DOCUMENTARY ANALYSIS ON VEHICULAR ACCIDENTS IN DAVAO CITY: BASIS FOR ACTION PLAN

The University of Mindanao

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Chapter 1

THE PROBLEM AND ITS SETTING

Background of the Study

Traffic accidents constitute a major health and development crisis and are predicted to increase if not addressed adequately. Every year, according to the statistics, 1.3 million people are known to die in auto collisions around the world. Almost 3,500 individuals kick the bucket on the world's streets consistently. A huge number of individuals are harmed or crippled each year. Youngsters, people on foot, cyclists and the elderly are among the most defenseless of street clients. If current trends continue, traffic accidents are anticipated to wind up distinctly the fifth driving reason for death by 2030. Currently it is in ninth place (WHO, 2012).

In the Philippines, a study conducted by the Department of Health emphasized that traffic accidents are the fourth driving reason for death among Filipinos and expected that if this issue is not settled rapidly, car crashes could be the top driving reason for death among Filipinos by the year 2020. In 2006 alone, there were at that point 15,000 instances of activity related mischances and fatalities. Meaning, practically consistently there were 41 instances of movement related mischances and passing(DOH, 2008).

In Davao City, the official website of SunstarDavao revealed information on traffic accidents data for the last ten months only of 2011. From January to October, 2011 there was a total of 6,789 accidents occurred.

Traffic Management Group or TMG emphasized this as very alarming traffic accident data. In most cases, criminal traffic offenses prompt to mishaps and even passing that could have been forestalled (TMG, 2011).

Hence, the above cited premises prompted the researchers to conduct this study is to find out the profile of vehicular accidents in Davao City. The result of the study may be used as basis for action plan to further improve the traffic safety and strict enforcement for drivers. Through this action plan, occurrence of vehicular accidents may be reduced.

Statement of the Problem

The study aimed to find out the Documented Analysis on Vehicular Accidents in Davao City as Basis for Action Plan. Specifically, it aimed to answer the following questions:

1. What is the rate of traffic accident in Davao City for Calendar Year 2012 – 2015 in terms of;

   1.1 Month;

   1.2 Types of Vehicle Involved; and

   1.3 Types of Accidents?

2. Based on the findings: What action plan can be proposed?

Review Related of Literature

This section provides relevant information and literature that support the recent study.

The National Highway Traffic Safety Administration as cited by Woloch (2012) conducted a study on traffic accident that happens every ten seconds in the United States. One percent of those mischances brings about death and 33% in harm. Over half of those mishaps included a driver who disregarded posted speed points of confinement, and more than 33% included liquor. In most auto collisions, carelessness must be resolved. For the most part, mischances happen on the grounds that at least one drivers neglect to obey movement flags and signs, overlook as far as possible, drive too quick or too moderate, neglect to utilize their turn signals, utilization of medications or liquor while driving, drive carelessly like passing or switching to another lane disgracefully. In addition, vehicular deformities, poor street and climate conditions, street impediments and breaking down activity flags likewise have an influence in auto collisions.

O'brien (2012) highlighted that lethal trucking mischance in Chesterfield, Burlington County close the New Jersey Turnpike for a few hours at a young hour in the morning last May 21,2010. One truck driver passed on at the scene and another truck driver stays in basic condition. The National Highway Traffic Safety Administration issued a report in 2008 enumerating trucking mischances in the United states. Truck drivers required in single vehicle accidents will probably be slaughtered than truck drivers required in numerous vehicle crashes. At the end of the day, the individual most get a kick out of the chance to bite the dust in a trucking mischance is not the truck driver, but rather a driver of another vehicle required in a mishap. Likewise, as per NHTSA, most deadly trucking mishaps happen in rustic regions, amid the daytime and on weekdays. Obviously, trucking mishaps are

perilous. Truth be told, trucking mischance fatalities accounted of 11 percent of the quantity of movement fatalities in the U.S in 2008. One stage in the correct heading to the control activity fatalities is a current boycott actualized by U.S Department of Transportation. As of January, 2010, drivers of business transports and trucks are precluded from messaging while driving.

The idea of O'brien testified that truck drivers required in single vehicle accidents will probably be slaughtered than truck drivers include in various vehicle crashes. At the end of the day, the individual most get a kick out of the chance to pass on in a trucking mischance is not the truck driver, but rather a driver of another vehicle required in auto collision.

