
RESEARCH PROJECT

BY

UTETE

(B1542850)

BACHELOR OF BUSINESS ADMINISTRATION HONOURS DEGREE IN POLICE AND SECURITY STUDIES OF BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

MARCH 2018

TO BE COMPLETED BY THE STUDENT

I certify that the dissertation meets the preparation guidelines as presented in the faculty guide and instruction for preparing dissertations.

(Signature of Student)     (Date)

TO BE COMPLETED BY THE SUPERVISOR

This dissertation is suitable for presentation to the faculty. It has been checked for conformity with the faculty guideline.

(Signature of Supervisor)     (Date)

TO BE COMPLETED BY THE DEPARTMENTAL CHAIRPERSON

I certify to the best of my knowledge that the required procedures have been fulfilled and the preparation criteria was met in this dissertation.

(Signature of Chairperson)     (Date)
RELEASE FORM

Name of author : Amos Tafirajeyi Utete


Year granted : 2018

Permission is hereby granted to Bindura University of Science Education library to produce copies of this dissertation for scholarly and research only.

Signed

______________________________

(Author’s signature)

Permanent address

House number 441
Zimbabwe Republic Police
Support Unit Camp
Greendale
Harare
DECLARATION FORM

I, Amos Tafirajeyi Utete, solemnly declare that the information of this dissertation, prepared in partial fulfillment of the Bachelor of Business Administration Honours Degree in Police and Security Studies and submitted to the Department of Intelligence and Security, Faculty of Commerce at Bindura University of Science Education has not been presented, submitted or published in this nature or part. Previous works have been duly accredited and acknowledged properly.

__________________________________  __________
(Signature of Student)                    (Date)
DEDICATION

I dedicate this study to my lovely daughter Glorious Annerle who drew encouragement and perseverance in undertaking challenges in conducting this study.
ABSTRACT

Road accidents involving police vehicles in the Zimbabwe Republic Police (ZRP) in Harare province in the period 2014 to 2017 have affected the smooth functioning of the organisation one way or the other. The study sought to examine and determine vehicle related causes of road accidents involving police vehicles, to establish all driver related factors causing accidents involving police vehicles, to establish the common places and times at which accidents involving police vehicles are occurring and to evaluate different road safety measures taken by local authorities to prevent accidents in Harare Province. Road accidents involving police vehicles were selected in urban area that was identified as high risks in accidents. Literature related to the study, theories, empirical evidence and gap analysis was used. The factors that might be contributing to the high accident rates in developing countries were studied. The study used descriptive survey design where a simple random sampling was used. Questionnaires and interviews were used for collection of data. A sample size was drawn from a population of 400 police drivers in Harare province, comprising 40 police drivers out of 200 and 40 officers in charge stations out of 200. The sample of 80 which constitute 20% of the police population was selected. It came out that the use of cellphone were the major cause of accidents and the conclusions were human error and recommended that laws be imposed to restrict the use of cellphones, the government to repair road signs and potholes. Traffic Police officers to be deployed at all major intersections especially during congestion period. There is need to carry out further researches spilling into other provinces and strict adherence to the police driving policy on periodic refresher courses.
ACKNOWLEDGEMENT

I would like to acknowledge the efforts, support, guidance, cooperation and encouragement from ZRP Harare Driving School Staff and the Manager Support Unit Supermarket (Assistant Inspector Sibanda) and staff who have made it possible for me to undertake this study.

I wish to express my sincere gratitude to my supervisor for patience, guidance, encouragement and support in shaping the outlook of this study.

I am grateful to all other member of staff at Bindura University Department of Intelligence and Security Studies for their support, encouragement and facilitation.

I would also like to thank all the respondents and key informants for their information and commitment.

My gratitude also goes to my only lovely wife Martha (see the Police Outpost November 2016), my children Kelvin, Charles and Glorious for the immeasurable support rendered to me during the production of this study. May you be accorded with the blessings you deserve for your support and encouragement to pursue educational and academic excellence for their betterment, the good of the organisation and the nation at large.

Last but not least, my appreciation goes to Mr Amos Mutasa and Ndlovu Dumisani for their help in editing this work.
# Table of Contents

APPROVAL FORM ........................................................................................................... ii  
RELEASE FORM .............................................................................................................. iii  
DECLARATION FORM ................................................................................................... iv  
DEDICATION ..................................................................................................................... v  
ABSTRACT ....................................................................................................................... vi  
ACKNOWLEDGEMENTS ............................................................................................... vi  

**List of Tables** ........................................................................................................... xi  
List of figures .................................................................................................................... xii  
List of appendices............................................................................................................. xiii  

