1	4	4
1	1	1	1	1	4	4
1	1	1	3	1	5	5
1	1	1	4	1	5	4
1	2	1	4	1	4	4
1	1	1	4	1	5	5
1	3	2	1	1	4	4
2	1	2	1	1	5	4
1	2	2	1	1	4	5
1	2	2	1	1	4	5
1	1	1	2	1	5	4
1	1	1	3	1	4	5
1	1	1	3	1	4	5
1	1	1	4	1	5	5
1	1	1	3	1	4	4
1	1	1	4	1	4	4
4	4	3	2	2	5	5
1	3	1	2	4	4	4
1	2	1	3	2	4	5
2	1	1	4	1	4	5
2	2	3	1	2	5	4
2	1	1	1	1	5	4
2	2	2	1	1	4	5
1	1	1	1	1	2	2
2	1	2	1	1	5	5
1	1	1	2	1	1	1
1	2	1	2	1	1	1

1	1	1	2	1	1	1
1	1	1	4	1	1	1
1	1	1	3	1	1	1
1	1	1	1	1	1	1
1	1	1	1	1	1	1
3	1	3	4	2	1	1
2	1	1	5	1	1	1
3	1	3	3	2	1	1
3	1	2	5	2	1	1
2	1	1	5	1	1	1
2	1	1	5	1	1	1
3	1	3	5	1	1	1
2	1	1	5	1	1	1
2	1	1	3	2	1	1
2	1	1	3	1	1	1
2	1	2	5	1	1	1
3	1	3	3	2	1	1
3	1	1	3	2	1	1
2	1	1	5	1	1	1
1	1	3	3	1	1	1
2	1	2	3	1	1	1
2	1	1	3	1	1	1
2	1	1	3	2	1	1
1	1	1	5	1	1	1
1	2	1	2	1	1	1
1	3	1	5	1	1	1
1	4	1	4	2	1	1
1	1	1	3	1	1	1
1	1	1	5	1	1	1
1	1	1	5	1	1	1
1	1	1	5	1	1	1
1	2	1	3	1	1	1
1	2	1	5	1	1	1
1	2	1	3	1	1	1
2	3	1	2	1	1	1
1	2	1	2	1	1	1
1	2	1	2	1	1	1
1	3	1	2	1	1	1
2	2	1	2	1	1	1
1	2	1	2	1	1	1
1	3	1	2	1	1	1
1	3	1	2	1	1	1
1	2	1	2	1	1	1
1	2	1	2	1	1	1
1	2	1	2	1	1	1
1	1	2	1	3	1	1

2	2	1	2	1	1	1
2	2	1	2	2	1	1
1	1	1	5	3	1	1
1	2	1	5	1	1	1
1	1	1	5	1	1	1
1	1	1	5	2	1	1
1	1	1	5	1	2	2
1	1	2	5	2	2	2
1	1	1	5	1	1	1
2	1	1	5	1	1	1
2	1	1	5	1	2	2
1	1	1	5	1	1	1
1	1	1	3	1	2	2
1	1	1	5	5	1	1
1	1	2	2	1	1	1
1	1	1	5	5	1	1
1	1	1	5	1	1	1
2	1	2	2	1	1	1
1	1	1	2	1	2	2
2	2	1	5	5	1	1
2	1	1	5	5	1	1
1	1	1	5	5	1	1
1	1	1	5	5	2	2
1	1	1	5	1	1	2
2	1	1	5	5	1	1
1	1	1	5	1	2	2
1	1	1	5	5	1	1

Table 39

Part III: Type of Distraction				
Visual Distraction				
a. Texting	b. Reading roadside advertisements	c. Looking at billboard advertisements	d. Checking roadside accident scenes,	e. Looking at GPS Navigation .
1	4	4	2	1
1	2	2	1	1
1	2	2	2	1

1	2	3	3	1
1	3	2	2	1
1	3	3	1	1
3	5	5	3	1
2	4	4	4	1
4	4	4	4	1
4	5	5	4	1
2	4	4	2	1
1	2	1	2	1
1	2	2	2	1
1	2	1	2	1
1	2	2	2	1
1	2	2	2	1
2	5	5	4	1
4	5	5	2	1
1	2	2	1	1
2	1	1	3	1
3	5	5	2	1
1	4	4	2	1
2	4	4	2	1
2	3	3	1	1
3	4	4	3	1
1	2	1	2	1
1	2	3	2	1
1	2	2	1	1
1	2	2	1	1
1	2	3	2	1
1	2	2	2	1
1	4	2	4	1
1	3	3	4	1
1	2	2	5	1
2	3	3	3	1
1	2	2	3	1
1	2	2	3	1
2	2	2	3	1
1	2	2	3	1
1	3	3	5	1
1	3	3	3	1
1	3	3	3	1
1	3	3	3	1
1	3	3	5	1
1	3	3	3	1
1	3	3	3	1
1	3	3	3	1
1	3	3	3	1
1	3	3	3	1
1	3	3	3	1
1	3	3	3	1

1	3	3	5	1
1	2	2	2	1
1	2	2	1	1
1	1	3	1	1
1	1	5	5	4
1	2	2	2	3
1	2	1	2	4
1	2	1	2	3
1	2	2	2	3
1	1	1	2	2
1	2	2	2	3
1	1	1	2	2
3	4	4	2	2
3	4	4	2	2
1	3	3	1	2
3	4	4	2	2
2	4	4	1	2
1	3	3	1	2
3	3	3	2	2
2	5	5	2	2
1	3	3	1	2
2	3	3	1	2
2	4	4	2	2
2	5	5	2	2
2	4	4	2	2
2	3	3	1	2
1	2	2	2	1
1	2	2	2	1
1	1	1	1	1
1	3	3	2	1
1	1	1	1	1
1	2	2	2	1
1	1	1	1	1
1	2	2	1	1
1	2	2	1	1
1	1	1	1	1
1	2	2	2	1
1	3	2	2	1
1	1	1	3	1
1	1	2	2	1
1	1	1	1	1
1	1	1	2	1
1	1	1	2	1
1	1	1	1	1
1	1	1	3	1
1	1	1	1	1

1	1	1	1	1
1	2	2	4	1
1	2	2	1	1
1	2	2	1	1
1	2	2	4	1

6.6 Proofs of Conducting the Study

Day 1: Tricycle Drivers



Figure 1



Figure 2



Figure 3



Figure 4

The researchers conducted their first survey on November 23, 2022, at Danao City Terminal and collected data from 25 tricycle riders.



Figure 5



Figure 6

Day 2: Multicab and Van/Bus Drivers



Figure 7

Figure 8

The second research survey was conducted on November 24, 2022, during which the researchers collected data from multi-cab, van, and bus drivers.

Day 3: Motorcycle Drivers



Figure 9

Figure 10

In the survey that ended on November 25, 2022, the researchers collected data from 25 respondents who were motorcycle drivers.