Recognizing road incident hotspots may be a key a piece done choosing great methods to decreased those thickness ranges clinched alongside mischances. This paper shows a method using geological data frameworks (GIS) Furthermore portion thickness estimation will think those spatial illustrations from claiming harm related road mischances in London, uk Furthermore a bunching method using biological majority of the data Furthermore comes about from the principle territory with settle on a request for road incident hotspots. Those usage of this procedure will be portrayed using the London run in the U.K. Road incident majority of the data assembled by those Metropolitan starting with 1999 on 2003 might have been used. A bit thickness estimation aide might have been settled on and in this lifestyle disaggregated by cell thickness should make a key spatial unit of a accident hotspot. Included biological majority of the data might have been that point included of the hotspot units and using K-implies grouping, an aftereffect from claiming similar hotspots might have been deciphered. Five get-

togethers What's more 15 bunches were settled on light for effect What's more personal satisfaction data. These bunches are inspected What's more evaluated for every their vigor Furthermore possibility utilization over road security crusading(Anderson, 2009).

Many creators have recommended that some street car accidents are masked suicide endeavors. A case report and writing audit is utilized to investigate this claim and to inspect the recurrence and hazard variables related with driver suicide. The creator closes the methodological trouble of building up the driver's expectation of suicide records for an under-estimation of the recurrence of this occasion and that many instances of driver suicide go unrecognized. Nature with the hazard variables related with driver suicide may aid the ID of instances of fizzled driver suicide and referral to psychiatric administrations (Duke, 2010).

Zozobrado (2009) concluded that a great deal of street mischances happens due to drivers who don't take after activity principles and controls. As a rule, petty criminal offenses prompt to mishaps and even passings that could have been forestalled by the drivers by taking after the essential standards. In any case, more than those reasons, it is the clear numbness of the drivers or outright unyieldingness in taking after movement rules. It is essential to keep them continually mindful of the fundamental movement runs so they can apply this in their day by day exercises.

Halbert (2008) out of the aggregate mishaps in the EU, 67 percent are in the urban zones and in 75 percent of the aggregate mischances, the driver is male. Youthful drivers between age 18 and 25 are included in more than 21

percent of the aggregate mishaps and fatalities. Inquire about demonstrates that the majority of mischances happen because of neglectful driving and inebriation. Other than this, there are huge quantities of rollover mischances including youthful grown-ups and high school drivers. The quantity of mishaps because of inebriation is additionally expanding persistently. In the US, around 70 to 80 individuals bite the dust each day because of mishaps identified with liquor.

Auto crashes would a standout amongst the fundamental wellsprings from claiming fatalities in the us. A crucial pointer from claiming survival rates after a incident may be those time between those accident Furthermore The point when emergency therapeutic worth of effort power are dispatched of the scene. Bringing crazy in long run, the middle of the point when an accident happens and at kin around call need aid dispatched of the scene diminishes passing rates. Eventually, Tom's perusing 6 percent. Restricted on manage dispensing with the postponement the middle of accident occasion Furthermore master once call dispatch may be to utilize in-vehicle programmed incident ID number What's more cautioning frameworks, which sense in point when auto collisions happen Also right away instruct emergency worth of effort compel. These in-vehicle frameworks, on whatever case, are not open altogether autos What's more need aid unreason ability on retrofit for that's only the tip of the iceberg prepared vehicles. This paper portrays how cell phones, for example, the iPhone. Furthermore, google bisexuality stages, could characteristically distinguish auto collisions using accelerometers What's more acoustic information, right away educate an central emergency dispatch server following an mishap. Furthermore, provide

for situational Care through photos, GPS arranges, VOIP correspondence channels, Furthermore accident data recording(White, 2011).

Top to bottom investigations of deadly vehicular mischances give profitable information to actualizing successful crisis administrations to decrease the injury related mortality and fortifying lawful measures in pinnacle hours of lethal mishaps. The example of wounds particularly lethal traumatic mind wounds happening in vehicular mischances. Following passing reports furthermore clinical records about setbacks of road auto crash autopsied amid the chance for 2001–2005 during section from claiming measurable solution What's more Toxicology, at India organization of restorative Sciences, new Delhi, were poor down reflectively. Crazy of aggravator 7008 medico legitimate dissections headed amid the survey time frame, 2472 were from claiming vehicular mischances. The male/female extent might have been 7. 49:1. Commonest period assemble impacted might have been between 21-40 quite some time including 1341 instances. Pre-healing office mortal sin might have been clinched alongside 985 situations. Dangerous traumatic cerebrum wounds were seen in 1699 situations. Skull cracks were found in 1183 instances of mind damage; mossycup oak standard bone poor might have been worldly bone. The commonest combination for intracranial channel might have been subdural release. The craniotomy might have been completed in 297 cases; practically amazing mortal sin might have been seen inside 4–days. Practically Typically hurt stomach organ might have been liver. No incredulous difference might have been self-evident. On event about dangerous vehicular accident on winds of the week and weekdays (Kumar, 2008).

