

# A Qualitative Analysis of the Causes of Traffic Accidents in the Municipality of Sta. Teresita

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## ABSTRACT

The study aimed to determine the Causes of Traffic Accidents in the Municipality of Sta. Teresita using a qualitative research method.

The purpose of the study was to identify the Causes of Traffic Accidents in the Municipality of Sta. Teresita.

The study was participated by 3 key informants composed of one from the community members, one personnel from the Municipal Engineering office, and one from the Philippine National Police. These participants of the study gave their consent during the one-on-one interviews conducted. The objectives of the study were to determine the (1) causes of Traffic Accident in the Municipality (2) the interventions implemented to reduce the number of Traffic Accidents, and (3) the impact of the programs to prevent traffic accident as assessed by the three groups of respondents.

The study found out that the causes of traffic accidents are influenced by many factors generally were caused by human behavior that all the causes identified have something to do on how a road user reacts or acts in the road situations. It was found out that despite the interventions being conducted it needs a comprehensive way to assure that all the road users will be given enough time and attention to learn on road safety measures. The respondents also believed that through the intervention it helped them to be defensive drivers and become responsible to follow traffic rules.

**Keywords:** Causes of Traffic Accidents, Traffic Accidents, Traffic

## INTRODUCTION

Traffic accidents are one of the leading contributory factors that cause injuries and death around the world. It has been observed in the municipality of Sta. Teresita that traffic accident is one of the causes of injuries and death in 2017 based on the police record 14 percent out of the total number of accidents died while 52 percent were injured and in the year 2018, the number of incidents remains unchanged. With the given data the researcher was encouraged to find out the causes of traffic accidents and road safety measures as well as its impact on the road users in the municipality.

According to Hassen, A. et al (2011) Road safety have been identified as an essential component that should be integrated into the road management system. The first image of road safety coming to mind may be the number of accidents happening on roads. Road safety refers to reduce the risk of a person in an accident. Road safety provides a safe environment for all road users. The government organizes different programs regarding road safety such as driver safety programs, pedestrian safety, child and teenager's safety programs, drink, and driving-related programs and speed management programs. These programs are organized to make people aware of the causes of road accidents but these programs fail to create

awareness, modify abnormal behavior of drivers, and poor enforcement of driving law. Road safety considers risk factors related to the road and its environment, the road user, the vehicle and emergency services

Ramya M. et al (2017) Road traffic accident's (RTA's) is an important global public health problem causing 20 to 50 million non-fatal injuries and 1.25 million deaths annually, currently the 8th leading cause of death globally and predicted to become the 5th leading cause of death by 2030. RTA is one of the leading causes of death among the most productive age group (15-29 years) costing billions of dollars to deal with its consequences. The present study is aimed to determine the awareness and behavioral patterns of road safety measures among undergraduate medical students, Bangalore. The study found that the Majority of the study participants were aware of traffic signal rules 99.2% and helmets usage 98.8%. 87.7% knew that alcohol consumption is dangerous while driving/riding, 67% were aware of seat belts usage and only 64.8% were aware of the usage of hands-free devices while driving/riding. Among the 392 two-wheeler and 188 four-wheeler users, 36.2% and 50% regularly used helmets/seatbelts respectively and 70% followed lane rule. The risky behaviors like jumping traffic signals, riding hands-free, drag racing, and drunken driving were noted

Rolison, J. J. et al (2018) The results show that both expert views of police officers and lay views of the driving public closely approximated the typical factors associated with the collisions of young and older drivers, as determined from official accident records. The results also reveal potential under-reporting of factors in existing accident records, identifying possible inadequacies in law enforcement practices for investigating driver distraction, drug and alcohol impairment, and uncorrected or defective eyesight. Our investigation also highlights a need for accident report forms to be continuously reviewed and updated to ensure that contributing factor lists reflect the full range of factors that contribute to road accidents. Finally, the views held by police officers and the public on accident causation influenced their memory recall of factors involved in hypothetical scenarios. These findings indicate that delay in completing accident report forms should be minimized, possibly by the use of mobile reporting devices at the accident scene.

Ghaffari, G et al (2016) found that indices median, lighting, and panel type and the road's longitudinal underlining have been identified to have the highest impact on safety. This issue considering sections with a complex geometric design with plenty of horizontal curves is very important; also, transverse road underlining and warning and regulatory signs in the road has a high weight. But what is noteworthy in this regard is that the total weight of road horizontal symptoms includes (underlining and text lines and bumps) is obtained 0.306, and the total weight of the vertical signs (regulatory and warning signs, and traffic lights) 0.181. This issue shows that importance and the effect of horizontal systems on roads is far more than vertical signs of road's margins.

In the study of Wang, Y et al (2017) results showed that road function class, crash location, road alignment, light condition, road surface condition, and speed limit results showed that, road function class, crash location, road alignment, light condition, road surface condition, and the speed limit has significant impacts on traffic crash severity. Higher crash severity is associated with rural roadways, major arterial, not at h intersection locations, locations with curves, during nighttime when it is dark without street light, dry roadway conditions, and has significant impacts on Traffic crash severity. Higher crash severity is associated with rural roadways, major arterial, not at high-speed limits. Intersection locations, locations with curves, during nighttime when it is dark without street light, dry roadway conditions, and high-speed limits.

## **Theoretical/Conceptual Framework**

### **THEORIES OF ACCIDENT CAUSATION**

An accident can be defined as a short, sudden, and unexpected event or occurrence that results in an unwanted and undesirable outcome. (Hollnagel, 2004). Along these lines, the accident is not in reality expected and can cause negative outcomes, for example, fatalities, wounds, close misses, harmed materials, or cracked nerves. Accident causation models were primarily formed keeping in mind the end goal to help individuals who needed to examine work-related accidents, with the goal that such mishaps could be explored successfully. Knowing how accidents are caused is likewise valuable in a proactive sense keeping in mind the end goal to distinguish what sorts of disappointments or blunders by and large reason mishaps, thus a move can be made to address these disappointments before they have the opportunity to happen. Behavioral elements have been perceived as an important supporter of 95.0% of traffic crashes and a conception of activity risk forecast and movement chance recognition may forecast drivers' activities. It was revealed that a more elevated amount of perceived risk for a specific manner was related to a lower possibility of a person's contribution in that manner.

The major perceived factors in charge of the accidents are - working states of drivers, risk recognition and submission to the inevitable, driver preparing and road utilize behavior, nature, and state of the road network, nature and state of business vehicles, and traffic law implementation. The previously mentioned subjects which rose out of the data set are similarly the reasons for some motor vehicle accidents.