CHAPTER ONE ..................................................................................................................1  
PROBLEM AND ITS SETTING .........................................................................................1  
1.0 INTRODUCTION ..........................................................................................................1  
1.1 Background to the study ............................................................................................1  
1.2 Statement of the Problem ............................................................................................4  
1.3 Purpose of the Study ....................................................................................................5  
1.4 Objectives of the Study ................................................................................................5  
1.5 Research Questions ....................................................................................................5  
1.6 Significance of the Study ............................................................................................6  
1.7 Assumptions of the study ...........................................................................................8  
1.8 Delimitations of the study .........................................................................................8  
1.9 Limitations of the study ............................................................................................9  
1.10 Definition of terms ...................................................................................................9  
1.11 Summary ..................................................................................................................10  

CHAPTER 2 .......................................................................................................................10  
REVIEW OF RELATED LITERATURE ...........................................................................10  
2.0 Introduction .............................................................................................................10  
2.1 Organisational Policy Affecting Police Drivers .........................................................11
### List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Number of vehicles in Harare province</td>
<td>4</td>
</tr>
<tr>
<td>1.2 Accident statistics involving police vehicles</td>
<td>5</td>
</tr>
<tr>
<td>3.1 Statistical presentation of the sample size</td>
<td>29</td>
</tr>
<tr>
<td>4.1 Demographic data of Police Drivers and OIC Stations</td>
<td>37</td>
</tr>
<tr>
<td>4.2 Authority to drive Police Vehicles (Government Authority)</td>
<td>40</td>
</tr>
<tr>
<td>4.3 Vehicle related causes of accidents</td>
<td>41</td>
</tr>
<tr>
<td>4.4 Establishment of driver related factors causing accidents</td>
<td>42</td>
</tr>
<tr>
<td>4.5 Establishment of ways to control the rate of accidents</td>
<td>43</td>
</tr>
</tbody>
</table>
## List of figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 The Transport section structure</td>
<td>12</td>
</tr>
<tr>
<td>2.1 A model for Traffic operations</td>
<td>16</td>
</tr>
<tr>
<td>3.1 Map of greater Harare</td>
<td>28</td>
</tr>
<tr>
<td>4.1 Types of accidents involving Police Vehicles</td>
<td>40</td>
</tr>
<tr>
<td>4.2 Environment related causes of accidents</td>
<td>42</td>
</tr>
</tbody>
</table>
List of Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>60</td>
</tr>
<tr>
<td>Appendix B</td>
<td>66</td>
</tr>
<tr>
<td>Appendix C</td>
<td>67</td>
</tr>
</tbody>
</table>
CHAPTER ONE

PROBLEM AND ITS SETTING

1.0 Introduction

There has been an increase in the number of accidents involving police vehicles in Zimbabwe. This study examined the measures that are in place to limit accidents in the organisation. This chapter focuses on the background to the problem of accidents involving police vehicles, the statement of the problem, purpose of the study, assumptions, significance of the study, scope of the study that is delimitations and limitations.

1.1 Background to the study

According to World Health Report of (2013), road traffic injuries cause 1.3 million deaths and 20-50 million injuries each year around the world, most of these injuries lead to lifelong disability including brain and spinal cord injury. In developing countries the proportion of the seriously injured and killed casualties are higher than in the developed countries. An analysis of cross sectional data on road traffic related deaths has shown that the poorest countries have highest road traffic related mortality rates (Soderlund et al, 1995). In this analysis, many industrialised countries appear to have introduced interventions that reduced the incidence of road traffic injuries and improve survival of those injured (Soderlund et al, 1995).

In developing countries there are some peculiarities regarding the accident profiles. A study done in Calcutta India, reported that there are some host (human) factors (such as the behaviour of drivers, pedestrians and cyclist behaviours) and seasonal factors (weather and time) that contribute to fatal road traffic accidents (Zhang et al, 1998).
Police cars are exempted from certain traffic laws under emergency circumstances although ZRP manual states that police vehicles should be operated in compliance with all traffic laws. The officer driving an authorized emergency vehicle is only exempt from traffic laws when either responding to an emergency call or in immediate pursuit of a suspected violator of the law. However to reduce the probability of being involved in an accident resulting from severe injuries, officers are still obliged to drive safely and follow safety procedures when responding to emergencies or pursuing criminal/offenders. Enhancement of training techniques for emergency situations or driving in pursuit of an offender and following the safety procedures are essential for safety in driving an emergency run by police.

Technologies like the internet, social media particularly the Whatsapp, Facebook and mobile phones have been attributed to accidents because of drivers who drive while drunk, communicate on social media while driving. Cell phones are the number one visual distraction that can cause accidents. Drivers are so connected to their phones that they often have a hard time putting them down even when driving. They feel that they cannot afford to miss a call or a text message. According to Distraction.(gov), Official US Government Website for Distracted Driving, Facts & Statistics, the percentage of drivers text-messaging or visibly manipulating handheld devices increased from 1.7 percent in 2013 to 2.2 percent in 2014 (NHTSA). Also motorists are always taking one hand off of the steering wheel to adjust the radio or put in a CD. As minor as these acts seem, they can cause serious or fatal accidents. Police officers have more cognitive distractions than civilian motorists. Due to the nature of their job, their minds are always on things other than driving. For instance, they have to be on alert at all times and constantly look for law violations (Esurance.com 2016).