A broad accumulation from claiming previous composing need used a combination about weigh majority of the data demonstrating methodologies on investigation acknowledges that impact those repeat from claiming thoroughfare mishaps through exactly the long run looking into roadway portions of a predefined period. A choice manner should manage this issue sees vehicle incident rates (mischances for every mile driven) particularly as opposed their frequencies. Perceiving the issue Concerning illustration constant majority of the data as opposed incorporate majority of the data makes a issue that roadway segments that don't have At whatever viewed mishaps over the perceived run through settle on unending majority of the data that are left-blue-penciled during zero. Secret word investigates need fittingly associated a tobit backslide model with address this blue penciling issue, yet this investigation need been confined over record for impalpably heterogeneity since it need been normal that the parameter assessments are settled again roadway-section recognitions. Using 9-year majority of the data from urban interstates to Indiana, this paper uses unpredictable parameters with bit backslide will representable surreptitiously heterogeneity in the examination for motor vehicle incident rates. The correct conclusions show that those unpredictable parameters tobit show thumps its settled parameters accomplice Also could conceivably provide for An more full appreciation of the components choosing accident rates looking into roadway portions (Anastasopoulos, 2012).

The variables including of the hurt reality from claiming bicyclists done bicycle–motor vehicle mischances using An multinomial logit show. The

model predicts those probability of four hurt reality results: deadly, crippling, non-weakening, and possible or no harm. The examination relies for police-revealed incident data in the region about 1997 What's more 2002 starting with North Carolina, USA. The results show a couple segments which more than twofold those probabilities of a bicyclist continuing An dangerous hurt done An mischance, each other thing continuously kept reliable. Strikingly, extreme climate, murkiness without whatever streetlights, a. M. Top banana (06:00 An. M. To 09:59 a. m.), head-on impact, speeding-included, vehicle speeds over 48. 3 km/h (30 mph), truck couch included, intoxicated driver, bicyclist ageistic 55 alternately over. Also, intoxicated bicyclist. The greatest sway will be brought looking into at assessed vehicle speed in the recent past impact is All the more conspicuous over 80. 5 km/h (50 mph), the place the probability about disappointment harm assembles more than 16-overlay. Speed similarly exhibits an edge sway toward 32. 2 km/h (20 mph), which bolsters those by and large used 30 km/h velocity compel in private neighborhoods. Those conclusions similarly induce that bicyclist fault may be more solidly corresponded for All the more foremost bicyclist harm reality over driver be faulted (Kim, 2007).

Head harm will be an crucial purpose behind mortal sin around the world Concerning illustration those head may be the practically defenseless bit of the form needed in dangerous road auto collisions. The introduce Audit might have been grasped with respect to 682 setbacks about road auto crashes who passed ahead due to wounds figured out how of the head, which were autopsied in locale Wenlock Hospital, Mangalore again a period from claiming 5 A long time the middle of January 1999 and December 2003. The

larger part of the mishaps needed happened amid those nighttime Furthermore night hours (1400–2200h). There might have been an stamped male predominance (84. 6 percent). Those mossycup oak defenseless ageistic gathering might have been watched to a chance to be in the region of 21 Furthermore 30 a considerable length of time. Bicycle tenants were the vast majority as a rule incorporated. Skull cracks were accessible over 88. 88 percent of the instances. Breaks of the vault were discovered in 88 percent, build of the skull on 35. 97 percent. What's more a mix of both to 35 percent for situations. In the lion's share of the cases, fissured breaks were uncovered (23 percent). "around intra-cranial hemorrhages, subdural channel might have been found Previously, 52. 63 percent and subarachnoid release for 27. 27 percent of instances. Wounds and slashes for personality were ran across Also for 35 percent of cases. (Menon, 2008).

Vehicles would these times outfitted with an combination for new sensors provided for social event information over themselves and from their surroundings. Clinched alongside An not with the goal inaccessible future, these vehicles will similarly could impart every last one of gathered data, with those including state and Around contiguous vehicles through sharp remote associations. They will similarly have those limit with interface for emergency reductions on there ought to emerge an event for mischances. Subsequently, flowed requisitions clinched alongside light from claiming vehicular Networks (VNs) ought further bolstering agree once a 'typical comprehension' from claiming setting to interoperability, and, hence, it will be vital with aggravate An standard structure which empowers majority of the data interoperability "around every last one of different substances required for transportation

frameworks. In this paper, we focus on development security applications; particularly, we show the VEhicularACcidentONtology (VEACON) expected on improve movement wellbeing. Our logic consolidates the information assembled when a accident happens, and the majority of the data receptive in the all Estimates framework (GES) mishaps database. We assess those reliability about our proposition using both sensible crash tests, held in the business settings about Applus+ IDIADA clinched alongside Tarragona, Spain, Also vehicular system recreations, in perspective of the ns-2 propagation cost instrument flying. Test goes over highlight that both contiguous vehicles Furthermore framework segments (RSUs) would faultlessly advised around An accident On just a couple moments, stretching the emergency administrations cautioning sufficiency(Barrachina, 2012).