Crashes shirking have been normally dependent upon learning from crashes and what's more close crash. By exploring each occurrence, we learn about reasons and can take action towards moderating and eliminating the reasons. The issue may be that we bring not been capable to develop, in the lack of sufficiently high-quality theories, inquiry methods which might raise every last one of the applicable components for averting. The assessment might provide for a logically beneficial picture of the reasons. However, this picture is generally related only to the specific evidence investigated. There may be some situations and issues which contributed to the accident whose connections the investigators do not identify or recognize. Generalize from one accident to other situations allow a degree of risk.

### **THE DOMINO THEORY**

In 1931, the late H.W. Heinrich (Heinrich et al, 1980) presented a set of theorems known as 'the axioms of industrial safety'. The first axiom dealt with accident causation, stating that 'the occurrence of an injury invariably results from a complicated sequence of factors, the last one of which being the accident itself.' Alongside, he presented a model known as the 'domino theory' as this accident sequence was likened to a row of dominoes knocking each other down in a row. The sequence is Injury by an; Accident, due to an; Unsafe act and/or mechanical or physical hazard, due to them; The fault of the Person, caused by their; Ancestry and Social Environment.

88% of all accidents are caused by unsafe acts of people, 10% by unsafe actions, and 2% by acts of God. Heinrich proposed a-five-factor accident sequencel in which each factor would actuate the next step in the manner of toppling dominoes lined up in a row.

The sequence of accident factors is as follows:

Ancestry and social environment: Those conditions that make us take or accept risk.

Worker fault or Undesirable Human Trait: Anger, careless, tiredness, lack of understanding, un-attention.

Unsafe act or condition together with mechanical and physical hazards: Poor planning, unsafe equipment, hazardous environment. Accident: The accident occurs when the above events conspire (combine) to cause

something to go wrong. Damage or injury: Injury occurs when the person sustains damage

As per Domino's theory, many aspects contribute to an accident. These could be associated with some dominoes standing in a row—if one is knocked down the remaining also fall. Take out one of these dominoes and the chance of a loss occurring is reduced.

The different stages of dominos are described as follow:

#### **A. Social Environment**

people are brought up in specific surroundings. A few people have minimal worry for their or different people's well being. This might make contended to a chance to be an aftereffect of the society of the culture or association for which those individuals will be efficient.

#### **B. The Fault of the Person**

this means that the person has specific tendencies to enter into unsafe situations. The psychological make-up of the person may escort to him or her to intentionally do something insecure, perhaps because he or she has not immersed training given or is unaware that he or she is carrying out an unsafe act. It is the person who is at fault—that person's psychology—as opposed to society's effect on the person concerned.

#### **C. The Unsafe Act**

this is the actual act that leads to the harm, such as the loss of balance on a horse or the failure to secure the stable door properly so that an animal escapes.

#### **D. The Injury Itself**

this is an injury to the person or property. The domino model has been noted as a one-dimensional sequence of events. Accidents are usually multi-factor and develop through relatively extensive sequences of changes and errors'. This has led to the principle of multiple causations.

### **ROAD SAFETY AND RISK HOMEOSTASIS THEORY**

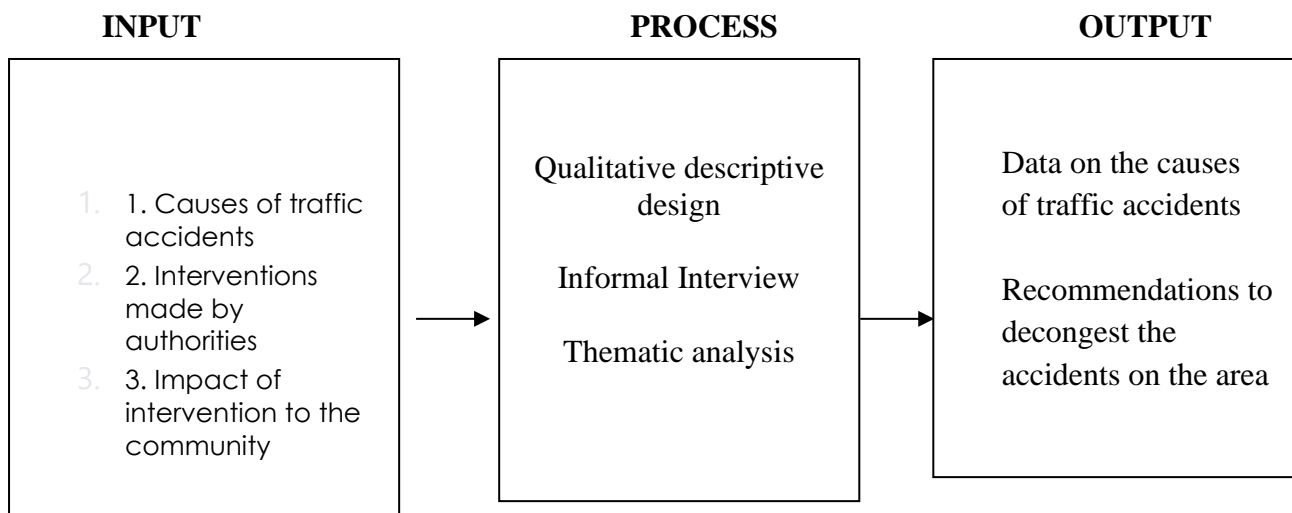
Homeostasis is a flexible procedure that keeps the result near close to the target by compensating for alarming outer control. The term homeostasis doesn't refer to a fixed and constant end effector to an unchangeable fix status of relationships but to a particular kind of dynamic process that matches essentially output to a target. Risk homeostasis is the degree of risk-taking performance and the amount of loss due to accidents and lifestyle dependent disease are maintained over time unless there is a change in the target level of risk. From what has been said so far it will be clear that in attributing the causation of accident loss in the nation to a homeostatic process. The level of traffic accident risk that is processed by the person at any moment derives from three sources: The person's post-experience with traffic. The person's assessment of the accident potential of the immediate situation. The degree of confidence the person has in processing the necessary decision-making and vehicle-handling skills to cope with the situation. The person's past experiences hold an unlimited verity of prior events: personal fear, arousing occurrences, traffic conflicts, close to accidents, limited escapes, bearing in mind other people's accidents, discussion for others something like an accident, presentation to accident reports these experiences clear out those drivers for A general feeling of the level for risk of the road. As these occurrences are commonplace and correlate with the accident statistics as generated by police force and government, there is no requirement assuming that for homeostasis to occur, people have more than a very faint knowledge of the official statistics. The instant condition includes those physical features of the road environment, the drivers own speed and direction, and the path and speed of another road where people read the risk implications of these features

As per to risk homeostasis principle due to those transform over’s important cause and fear arousing obstruction with existing abilities road users overestimated the level of accident risk that is would create. Subsequently, the observed level of risk surged to a surprising level that much surpassed the target level about risk. Three types of skill affect the level of risk perceived and action performed: (i) Perceptual skills (ii) Decision-making skills (iii) Vehicle handling skills. skill determines the extent to which the person’s subjectively perceived risk corresponds to the objective risk. This skill includes the ability to correctly assess one’s level of decision making and vehicle handling skills. That is important because it implies that persons with limited decision making or vehicle handling skills are at no greater accident risk provided, they realize their limitations and act accordingly

**The paradigm of the Study**

**GFYJJU7FFJLJSL**

**Significance of the Study**



**Figure 1. Paradigm of the study**

Road Safety Measures is one of the important factors that could help to lessen the Traffic Accidents despite the road safety measures used in the municipality of Sta. Teresita, it is still the most common incident it keeps on increasing yearly.