The Zimbabwe Republic Police (ZRP) is a police service organization which was born from the British South African Police (B.S.A.P.) who was its colonizer. The Z.R.P. is the main law enforcement organization in Zimbabwe with its main purpose and goals enshrined in Section 219(1) (b) of the Constitution of Zimbabwe.

The organisation has 17 police provinces established for administrative commitments including Police General Headquarters located in the national province under study. ZRP Transport and Logistics can be traced back to 1993 where before that the organization’s
transport requirements were handled by Central Mechanical Equipment Department (CMED). CMED back and as its mandate today, was in the business of hiring out vehicles to all government departments including the police to manage crime. Priority differences sparked debate between CMED and Police relationship souring among others was ghost vehicle hire claims. In 1994 police weaned itself from CMED. The fleet included Nissan Patrols, famous blue door Peugeot 404, 504 Toyota land cruiser, Nissan UG 780 and Mitsubishi Lancer to mention a few (Police Outpost, October 2017).

Table 1. Number of vehicles in Harare Province.

<table>
<thead>
<tr>
<th>TYPE OF VEHICLE</th>
<th>NO. OF VEHICLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSES</td>
<td>17</td>
</tr>
<tr>
<td>HEAVY VEHICLES</td>
<td>41</td>
</tr>
<tr>
<td>MAZDA B 1800</td>
<td>21</td>
</tr>
<tr>
<td>MITSUBISHI</td>
<td>9</td>
</tr>
<tr>
<td>DEFENDER</td>
<td>22</td>
</tr>
<tr>
<td>FORD RANGER</td>
<td>15</td>
</tr>
<tr>
<td>COMMAND VEHICLES</td>
<td>105</td>
</tr>
<tr>
<td>OTHER</td>
<td>41</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>271</strong></td>
</tr>
</tbody>
</table>

Source: ZRP Transport Vehicle Register 2016

In an effort to minimize road accidents involving police vehicles, all police drivers in respect of all classes of motor vehicles used by the Z.R.P. are trained in both theoretical and practical concepts and skills of safe driving. The schools follow and teach a unique police system of driving motor vehicles referred to as the system of car control of which when perfected leaves nothing to chance but gives the driver one and the only ingredient to safe driving which is ‘time to react.

The Z.R.P. has a transport policy that is clear on the procedures to be followed whenever a police vehicle is involved in an accident. It gives the Chief Staff Officer [Transport and Logistics] the duty to receive all accident reports sent from stations and sections of the organization nationwide and record them in a register. The policy also stipulates how a
police driver is indemnified, suspended, uplifted and surcharged after being involved in an accident. While cost is a common consequence of police involved accidents, a few areas are now holding the police officers accountable. In Fairfax County, in Washington, has cited officers for causing crashes; not all write citations, instead they issue internal discipline ranging from reprimands to suspensions and even termination if warranted (Sterman, 2014). It follows, therefore, in the ZRP that before any new vehicle is given to a driver for use, the driver has to undergo a vehicle familiarisation refresher course at a police driving school in his/her region.

The mechanisms in place are to necessitate the safe movement of people and goods from one place to another, with special consideration on the hardships that the Z.R.P. has been operating from. It is disturbing that between period under study that is 2014 and 2017, 93 out of 271 vehicles have been involved in road accidents and some of them have been damaged beyond repair. Besides losing the vehicles, the organization has lost its manpower and a lot of funds through compensation made to third parties. Table I below shows how accidents involving police vehicles have occurred during the period under study (2014 – 2017).

Table 1 shows that accidents involving the police vehicles. Some vehicles were never repaired to be back on the road. It cannot be disputed that accidents involving the police vehicles have negatively impacted on the operations of the organisation. The research is predictable to expose all contributing factors underlying this problem of grounding down police fleet of vehicles.

1.2 Statement of the Problem

Despite of all ongoing drivers’ education, road maintenance, vehicles upkeep and traffic regulations being implemented as road safety initiatives, the accidents involving police vehicles remain a cause of concern. Statistics shown in table 1 below reflect the magnitude of accidents involving police vehicles in Harare province.