According to the Antiporda (2017) that buses was the main cause of increasing numbers of death in just one accident occur, because of the capacity of a bus to accommodate lot of passengers. Based on the records, the tragic accident in Tanay, Rizal claimed 15 people dead and it was the basis of Senator Grace Poe in her proposal to create National Transportation Safety Board (NTSB) under Senate Bill 162 to Department of Transportation (DOTr).

Megalingam (2010) Infers a technique on shrewdly recognize a accident at wherever and In whatever the long run Furthermore report card those same of the contiguous `service supplier'. Those pro center orchestrates the key the table support. Accident identification Also reporting weight framework (ADRS) which might a chance to be place over whatever vehicle uses a sensor will distinguish the incident. Those sensor yield will be

checked Furthermore took care of Toward those PIC16F877A microcontroller. The microcontroller takes decision on the auto crash in perspective of the commitment starting with those sensors. Those RF transmitter module which may be interfaced for those microcontrollers will transmit those incident information of the contiguous crisis administration supplier (ESP). This information will be gotten Toward the rfauthority module during the `service supplier' control room in the territory. Those rf handset module used need An extend dependent upon 100 meters under impeccable states. Those master center could use this information will genius salvage vehicle Also inform police What's more facility. We used negligible exert RF modules, a microcontroller Eventually Tom's perusing Microchip, LCD module Also a accelerometer. This schema might make presented toward maladroit locales Also it could basic on recognize Also report card those same. MPLAB IDE and Proteus modifying would use reenact a few parts of the skeleton. ADRS similarly executes an smart mischance identification What's more reporting weight calculation (ADRA) for the motivation behind.

Traffic accidents has been the problem of all country for decades. The researchers concluded that during the trials of traffic accident cases was became doubtful for them in making their judgement because trial is done too fast compared to the other cases. They also added that physical appearance and proper grooming of the defendants and accused would affect the judgement of the judge in respect in the court room (McDade, 2014).

Those Extending development in the shrewdly transportation frameworks (ITS) area confronts a strong impediment: the moderate pace during which the auto business is making autos "more fast witted".

Notwithstanding the thing that could make expected, the wireless industry will be progressing quickly. Existing Mobile phones are supplied with different remote interfaces. Furthermore,secondary computational power hosting those abilities on assume out an totally combination for errands. By combining Mobile phones with existing vehicles through a correct interface we camwood draw closer of the splendid vehicle worldview, advertising the customer new functionalities and administrations at crashing. In this paper, we recommend an Android-based provision that screens those vehicles through an with respect to table diagnostics (OBD-II) interface, Hosting the ability should distinguish mischances. Our suggested requisition gauges the g drive encountered by the travelers if there ought to a chance to be an event of a frontal crash, which is used together with airbag triggers on recognize mishaps. Those provision responds with certain ID number Eventually Tom's perusing sending insights over the incident through Possibly email or SMS on pre-characterized goals, right away took following Eventually Tom's perusing an programmed phone call of the emergency administrations. Exploratory results using an real vehicle show that the provision could react should accident events over under 3 seconds, a low time, sanctioning that achievability about wireless develop replies for upgrading wellbeing done light of the road(Zaldivar, 2011).

Quick What's more helpful correspondence of the suitableness affiliation will be vital amid existence undermining events and is especially substantial for vehicular mishaps which might incorporate crashes, rollovers provoking on impacts, et cetera. Mischances in which an vehicle moves over record for the more stupendous and only know single-vehicle crash passings.

An emergency structure to a vehicle might perceive Furthermore break down the life-debilitating occasion, and, done an electronic form, inform those emergency restorative administrations (EMS) suppliers to prompt action. Same time there need aid few about such frameworks accessible, the lion's share from claiming them are expensive, vehicle particular, obliges mankind's mediation, and don't provide for information around those biological states of the vehicle. This keeps those EMS suppliers from scurrying the needed course of action about serves of the accident webpage at the most punctual. Those targets for this fill in will be on develop a universally suitable programmed emergency cautioning structure to vehicles using different sensors that will screen those vehicle and, in the event of a crash, Regularly report card all possible information (vehicle tilt, temperature, light, speed, area, date What's more time) of the EMS suppliers. The framework Also change in spite of the truth that mulls again the United States of Americapsilas movement. Furthermore framework; those made schema may be spare from spatial necessities What's more could make used by(Acharya, 2008).