To the Pedestrians, it will help them understand the significance of Road Safety Measures that could be useful to lessen Road Accidents.

To the Police, as the enforcers and investigators of incidents, it will help them to come up with more comprehensive techniques to introduce the road safety measures to the pedestrian. It will also give them an idea of how to determine the most suitable scheme that could help in the widest dissemination and understanding of the pedestrian on the road safety measures.

Lastly, it will become significant to the Municipal Engineering Office and other concerned authorities, it will help them to have an idea of how they can make more helpful activities or programs to assure that the pedestrians are aware of the significance and uses of road safety measures.

**Objectives of the Study**

The objective of this study is to present a Qualitative Analysis of the Causes of Traffic r Accidents in the

municipality of Sta. Teresita, Cagayan. It specifically answers the following problems:

1. What are the causes of Traffic Accident in the Municipality?
2. What are the interventions implemented to reduce the number of Traffic Accidents
3. What is the impact of the programs to prevent traffic accident as assessed by :
  - 3.1 Police/PNP
  - 3.2 Municipal Engineering
  - 3.3. Community

## **MATERIALS AND METHOD**

### **Research Method**

This study shall be using the Qualitative Descriptive research method which is usually used in qualitative researches which is typically descriptive (Kim, H., et. al., 2016). Qualitative descriptive design is most appropriate for the study as it aims to bring out the phenomenon through an in-depth analysis of the themes.

The qualitative approach was preferred because it allows the researcher to gain an understanding of road safety measures and road accidents (McMillan and Schumacher, 2010). The researcher will use purposive sampling. The data will be collected through document analysis, face to face interviews, and open-ended questionnaires. Triangulation of data sources will be used in this study; qualitative researchers generally use this technique to ensure that the data is strong. All the data gathered in this study will be analyzed thematically in line with qualitative research approaches and will be treated with the utmost confidentiality.

### **Population and Locale of the Study**

This study was conducted in the Municipality of Sta. Teresita, Cagayan as the locale of the study considering that the place is where the permanent residence of the researcher.

### **Data Gathering Tools**

This study will conduct an informal interview using an approved interview guide. A letter of consent was distributed among the respondents for their approval before the interview shall be undertaken.

### **Data Gathering Procedure**

Communication letters by the Dean of the University of Baguio Graduate School were routed. Likewise, there was an approved letter or consent from the respondents, and respondents were notified about the objectives of this study before the conduct of the interview. All answers were consolidated and kept with confidentiality.

### **Treatment of Data**

The data will be analyzed using thematic analysis. The researcher will make use of the method established by Braun and Clarke's in doing TA. The six steps are as follows:

1. Familiarizing yourself with your data This step requires the researcher to be fully immersed and actively engaged in the data by firstly transcribing the interactions and then reading (and re-reading) the transcripts and/or listening to the recordings. Initial ideas should be noted down. It is important that the researcher has a comprehensive understanding of the content of the interaction and has

familiarized him-/herself with all aspects of the data. This step provides the foundation for the subsequent analysis.

2. **Generating initial codes.** Once familiar with the data, the researcher must then start identifying preliminary codes, which are the features of the data that appear interesting and meaningful. These codes are more numerous and specific than themes but indicate the context of the conversation.
3. **Searching for themes.** The third step in the process is the start of the interpretive analysis of the collated codes. Relevant data extracts are sorted (combined or split) according to overarching themes. The researcher's thought process should allude to the relationship between codes, subthemes, and themes.
4. **Reviewing themes.** A deeper review of identified themes follows where the researcher needs to question whether to combine, refine, separate, or discard initial themes. Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes. This is usually done over two phases, where the themes need to be checked with the coded extracts (phase 1), and then for the overall data set (phase 2). A thematic 'map' can be generated from this step.
5. **Defining and naming themes.** This step involves 'refining and defining' the themes and potential subthemes within the data. Ongoing analysis is required to further enhance the identified themes. The researcher needs to provide theme names and clear working definitions that capture the essence of each theme in a concise and punchy manner. At this point, a unified story of the data needs to emerge from the themes.
6. **Producing the report.** Finally, the researcher needs to transform his/her analysis into an interpretable piece of writing by using vivid and compelling extract examples that relate to the themes, research question, and literature. The report must relay the results of the analysis in a way that convinces the reader of the merit and validity of the analysis. It must go beyond a mere description of the themes and portray an analysis supported with empirical evidence that addresses the research question.

### **Ethical Considerations**

In this study, the researcher will ensure the quality and integrity of the research by asking permission or consent from the respondents. The researcher will also respect the confidentiality and anonymity of the respondents, the researcher will ensure that the respondents will participate in the study voluntarily, the researchers will avoid harm to the respondents and the respondents will show that the research is independent and impartial.

## **RESULTS AND DISCUSSION**

### **A. Causes of Traffic Accidents as perceived by the three groups of Respondents**

#### **A. 1 IGNORING ROAD SIGNS**

Posted traffic signs are the most commonly used devices for controlling traffic. These signs convey messages in terms of words and/or symbols and are placed to regulate, warn, or guide road users. When a driver uses bad judgment while operating a motor vehicle like disobeying the traffic signs most especially in accident-prone areas it can result in an accident or a tragic. Similarly, Fang et al (2004) stated that Traffic signs provide important information for regulating, guiding, or warning the behaviors of drivers to make driving safer and easier.

Furthermore, traffic signs are important because they help maintain safe driving conditions. Without these

signs, road users would not know how fast to drive, what direction to drive down a road, whether or not the roads being driven on having an upcoming hazard, or whether they are approaching a merge. It can help to reduce the rate of car accidents, help ensure the safety of pedestrians, and help drivers know how to communicate with other drivers in a non-verbal way that keeps us all safe. Failure to follow warning signs or any road reminders was determined in the present study as a contributory factor to traffic accidents it is corroborated by Ako (2019) mentioned that from the review of several theories and empirical studies it was established that accidents were a result of more human factors like none respect for road signs.

*KII( PNP) I think because of negligence or they ignore warning or traffic signs especially in intersections. Dahil po sa kakulangan ng pag-iingat o di pagsunod sa mga paalala sa kalsada or mga warning or road signs lalo na sa mga intersections khit na may barikada minsan nguunahan padin sila ayaw mag give way nung iba( phone call may 15, 2020)*

Some drivers do not appreciate the importance of road signs due to negligence as mentioned by the key informant they fail to comply with the warning signs posted on the road it was observed that only a few cars traverse the barangay roads in the municipality that some drivers believed that there is no car approaching so they take the other lane which causes a collision. similarly Oluwadiya et al (2004) stated that it has been observed that motorcycle riders often ignore safety measures, thus increasing their risk of accidents with other road users with which they share the same traffic space. on the other hand, Langford (2006) also found that failure to comply with signs and signals, failure to see objects, and improper turns and lane changes were commonly reported in road accident records for collisions of older drivers.

Furthermore, Sabbour et al (2010) sixty-nine percent of students reported having previous car accidents of which 63.5% were simple accidents with minimal car affection and no human injuries. Driving styles and behaviors that were significantly higher among males disregarding road signs.

Also, the Department for Transport report (2004) disobeying road signals was one of the risk-taking actions reported among motorcyclists in an in-depth study in London which put the rider and other road users at risk

The key informant (PNP) was able to identify that failure to follow the road rules is one of the contributory factors that affect traffic accidents the municipality most especially in intersections wherein even there is a barrier because some drivers are irresponsible that lead them not to follow rules. It is corroborated by Bates et al. (2014) In this sense, the evidence has shown that traffic accidents are generally caused by the recklessness of drivers and their disregard for traffic norms.

Although it is believed that the occurrence of traffic accidents can be based on different factors or consequences. The present study identified that among the three groups of respondents the Police noted that ignoring road signs is one of the contributory factors of a traffic accident in the municipality, as supported by Bone et al. (2006), have identified that road accidents occur due to different factors such, not following the road rules

## **A. 2 OVER SPEEDING**

The researcher was able to determine through the key informants that over speeding is one of the factors that contribute to traffic accidents running your vehicle more than the allowable speed limit is considered as over speeding. It is dangerous because it prevents the driver from responding quickly that may result in severe damage. It is supported by Braitman et al., (2008). Excessive speed, loss of control, and failure to detect another



vehicle or traffic control

Overspeeding is one of the causes of traffic accidents that increases the chance of injuries and death the higher the speed the more that it can cause severe damage to the casualty. It is supported by Elvik (2012) Speeding is the factor that most contributes to the risk, severity, and fatality of motor vehicle collisions that speed of vehicle strongly influences impact speed in crashes that could eventually contribute to fatality. also, Gonzales et al., (2005) Speeding and traveling too fast for conditions have been associated with fatal crashes involving 16-year-old drivers.

*KI 1 (PNP) They drive fast even on curve roads. pag papatakbo ng mabilis kahit sa mga may paliko na kalsada (phone call- May 15, 2020)*

*KI 3 (Community) They drive fast even though it's raining. yung isa pa sa npansin ko yung mabilis sila mgpatakbo khit na umuulan at (phone call may 15, 2020)*

Similarly, Potoglou et al (2018) in his findings from a mixed-effects logistic-regression model suggest that accident severity increases when two young drivers are involved, road traffic conditions are light/normal and when vehicles crash on a two-way road or carriageway. Speeding is more likely to cause slight or serious injury even when compared to a vehicle moving towards the opposite direction of traffic. An accident during the summer is more likely to result in a slight or serious injury than an accident during the winter, which is in line with evidence from Southern Europe and the Middle East. Finally, the severity of non-fatal accident injuries in an urban area of Southern Europe was significantly associated with speeding, the age of the driver, and seasonality

Furthermore, Goniewicz et al (2016) revealed that one of the main causes for the higher rate of severe accidents in Poland is inappropriately adjusted the speed by a driver to traffic conditions. On the other hand, Tamayo (2009) also stated that a road accident is commonly attributed to the collision of vehicles, pedestrians, or with an object that will result in death, disability, and property damage. Road accidents were caused by over speeding. Daytime traffic accidents were found higher than at the night. The study focused on the occurrence of the traffic accidents from the period 2001 to 2006 and events were evaluated using the factors that contribute to the accidents. An empirical model was constructed to forecast the number of accidents using the causes of accidents and the period of occurrence

Moreover, Aarts et al (2006) mentioned that speeding is another widely recognized major cause of traffic accidents. They are: speeding over 50% for motorcycles, minibusses, large and medium buses, and speeding below 50% for heavy trucks, and in the top 10 high-risk injury behaviors, speeding occupied three seats, which are: speeding below 50% for large and medium buses, speeding over 50% for minibusses, and speeding below 50% for minibusses, respectively. Moreover, McKnight et al (2003) found that, among teenage drivers, males were more likely than females to crash due to speeding and losing control of the vehicle; whereas females were more likely to violate the right-of-way because they failed to see the other vehicle or traffic control.

Among the three groups of respondents, the PNP and the members of the community both agreed that one of the main causes of traffic accidents. Similarly, Elturki et al (2018) in the results show that more than 84% of respondents considered the over speeding as the most significant factor that causes of Road Traffic Accidents.

It needs to be given attention most especially that some drivers do not consider the possible consequences of their actions. It is supported by Daina et al (2012) stated that one of the main causes of generating accidents is speed. Therefore drivers and pedestrians alike should adopt measures to prevent traffic accidents.

In the present study, it was mentioned by the key informants that even in curves some drivers still beat the speed limit that could cause accidents. Similarly, Gayer et al. (2000) have found that excessive speed reduces the driver's ability to negotiate curves or objects on a roadway, extends stopping distance, and increases the distance a driver travels when encountering a dangerous situation.

### A. 3 POOR ROAD SIGNS or NO ROAD SIGNS

Lack of proper signage is just one way a defective road or maintenance issue, signs are necessary for every danger to a driver can directly cause road accidents. The researcher was able to determine that not properly maintained road signs are one of the causes of accidents. We all know that road signs are very useful because it gives warning to the road users most especially on the dangerous areas such as blind roads and accident-prone areas. It is supported by Tollazzia et al (2012) state that road signs must be placed in clear locations and must be easy to understand, as while drivers only have a limited time to notice them and make the correct maneuvers. Road signs must also be placed in an optimum number, as the too high or too low number may put the traffic in danger.

*KI 3 (Community) failure to maintain signage's in some areas or no signage hindi maayos na signages sa o walang sinage sa ibang lugar o (phone call may 15, 2020)*

The key informant claimed that not properly maintained or no road signs can cause road accidents, warning signs or road signs must be properly placed in a visible area where it easily is seen by the drivers without any distractions. It is corroborated by Ezeibe et al (2018) the result shows that the failure of the government to provide and maintain traffic signs to guide road users through the numerous accident black spots on the highways is the major cause of road accidents in Nigeria. The study argues that the provision and maintenance of traffic signs present an opportunity for promoting safety on the highways and achieving sustainable development goals.