An broad bunch about Scrutinize need associated alcohol use What's more motor vehicle mishaps (MVAs), yet significantly lesquerella reviews need assessed the peril from claiming MVA setback "around solution customers. Our survey addresses this fissure. We distinguished copartners about kin hospitalized Previously, california starting with 1990 on over 2,800 doctor look assignments led from April 1, 2009 to March 31, 2010 for ICD-9 analyses of methamphetamine, liquor, opioids, cannabis, cocaine, alternately polydrug-related clutters, and these get-togethers were taken after for up to

16 A long time. Age, sex, also race-balanced instroke demise rates (SMRs) to passings due to MVAs were generated for association of the California. Generally speaking, state funded. Instroke MVA mortal sin proportions were hoisted again know solution partners: alcohol (4. 5, 95 percent), cocaine (3. 8, 95 percent), opioids (2. 8, 95 percent), methamphetamine (2. 6, 95 percent), cannabis (2. 3, 95 percent) Furthermore polydrug (2. 6, 95 percent). Guys and females needed similar MVA SMRs. Our huge, people built Audit found lifted peril of MVA mortal sin through the sum friends for people for alcohol or prescription use scatters. Provided for that illicit prescription customers are every now and again insensible from claiming alternately misperceive the impacts from claiming prescription use for sheltered driving, it could be basic for wellbeing organization or all wellbeing mediations should deliver such predispositions also improve road security(Callaghan, 2013).

Vehicular accident was the fourth leading cause of death worldwide the main reason is human error, fails to follow nor obey traffic rules and undisciplined drivers. The World Health Organization was continue monitoring the records of traffic accidents for the reason of the increasing number of accidents and deaths by the drivers. The alerting data result become the basis of the vehicle company in inventing new sensors and upgraded technology attached to a car.

Theoretical and Conceptual Framework

This review is moored on the hypothesis of Tamayo (2009) that the street mischance is ordinarily credited to the crash of vehicles, person on foot, or with a question that will result to death, handicap and harmed property.

Causes vehicular mishaps in the Philippines are the driver's blunder, mechanical deformity, over speeding, drinking of liquor before driving, and harmed streets. The said concentrate concentrated on the event of the vehicular mischances from period 2001 to 2006.

Figure 1 shows the conceptual framework of the documented analysis on vehicular in Davao City as basis for action plan. The input is the Month, Type

Input **Output**

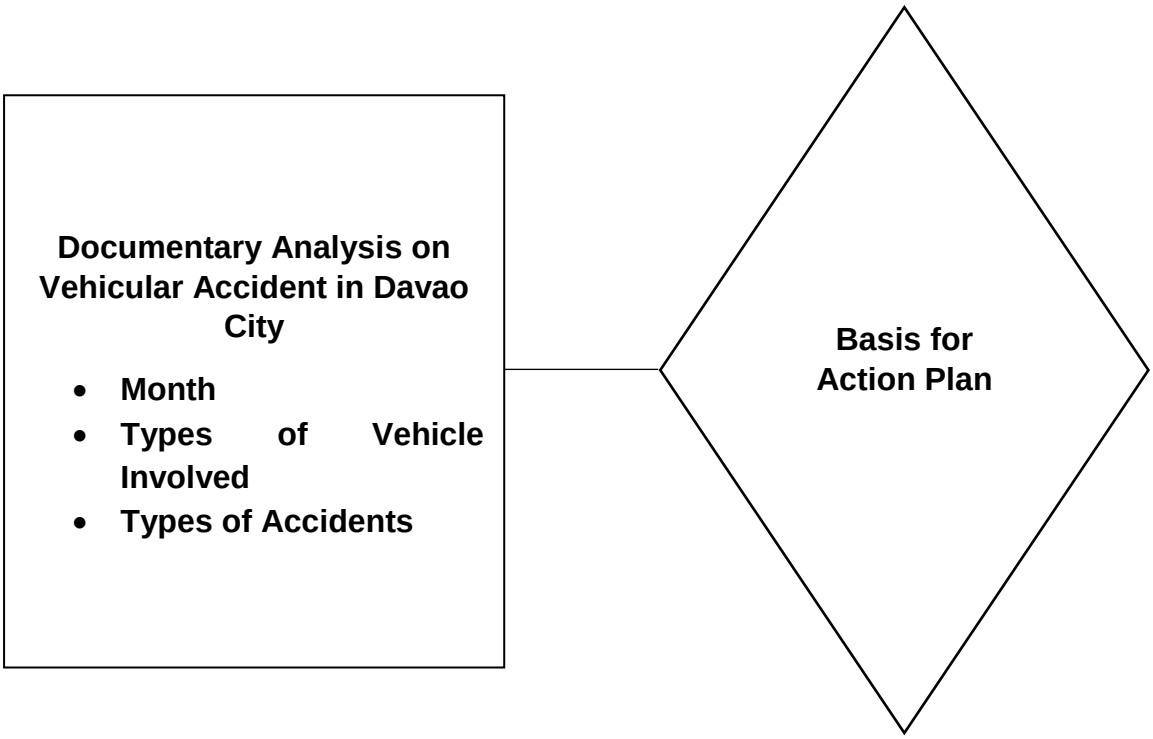

Figure 1. Conceptual Framework Showing the Variables of the Study

of Vehicle Involved and Types of Accident. The output is the Basis for Action Plan.

Significance of the study

The findings of the study will be beneficial to the following:

Land Transportation Office. The findings of this study will help the awareness of the LTO in vehicular accident occurred in Davao City, if the result of the study has increased to the number of percentage from the past years, and will find out if their action plans for motorist become effective.

Traffic Management Center. The result of this study will be the source of information on what is the volume of vehicular accidents occurred in Davao City. The result of this study will be useful also to the traffic management center in their campaign on road safety and formulating plans to enforce, educate, improve and prevent vehicular accidents in Davao City.

Local Government Unit. The finding in this study would improve their action plan and develop their traffic enforcers in vehicular accidents.

Road User. The findings of this study would serve as awareness for the road users of common vehicular accident that drivers encounter on road and for them to check their motor vehicle before they use it for ride.

Criminology Students. This study can be used for further information in the lectures of the professor not only to the book required for the students,this will be helpful for the students in awareness of vehicular accident occurred in Davao City.

Future researchers. The result of this study will provide a basis for further research.

Definition of terms

The terms used in the study are operationally defined.

Documentary analysis. This means an analysis of documented accidents recorded in Davao City if the current year lessened the number of motor vehicle incidents compared to previous years.

Vehicular accident. Defined as when a motor vehicle strikes or collides to another vehicle, pedestrian, animal, and property damages or any stationary obstruction.

Action Plan. This refers to the Traffic Group Management plan if their campaign for road safety through seminars, became effective in minimizing the

number of vehicular accident in Davao City.

Chapter 2

METHOD

In this chapter, the researchers present the research design, research subjects, research instrument, data gathering procedure and the statistics treatment of data.

Research Design

A descriptive data was used in this study. According to Manda (2012), descriptive data is used when the objective of the study is to look into the frequency, average or other statistical methods to understand a subject being studied and to find out the prevalence of a problem in a certain demographic area.

The descriptive data was an appropriate method in analyzing the vehicular accident recorded in Davao City.

Research Subjects

The data that was used in this study weretaken from City Transportation and Traffic Management Office (CTTMO). This data that were gathered involved the records of all vehicular accident in Davao City.

Research Instrument

The researchers were used hard data requesting the City Transportation and Traffic Management Office (CTTMO) in Davao City. The data that wereobtained from the above said agencies were used for documentary analysis of vehicular accident in Davao City as for basis for action plan.

Data Gathering Procedure

The researchers in the conduct of the study observed the following steps:

1. **Asking Permission to Conduct the Study.**The researchers sent a letter of request to the head of the City Transportation and Traffic Management Office (CTTMO) in Davao City noted by Carmelita B. Chavez, Ph.D., Dean, College of Criminal Justice Education requesting for the hard data needed for the study.

2.**Gathering of Data.** Upon approval, the researchers waited until the scheduled date.

3.**Retrieval of Data and Statistical Analysis.** Upon the scheduled date of releasing, the researchers asked for the hard data.

Statistical Treatment of Data

The researchers used descriptive statistical such as frequency count and percentage in analyzing the data.

Frequency Count. This was used to determine the exact numbers of vehicular accidents that were recorded in Davao City.

Percentage. This was used to determine the percentage of vehicular accidents that were recorded in Davao City.

Chapter 3

PRESENTATION AND ANALYSIS OF FINDINGS

Presented in this chapter is the interpretation and analysis of data gathered in the study. The various results are presented in the succeeding tables.