Out of the three groups of respondents, the members of the community identified that poor road signs are one of the causes of accidents in the municipality it is supported by Agyemang et al (2013) found that about 40% of road traffic accidents are attributable to lack of road sign factors in Ghana.

The traffic signs may give warning or guide the road user to their destinations, it is also used to inform drivers in advance most especially on road curves, intersections, blind roads, and accident-prone areas. It is corroborated by McPhee et al (2004) Road signs can be used to control vehicular or pedestrian traffic. These can also minimize risk in areas such as construction sites, schools, and hospitals. These can even guide people to their destinations.

### A. 4 DISTRACTED DRIVING

It was determined by the researcher that distracted driving is one of the causes of traffic accidents in the municipality. Distraction can arise from visual/manual interference, for example, when a driver takes his or her eyes off the road to interact with devices or things that may impair the attention of the driver to process information necessary for the safe operation of a motor vehicle. In the latter case, the driver's eyes may be on the roadway and his or her hands on the steering wheel, but he or she may not be attending to the information critical for safe driving. Concern over distracted driving is growing as more and more wireless devices are being integrated into the vehicle. Also, Pettitt et al (2009) stated that Distraction is the attention given to a non-driving related activity, typically to the disadvantage of driving performance

Similarly, Stutts et al (2001) Driver distractions are things that take the drivers' attention away from their primary driving focus, distraction is a form of inattention in which a driver "is delayed in the recognition of information needed to safely accomplish the driving task because some event, activity, object, or person within or outside the vehicle compels or induces the driver's shifting attention away from the driving task. According to Strayer (2015), driver distraction is increasingly recognized as a significant source of injuries and fatalities on the roadway. Our studies show that the distraction potential can be reliably measured, that cognitive workload systematically varies as a function of the secondary task performed by the driver, and that some activities, particularly newer voice-based interactions in the vehicle, are associated with surprisingly high levels of mental workload. Changing the culture of distracted driving will require a combination of scientifically based education concerning the hazards of inattention, regulations that target the root causes of distraction, and enforcement of the distracted driving laws.

*KII(PNP) For some drivers they don't focus their attention on the road they entertain calls and even talk to the passengers. yung ibang drivers po kasi hindi nakafocus sa daan kung anu anu gnagawa kagaya ng pag cellphone tumatawag habang nagdradive o kaya nakikipagkuwentuhan sa pasahero(phone call -may 15,2020)*

One of the causes of road accidents as mentioned by the key informant in the present study is the lack of focus of the drivers on the road while driving like talking to a passenger, using mobile phones, and eating while driving. It is supported by Eid et al (2017) found out that there were 444 drivers, 330 of them were fully oriented patients, out of them only 44 (13%) were distracted. Nineteen (5.8%) drivers were distracted by using mobile phones, 12 (3.6%) were preoccupied with deep thinking, six (1.8%) were talking with other passengers, four (1.2%) were picking things in the vehicle, and three (0.9%) were using entertainment systems.

Also, Carney et al. (2015) found that the driver conversing or otherwise interacting with a passenger was the most common factor in teen-driver crashes (15%), followed by the driver being engaged in a cell phone conversation (12%). However, the pattern changes for adult drivers.

It is noted that Klauer et al (2014) found out various distractions, including reaching for an object in the car, eating, and looking at roadside objects elevated the risk of a crash or near-crash among young novice drivers. Furthermore, Dingus et al. (2016) found that engagement in a secondary task distracted drivers more than 50% of the time while driving, doubling their risk of a collision

In contrast, there are instances that drivers need to have a conversation to the passengers most especially to the public utility vehicles even, entertaining emergency calls and drinking water that affects their focus which cannot be easily avoided but they do those things when they believed that they can manage to drive it is corroborated by Gaspare al (2014) that the conversation was temporarily halted during a difficult section of driving and then resumed when driving became easier. In effect, the passenger acted as another set of eyes that helped the driver control the vehicle, and this sort of activity is not afforded by cell phone conversations.

The relationship between driver distraction and crash risk is complicated by how and when drivers choose to engage in the other activity's drivers may decide to talk or entertain phone calls while driving if they believe that they can manage the risk of the road. corroborated by Huth, et al (2015) by contrast, reactive self-regulation refers to situations where a driver moderates his or her usage in real-time based upon driving difficulty or the perception of driving errors. An example of reactive self-regulation is when the driver terminates his or her call when the demands of driving increase (e.g., when they enter a school zone)

Out of the three groups of respondents, the PNP believed that distracted driving is one of the causes of accidents. The safety of road users is dependent on the driver's behavior while driving the vehicle most especially if they don't focus on the road, it is obvious that driving needs hundred percent of attention for the driver to safely accomplish the task it is corroborated by De Andrade et al (2003) mentioned that lack of attention during driving was previously reported among medical students as a cause of Road Traffic Accidents. Also, Shi et al (2010) in their study has shown that drivers are likely to drive in a manner that negatively affects traffic safety and traffic flow if they are distracted.

## A. 6 DRUNKENNESS

The present study determined that drunkenness is one of the contributory factors of traffics accidents. It has been known that alcohol use impairs driving skills and increases accident risk. It has been found that while driving under the influence of alcohol, the risk of having an accident causing injury or death increases exponentially. It is supported by Arnedt et al. (2000), Drunk driving has a high probability to lead to serious accidents. Even with a small amount of alcohol assumption, drivers are twice likely to be involved in traffic accidents than sober drivers

Similarly, Geneva: Global Road Safety Partnership; (2007) in their report drunken driving is one of the major causes of road accidents. The statistics also show that most of the road accidents on the highways are due to drunken driving only. Globally, some 480,000 deaths and 20 million people get injured by drunken driving every year. In most high-income countries about 20% of fatally injured drivers have excess alcohol in their blood, i.e., blood alcohol concentration (BAC) above the legal limit. In contrast, studies in low- and middle-income countries like India have shown that between 33% and 69% of fatally injured drivers and between 8% and 29% of non-fatally injured drivers had consumed alcohol before their crash. Patil et al. (2012) found that alcohol consumption increased the probability of sustaining a serious injury.