Traffic Accidents in Davao City for Calendar Year 2012 – 2015 in terms of Month

Presented in Table 1 is the overall total of accident recorded by month in Davao City from 2012 – 2015 is 40,741. Traffic accidents was included from January to December. The highest frequency and percentage of traffic accident is in the month of July with 4,211 cases with the equivalent to percent. Mostly, private vehicle got the biggest number of vehicular accident involved in Davao City. The lowest frequency and percentage of traffic accidents is month of January with 460 cases with only 1 percent in the overall total.

In year of 2011 Traffic Management Group released their data in traffic accidents in Davao City, From January to October was the alarming month with a total of 6,789 accidents that occurred in Davao City. The result of the study indicates that from month of March to August got the highest recorded of vehicle accidents, compared to recent years 2012-1015 the gap of vehicular accidents in month was changed and moved from March to August instead of month of January to October, but the number of accidents recorded had increased rapidly based on the data presented in the table. This means that the agencies do nothing to minimize the vehicular accident in Davao City.

Table 1

Traffic Accidents in Davao City for Calendar Year 2012 – 2015 in terms of Month.

Month	Frequency	Percentage
January	460	1%
February	3484	9%
March	4107	10%
April	3980	10%
May	3636	9%
June	4133	10%
July	4211	10%
August	4056	10%
September	3209	8%
October	3985	10%
November	2925	7%
December	2555	6%

Total	**40741**	**100%**

Traffic Accidents in Davao City for Calendar Year 2012 – 2015 in terms of Types of Vehicle Involved

Presented in Table 2 the total of vehicle involved in Davao City from 2012 – 2015 is 47,286. Types of vehicle involved are motorcycle, motorcycle/side car, public utility vehicle (PUV), private vehicle, taxi, van, bus, truck, armored car, government vehicle, bike, fixed object, ambulance, trisiboat and pedestrian. Among the items, the highest frequency and percentage of vehicular accident is private vehicle with 19,162 cases with the equivalent of 40 percent. In contrast, trisiboat got the lowest among vehicle involved with 17 cases with only 0.04 percent.

In the year of 2004-2011 private vehicle has the highest total of number of accidents recorded in Davao City with a percentage of 36.53. The result of the study when compared to recent years 2012-2015 was still the same but increased to 57 percent.

Table 2

Traffic Accidents in Davao City for Calendar Year 2012 – 2015 In terms of Types of Vehicle Involved

Types of Vehicle Involved	Frequency	Percentage
Motorcycle	**8072**	**17%**
Motorcycle/Side Car	**1219**	**3%**
PUV	**4681**	**10%**
Private Vehicle	**19162**	**40%**
Taxi	**5376**	**11%**

Van	**2032**	**4%**
Truck	**3799**	**8%**
Bus	**745**	**2%**
Armored Car	**41**	**0.1%**
Government Vehicle	**168**	**0.4%**
Bike	**250**	**0.5%**
Fixed Object	**203**	**0.4%**
Ambulance	**64**	**0.1%**
Trisiboat	**17**	**0.04%**
Pedestrian	**1457**	**3%**
Total	**47286**	**100%**

Traffic Accidents in Davao City for Calendar Year 2012 – 2015 in terms of Types of Accidents.

Presented in Table 3 is the overall total of accidents from 2012 – 2015 in Davao City that was recorded is 39, 036. This was categorized to minor injuries, serious injuries, homicide/fatal, damage to property and none injuries.The highest frequency and percentage among the categories is damage to property with 22,242 cases with equivalent to 57 percent. In contrast, homicide/fatal has the lowest number with 410 cases with only 1 percent.

In the result of his study in traffic accident from 2006-2011 traffic accidents in Davao City resulting to damage to property is the leading result of the drivers to their vehicle with a percentage of 68.43 (Cruz 2011). The result indicates that compared from recent years 2012-2015 damage to property was decreased to 57 percent.

Table 3

Traffic Accidents in Davao City for Calendar Year 2012 – 2015
In terms of Types of Accidents

Types of Accidents	Frequency	Percentage
Minor Injuries	**6414**	**16%**
Serious Injuries	**1484**	**4%**
Homicide/Fatal	**410**	**1%**
Damage to Property	**22242**	**57%**
None Injuries	**8486**	**22%**
Total	**39036**	**100%**

Proposed Action Plan

The Traffic Group are conducting seminars quarterly in a year to the drivers. According to the result of the research, private owned vehicle has the highest vehicular accident recorded from 2012-2015. The Traffic Group come personally to the vehicle owners to inform them regarding the traffic rules or they give authority to the manager of the Vehicle Company to give seminars to their buyers. Seminars to vehicle owners are not properly impose, Traffic Group Management must create a seminar only for the owners to focus on them and strictly confiscate their license after 3 consecutive warnings if they caught for violations or accidents. City Transportation and Traffic Management Office (CTTMO) are conducting interventions to minimize the number of vehicular accidents and traffic violators in Davao City. Citation Tickets is when drivers and public users are caught violated the laws

implemented and impose penalty in relation to their actions. Road safety plan, with the coordination from DPWH regarding to the maintenance of traffic signs, markings and pavements, road widening and other road safety measures.