Also, Patil et al. (2012) found that alcohol consumption increased the probability of sustaining a serious injury. Similarly, Mnzawa (2013) identify alcoholism as a source of road accidents; they argued that drunkenness is a serious problem and among the leading causes of road accidents

Furthermore, Fletcher et al (2006) mentioned that alcohol consumption among drivers and pedestrians is a major cause of road traffic accidents in Ghana. Alcoholic beverages are commonly sold within the periphery of many lorry stations and taxi ranks, enabling drivers to drink before setting off for every journey. Pedestrians who drink and walk along major roads or streets are more likely to be knocked down by any moving vehicles perhaps driven by a drunk –driver

*KI1(PNP) some **drivers drink alcohol** and then they drive. **Paginom ng alak lalo na tapos magmaneho sila** (phone call may 15, 2020)*

*KI 3 ( Community) Some still drive even though **they are under the influence of intoxicating liquor** may mga driver na ngdradrive kahit nakainom ng alak (phone call may 15, 2020)*

As stated by the key informants driving under the influence of alcohol is one of the factors that affect road accidents that alcohol can impair the normal function of the person most especially in manipulating the vehicle when driving which can cause an accident. Similarly, Bautista et al (2017) in his findings revealed that participants also claim that they were under the influence of alcohol when they experience road accidents.

Also, Zhao et al (2014) also stated that drinking driving is responsible for a high proportion of traffic accidents. The analysis of the accident rate showed that a higher BAC level would lead to a higher accident

rate. The statistical analysis results of driving performance indicated that average speed, speed standard deviation, and lane position standard deviation were significantly higher under the influence of alcohol. They also had a statistically significant linear trend as the function of the BAC level. The discrimination of drinking driving based on driving performance was performed with the Fisher discrimination method. The results showed that drinking driving with a higher BAC level was easier to discriminate from normal driving. Also, the results indicated that the three significant indicators on the straight roadway could be used in the discrimination of drinking driving state. The conclusions can provide references for the study of drinking driving and the identification of the driving state and then contribute to traffic safety.

Moreover, Fell et al (2014) The role of alcohol as a major factor leading to traffic accidents has been firmly established. The thresholds of driving under the influence of alcohol and drunk driving in mainland China are 0.02 and 0.08, respectively. This study finds that the average fatalities of drunk driving are significantly higher than that of driving under the influence of alcohol, but there is no significant difference in injuries, which implies that lower blood alcohol concentration (BAC) is more effective to reduce fatalities than injuries

Furthermore, Zhang et al (2020) stated that traffic accident causes and types of the primary responsible parties have a strong impact on fatalities and injuries, followed by zones and time intervals. However, drunk driving (Blood Alcohol Concentration  $\geq 0.08$ ) and driving under the influence of alcohol ( $0.08 > \text{Blood Alcohol Concentration} \geq 0.02$ ). Both pedestrians and cyclists violating the traffic law are vulnerable to fatality

Similarly, Chador et al (2018) Road traffic accidents (RTAs) are a major cause of death and injury globally. There was little information on the burden and causes of RTAs in Bhutan. The study estimates the burden and characteristics of RTAs and describes the victims of RTAs in Bhutan. A descriptive cross-sectional study conducted analyzing police case records. In 2013–2014, 1866 accidents resulted in 1143 injuries and 157 deaths. They identified 39% more deaths from RTAs than that submitted to WHO in 2013 as the 30-day mortality. The main causes were careless driving and drunk-driving.

Out of the three groups of respondents, the PNP and members of the community both agreed that drunk driving is one of the main causes of accidents in the municipality. The driver who is under the influence of alcohol has higher tendency alcohol may alter the normal function of the human body similarly, Fillmore et al. (2008) expressed that alcohol significantly impaired driving performance, which included deviation of lane position, line crossings, steering rate, and driving speed. Also, Chamberlain et al (2002) concluded that alcohol consumption negatively affects steering wheel control and braking behavior. In other words, there is unequivocal evidence that alcohol significantly impairs driving performance, as demonstrated through laboratory, simulator, and driving studies

## **A. 8 LACK OF KNOWLEDGE ON ROAD SAFETY**

There are many additional aspects to road safety that drivers seem to be unaware of. An average driver breaks many of the fundamental rules of road safety daily, which affects general safety levels of the road users lack of awareness may seem to affect the daily activities of the drivers while driving that possibly result to road accident it is supported by Haulle et al (2016) in the study found that insufficient education is a factor contributing to road accidents. In this aspect, the findings showed that many people do not have basic road safety education. Many pedestrians, motorcyclists, and drivers do not adhere to the road safety rules and regulations in place as a result of a lack of awareness.

*KI1(PNP)No proper training or seminar on road safety. walang training or seminar tungkol sa road safety .(phone call may 15, 2020)*

*KI2( Engineering). lack of knowledge on road safety. hindi pa sapat ang kaalaman sa road safety nagdradrive na sila kaya ayan naaksidente (phone call may 15, 2020)*

The key informants were able to identify that lack of knowledge on road safety is one of the factors that affect traffic accidents. According to sir Aguinaldo the head of Traffic Unit in the municipality youngster who drives their motorcycles in the municipality some of them are not familiar with road safety signs that lead them to violate such. It is supported by Sangowawa ( 2007) reported that out of 365 motorcyclists, up to 292 (80%) had poor knowledge of road safety signs and as a result, most did not obey them.

Similarly, Alonso et al (2016) mentioned that the informative and educational process might part both from the road safety education received from the scholar system.

Moreover, Al-Zahrani ( 2015) mentioned that majority of the participants, 90 (75%), mentioned that they had moderate knowledge about road traffic regulations, lack of awareness about traffic regulation and laws, were the most important cause of Road Traffic Accidents.

Nangana et al (2016) results showed a total of 144 RTA that involved two motor vehicles with four wheels occurring during the study period which affected 104 people, including 93 injury and 11 fatality cases. The majority of Road Traffic Accident -causing drivers (53.4 %) did not attend a driving school.

Chatorvedi (2006) found that the majority of road users including civilians do not have the basic knowledge of proper road usage. This was pointed out by RTO who reported that the provision of education about road safety to the pedestrians and drivers hugely helped to reduce accidents

Among the respondents the PNP and Engineering stated that lack of knowledge is one of the main causes of the traffic accident, it is corroborated by Al-Naggaret al (2010) found out in that participants had moderate knowledge about road traffic regulations and most of them mentioned lack of awareness about traffic regulation and laws was one of the most important causes of road traffic accidents.

The present study found that road safety is everybody's concern that all road users must undergo training or seminars to enhance their knowledge most especially on their vital role in road safety. Similarly, Raynor et al (2014) mentioned that the general public, including passengers and private vehicle owners, also cause problems by failing to understand their role in road safety and placing the blame on others.