The City Transportation and Traffic Management Office (CTTMO) are making reports, recommendations and coordinate for the enhancement and maintenance of the road to the drivers and public users. Their power and control was only limited to the public interest which is the Public Utility Vehicles (PUV). Lastly, the speed limit, it is one of their effective intervention that conducted in Davao City, the used of speed gun to determine the speed of the vehicle in road, if they exceed to the speed limit imposed. The result of this intervention was successful to the City Transportation and Traffic Management Office (CTTMO) and other agencies for big impact in decreasing the vehicular accident in Davao City from previous years.

With coordination of one agency to another agency the Highway Patrol Group (HPG), Traffic Group and City Transportation and Traffic Management Office (CTTMO) the joint force to enforce laws strictly to the public, especially to those abusive drivers this will help to stop them from violating traffic rules, it will be become effective if they had an online record of this persons that has previous record to monitor their actions and for them to confiscate immediately their license. Their visibility in the road will help to discipline the drivers.

Vehicular Accident Action Plan

Key Results Areas	Objectives	Activity	Persons Involved	Expected Outcomes	Source of Funds
Road Safety and Driving Techniques Seminar -Drivers Physical, Emotional and Mental Condition. -Vehicle Maintenance	To conduct a proper training seminar on road safety, driving techniques, traffic rules.	Conduct road safety and driving techniques training program once for the new driver's license applicant and renewal licensee	New applicants and those who wants to renew their license	Driving skills improvement on road safety.	LTO, CTTMO and DCPO in participation of LTFRB and DPWH
Speed Management Seminar Program	To conduct an appropriate seminar on speed management -To educate and discipline on traffic rules -To know the maximum speed limits on roads	Conduct a road courtesy seminar program	New applicants and those who want to renew their license. Facilitator/s: CCTMO Speakers/s: TMG	Enhance knowledge and improve the drivers behavior	LTO and DCPO
Drivers Responsibility Awareness	To conduct seminar to the drivers regarding penalties to be impose when they violate traffic rules	TMG and CCTMO deploy Traffic enforcers on road to give fines to those violators	Drivers Traffic enforcers	Disciplined action of drivers.	

Private Vehicle Special Seminars	-to conduct proper and appropriate seminar n road safety driving techniques -awareness of statistical data	Conduct road safety and driving techniques	Private Vehicle Owners Facilitators: LTO Speakers: LTO	Driving skills improvement on road safety and drivers behavior	LTO

Chapter 4

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presents the summary of findings, conclusion and recommendation drawn by the researchers form the data gathered.

Summary

The following are the significant findings revealed in the study summarized as follows:

1. Documentary analysis of vehicular accident in the year of 2012 – 2015, June, July and August has the closest in highest number of result. Based on the frequency of 4211 or with the percentage of 10 percent.

2. Documentary analysis of vehicular accident in the year of 2012 – 2015, per the result of the data, private vehicle covers mostly the vehicle accident with a frequency of 19,162 or with the percentage of 40 percent.

3. Documentary analysis of vehicular accident in the year of 2012 – 2015, drivers after the accident are resulted to damage to property with a frequency of 22,242 or with the percentage of 57 percent.

Conclusions

In the above findings, the following conclusions are drawn:

1. Vehicular accident in Davao City 2012 – 2015 in month of July is where the drivers are prone to accident.

2. Vehicular accident in Davao City 2012 – 2015, private owned vehicles are vehicles that are engaged in road accident.

3. Vehicular accident in Davao City 2012 – 2015, vehicular accident is resulted to damage to property

Recommendations

Based on the findings, the following recommendations are offered by the researchers:

1. Traffic agencies must have online records of traffic accidents for other agencies will have easy access for those records of drivers involved in vehicular accident and their previous acts.

2. City Transportation and Traffic Management Office (CTTMO) and the Land Transportation Office (LTO) must create an action plan for prevention of vehicular accidents to decrease the increasing accident yearly.

3. The City Transportation and Traffic Management Office (CTTMO) should include the private owners of a vehicle in their responsibility in conducting effective driving skills seminars.

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