## **A. 9 VEHICLE DEFECT**

Vehicle defect is one of the factors that cause traffic accidents as mentioned by the key informant the condition of the vehicle must be taken into consideration most especially before using it all the necessary parts must be check properly like the brake, the tires, and the lights. It is supported by Solah et al. (2017) found that the defects in the brake system, tires, lighting, body/paintwork, and upper body part are the most common components that contributed to road crashes

Similarly, Cuerden et al. (2011) investigated the effects of vehicle defects in traffic crashes The study estimated that vehicle defects are likely to be a contributing factor in around 3% of crashes in the UK. It also showed that reducing the frequency of testing of newer vehicles is likely to have adverse road safety consequences

*K2(Engineering)what I observe are those cars that are not maintained properly by the owner. Hindi mine maintain ng may ari yung mga sasakyan nila kaya sila nadidisgrasya (phone cal may 14, 2020)*

Moreover, Schoor et al ( 2001) who found that defects in tires and brake system were the two most dominant factors that resulted in mechanical failure leading to a crash

Bone et al (2006) have identified that road accidents occur due to different factors such as the health of a person, lack of attention and public, unexpected acts of road users, failure of vehicles, and poor maintenance of vehicles.

As mentioned by the key informant (Engineering) condition of the vehicle is one of the identified factors that cause accidents in the municipality. Checking the condition of the vehicle before using it to determine if there are defects on brakes that could deter the driver to stop or control the vehicle. It is supported by Elturki et al (2018) The results show that 74% of respondents seeing that poor brakes or brake failure factor has a high and considerable impact on the Road Traffic Accidents among the vehicle factors

## **B. Interventions made by the authorities within the Municipality to reduce the number of Traffic Accidents as perceived by the three Groups of respondents**

### **B 1. TRAINING OR LECTURES ON ROAD SAFETY**

Training and Lectures is one of the interventions conducted by the authorities as mentioned by the key informants, knowledge of road safety plays a vital role not only to the drivers but also the road users to be a more vigilant and responsible driver. It is supported by Chatorvedi (2006) argues that education is one of the important factors which would play a kingpin, in the long run, to drastically reverse the graph of road accidents. Education helps individuals to play their positive roles in the prevention of road accidents and prepare the responsible drivers. This was pointed out by RTO who reported that the provision of education about road safety to the pedestrians and drivers hugely helped to reduce accidents.

Proper knowledge on traffic rules could help the road users to be more responsible on their actions while on the road that could help them avoid the greater impact of accidents it is corroborated by Redhwan et al (2010) Awareness about road safety is a very important step for road traffic injuries prevention.

Educating drivers on traffic rules is one of the tools that could help them to be more aware on the prohibited acts as well as its equivalent penalty and punishment that could encourage them to be more cautious while traversing the road similarly, Alonso et al (2005) the exertion of effective prevention of traffic accidents use to be preceded by, for instance, proper knowledge of the traffic rules among road users.

*K11(PNP)The LGU in cooperation with TESDA conducted a **Defensive Driving the training** was intended for the drivers to learn how to avoid accidents while driving. May libreng training sa LGU kasama ang TESDA pra sa mga drivers 3 months yun at **tinuruan yung mga drivers pra makaiwas sa aksidente** (phone call may 15, 2020)*

*K2( **Engineering**)Lectures conducted by the PNP on Road safety. Yung mga lecture na kinaconduct ng PNP tungkol sa road safety. (Phone call may 14, 2020)*

*KI3 ( **Community**) What I can recall is that PNP members **conduct lectures about road safety** in our barangay. Ang nalala ko lng **ngbigay ng lecture ang mga pulis tungkol sa road safety sa aming barangay.** (phone call may 15, 2020)*

Similarly, Olumide et al (2016) because of the study findings as well as the importance of good knowledge of road safety on driving behavior and ultimately the occurrence of road crashes. Also, Swaddiwudhipong et al (2002) Motorcycle rider education may, therefore, be a promising intervention for prevention of motorcycle-related injuries

It is also important that drivers should have proper training on the handling of their motor vehicle and road safety education this could help the driver to maintain his vehicle and learn safety precautions while traversing the roads. Similarly, Transport department (2010) has described that many factors have been

included in road safety to minimize the risk, such as handling of vehicles, adequate training, and education for safe driving and maintenance of the vehicle.

The three groups of respondents believed that educating road users can help to reduce the number of traffic accidents in the municipality. This is corroborated by Chiduo et al (2001) The education would ensure that all road users, road managers, vehicle manufacturers have a shared responsibility to take appropriate actions and steps to end road accidents

In contrast, educating road users is not enough to assure the reduction of traffic accidents although this could help them to enhance their knowledge and skills in road safety the behavior of road users is still the leading factor that could cause traffic accidents. This is supported by Clarke et al. (2002) have found that drivers' higher education is not a solution to reduce road accidents. Poor driving skills and lack of knowledge of traffic laws are identified as the causes of fatal accidents. Rebellious attitudes and decision-making skills of young drivers' are contributory factors of road accidents.

## **B2. ENFORCEMENT OF TRAFFIC ORDINANCE or LAWS**

Traffic rules play an important role in reduces road accidents. Traffic rules have been implemented by the Police for saving the life of road users. Road accidents can be minimized by strict enforcement of the law. It is supported by Soori et al. (2009) found that number of deaths caused by driving accidents reduced from 38.2 in 2004 to 31.8 in 2008 (in every 100 thousand people). For every 10 thousand vehicles, the number of deaths reduced from 24.2 to 13.4. A similar reduction was observed in injuries caused by driving accidents. They concluded that the measures taken by traffic police had been effective in reducing the number of driving accidents and deaths

*KI3 (Community) I think the LGU made its ordinance prohibiting minors to drive which is being implemented by the Police. ang alam ko mga ordinansa na inilunsad ng LGU ay pagbawal sa minor na mgmaneho, pagkakaroon ng checkpoint na pinapatupad ng PNP.(phone cal may 15, 2020)*

Mphela (2011) The findings reveal that the enforcement of the new road laws has achieved little in the reduction of fatalities. Increasing the minimum driver licensing age may be a panacea to road accidents. Licensed drivers in the age group 30 to 45 years have the lowest rate of fatalities. The study questions the ability of punitive policies (i.e. road fines) to reduce fatalities. It offers that driver behavior should be studied to come up with relevant policies.

A large proportion of road traffic accidents are a result of road-user behavior and more specifically, accidents occur because of the decisions taken by road users to disobey or break the road rules, commonly referred to as human error. Accident rates and compliance are inversely related laws and ordinance implemented by the law enforcers serves as a reminder to the road users to comply with the rules on roads. Aparicio et al (2011) stated that law enforcement agencies like the traffic police come up with strategies including the use of penalties to ensure road rules are obeyed and compliance improves attribute the significant success of the penalty point systems to the 'gradual stepping up' of surveillance in Spain.

Penalizing the violators may reduce the number of accidents in the locality the key informant made mention about the ordinance to lessen the accidents among minors the present study determined that there is an implementation of this ordinance that may lead to the apprehension of the violators This is consistent with the findings of Redelmeier et al (2003) who found that convicting motorists for road offenses can reduce the relative risk of death for drivers and other road users by 35%.



The existence of policies is not enough but the enforcement makes the difference in a way that it simply puts the written rules into action. Road safety interventions like lectures and law enforcement measures are usually adopted to deal with road safety issues. Similarly, Constant et al. (2008) state that the embracing of the stricter regulations in France brought significant changes because it was coupled with enforcement.

The key informants mentioned about pieces of training or lectures conducted by the authorities to lessen traffic accidents or they claimed that educating road users may lead to lesser accidents but as observe in the present study it is not enough that awareness should only develop among them it must be supported by strict implementation of traffic laws to assure that road users will abide on the rules intended for road safety. It is supported by Shetty et al (2017) mentioned that though the respondents were aware of road traffic rules to a certain extent but they were not obeying the road traffic rules wholly. This can be addressed through the strict enforcement of road traffic rules and behavioral change communications.

### **C. Impact of Interventions made to reduce the number of Traffic Accidents as perceived by the three groups of respondents**

#### **C1. OBEY RULES**

One of the impacts of the programs to the members of the community according to key informant exposure to intervention programs helped them become more responsible particularly in obeying rules on traffic, by simply knowing the uses and meaning of road signs seen by the divers or pedestrians may lead to follow rules it is supported by Johnson et al (2011) mentioned that education on road safety signs will improve compliance of the motorcyclist and lead to safer road use among them.

*KII( PNP) they learn to obey the laws and traffic signs. Natutunan nila ang tamang pagsunod sa batas sa kalsada at ng traffic signs (phone call may 15, 2020)*

The interventions implemented by the authorities particularly conducting lectures to increase awareness serves as a reminder among road users to be more vigilant and more responsible in their actions while traversing the road and to be mindful of the road signs. This is corroborated by Johnson et al (2011) motorcyclists in the intervention group who were given education on the importance of compliance to road safety signs. Data were subsequently collected from both groups 3 months post-intervention and analyzed using the Statistical Package for the Social Sciences version 11. A total of 200 respondents participated in the study, 100 from each group. Following the intervention, respondents with good knowledge score increased from 21% at baseline to 82% at 3 months post-intervention in the intervention group ( $p < 0.05$ ) and from 19% to 21% in the control group. Compliance scores in the intervention group increased from 15% to 70% ( $p < 0.05$ ) and from 12% to 18% in the control group. A significant increase in compliance with road safety signs was recorded among motorcyclists in the intervention group after safety education. All motorcyclists should, therefore, be given education on road safety signs as this will improve compliance and lead to safer road use among them.

The key informant (PNP) believed that interventions could be a tool to motivate the road users to obey traffic rules most especially if they are aware of traffic laws and sanctions could prohibit unsafe driving behavior or violation that is likely to result in accidents

#### **C2. DEFENSIVE DRIVER**

Programs particularly the lectures or training, using traffic signs, and implementing ordinances conducted by the authorities was determined by the researcher that helps lessen the number of accidents in the

municipality exposing drivers to a comprehensive training as one of the capability training identified by the key informants could make them more prepared when the accident happened.

It is supported by Legeza et al (2013) drivers make decisions based on their knowledge and information available, which determine the chain of events in transportation. An error occurring in the chain causes disturbance in the transport process that must be solved as soon as it is reaching a critical level. If it fails to resolve, road traffic accidents occur. The level of road safety is therefore significantly influenced by the quality of information.

*KI2 (Engineering) Through programs or activities helps us a lot to **be more careful when driving.** Ang mga programa o actibidades sa aming mga drivers o mananakay dhil natototo kami kung paanu maiwasan o mas magingat sa pagmamaneho. (phone call may 14, 2020)*

*KI3 (Community) Programs conducted enhances my knowledge it gives me more idea to **be more careful when driving my motorcycle.** nakakadagdag yung programa na yan sa kaalaman ko bilang driver kasi my motor din ako ngayon mas alam ko na ang mga gagawing paguingat pag nasa daan ako. (phone call may 15, 2020)*

Comprehensive lectures and activities made by the authorities in the community particularly on road safety enhance their knowledge by simply knowing the dos and dont's could help them to be more cautious while on the road their knowledge contributes a lot to their actions it is supported by Amoran et al (2005) It is essential for all road users including work-related drivers to have good road safety knowledge as this has been shown to influence driving behaviors and practices.

The key informant (Engineering) believed that the impact of interventions to the drivers as mentioned in the present study, that programs or activities given by the authorities helped the drivers to maintain a safe driving habit.

## CONCLUSION

The causes of a traffic accident as manifested by the three groups of respondents are ignoring road signs, over speeding, poor road signs or no road signs, distracted driving, drunkenness, lack of knowledge on road safety, and condition of the vehicle; most of the identified factors are caused by human behavior which is believed to be common in nature.

The interventions done by the authorities are conducting training or lectures on road safety and enforcement of traffic ordinances or laws.

The interventions impacted the three groups of respondents significantly. It motivated them to obey the traffic rules and it develops them to become a defensive driver

## RECOMMENDATIONS

In light of the findings and conclusions of this study, the researcher recommends the implementation of the following measures to lessen the number of traffic accidents in the municipality of Sta. Teresita. The following measures are recommended.

1. The PNP must conduct a more comprehensive lecture and workshop on the meaning and uses of traffic signs among road users.
2. The PNP members must also conduct refresher lecture regularly among road users to assure that they are aware and updated on the new ordinances in the municipality.
3. Stricter implementation of the PNP on the traffic ordinance must also be implemented not only during market days but it should be done regularly.

4. The PNP must also make a scheme on how to keep the community members or road users to be updated on the causes of traffic accidents in the municipality which could give warning to those irresponsible drivers.
5. The PNP in cooperation with the barangay officials must maintain a score-card to record the number of traffic accidents per barangay so that it will be properly monitored.
6. The Engineering Office must regularly check the conditions of roads and the signages in the municipality for proper maintenance.
7. The Engineering office must also provide visible warning signs in the accident-prone areas in the municipality and also in the under-construction roads
8. Drivers must be given a lecture aside from sanction if they violated traffic ordinance
9. Lectures on road safety must be mandatory to be attended by the head of the family
10. To further conduct a similar study focusing on the impact of a traffic accident on the economy of the municipality as well as to the victims or family of the victims

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### Interview Guide

1. Sir / Ma'am what are the reasons why drivers or pedestrian get involved in accidents
2. Sir / Ma'am What are the programs or activities being implemented in the community to reduce the number of traffic accidents By the PNP or the Municipal Engineering office or LGU
3. Sir/ Ma'am How does these programs help to reduce the number of traffic accidents in the municipality