Table 2: Accident statistics involving police vehicles 2014-2017 (Harare Province)
<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Feb</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Mar</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Apr</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>May</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Jun</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Jul</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Aug</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Sept</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Oct</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Nov</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Dec</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17</td>
<td>34</td>
<td>42</td>
<td>53</td>
</tr>
</tbody>
</table>

*Source: Police General Headquarters Master Accident Register 2016*

### 1.3 Objectives of the Study

The study was guided by the following objectives, which are to:

- To examine and determine vehicle related causes to road accidents involving police vehicles in Harare province;
- To establish all driver related factors causing accidents involving police vehicles in Harare Province; and,
- To establish the common places and times at which accidents involving police vehicles are occurring in Harare Province.
- To evaluate different road safety measures taken by local authorities to prevent accidents in Harare Province

### 1.4 Research Questions
What are the causes of police vehicle related traffic accidents involving Police vehicles in Harare Province?

What are the common places and times at which accidents involving police vehicles are occurring in Harare Province?

What has the local authority put in place to prevent road traffic accidents in Harare Province?

What are the recommendations from this study?

1.5 Significance of the Study

The results of this study will have abundant bearing to the following beneficiaries:

To the researcher,

The study is an academic pursuit by the researcher in partial fulfillment of BBA PSS. The research will increase research skills and will also gain and broaden the knowledge concerning accidents involving police vehicles. The research will also help to link theory with practical aspects since the researcher is stationed at ZRP Harare Driving School.

Police Drivers and Drivers in general
Police drivers are expected to benefit from the existing body of knowledge about causes of accidents. The consequences of an accident are very adverse to a police driver. The driver is suspended from driving all police vehicles and may be surcharged rendering the driver socially and economically affected. The findings of this study will help drivers to be aware of the reasons why police drivers are exposed to accidents with the police vehicle, which in turn will help them come up with strategies for reducing this epidemic. Besides police drivers, any other driver in Zimbabwe and beyond may benefit out of the results of this study by learning why police drivers have been involved in road accidents. Whether the causes of these accidents are vehicle, environmental or driver related it is assumed that the lessons lent from this study may apply to any user of any other vehicle. The solutions
suggested to this problem of accidents are not confined to the police drivers only. Any
driver is set to benefit.

**The Police Organization**

The police organization is expected to benefit much from the recommendations and
findings of the study in that the responsible authorities. Transport Section and the Police
Driving Schools would be afforded an opportunity for a comprehensive perception of the
current phenomenon involving the police vehicles in the Z.R.P. thereby helping them to
come up with strategies and control measures that may see this problem being under
control.

**The Ministries of Home Affairs and Finance/Legislators**

The acquisition of new vehicles by the police organization is done through the Ministry of
Home Affairs being funded from the national fiscus by the Ministry of Finance. The need
for all government ministries to be mobile in serving the nation cannot be overemphasized.
When vehicles are bought and supplied to a government department using government
funds, the unwarranted loss of such vehicles will put the nation at a very big loss through
the costs incurred when the government repairs or replaces the government vehicle or when
the government compensates for damages or injuries incurred to other parties and their
vehicles or property.

The results of this study may help both the Ministry of Home Affairs and Finance in serving
government funds through replacement and repair of accident damaged vehicles because
when accidents are reduced. Claims for compensation from accident victims are going to
be reduced which will again save government funds. The study will put on task the
legislators to formulate laws or improve the current laws to deal with causes of accidents
and discrimination issues and put in place effective measures to eradicate these imbalances
and discrimination on bad publicity of police drivers. It will also persuade them to
formulate policies which are clear without any ambiguities so as to make the administration
of the policies less problematic when effected by the administrative agencies

**The General Public/ Community**
When accidents involving police vehicles occur, they do not only affect police officers. Members of the general public/community are affected one way or the other. In some cases pedestrians are run over by police vehicles and some members of the public are killed being passengers in police vehicles as state witnesses or suspects. When accidents involving police vehicles are reduced as a result of this study, the general public is assured of safety whenever they are dealing with the police. The study will provide useful and clear information to the public/community regarding the causes of accidents in fighting accidents. The study will also bring an insight on the effectiveness police driving conduct in fighting accidents regardless of their nature of duties.

To Bindura University

Academically, the study will contribute to the existing body of knowledge in the field of study hence filling the gap left by other researchers in assessing the fighting loss of human life caused by accidents in our roads. There will be an increase of literature for future use hence a benefit to students. Future researchers may be in a better position to develop own research strategies.

1.6 Assumptions of the study

The research was premised on the following assumptions;- 

- Authority to access information and carry out the study had been granted from PGHQ.
- Experience of researcher as a member of the ZRP provided invaluable information.
- Respondents would answer the questions on questionnaires and interviews truthfully and honestly and give maximum cooperation throughout the study.

1.7 Scope of the Study

1.7.1 Delimitations of the study
The study was confined to Zimbabwe Republic Police of 200 police drivers and 200 Officers in Charge stations in Harare Province. The area has been chosen because the researcher is one of the trainers and examiners of trainee drivers currently stationed at Harare Driving School. The research covers a period of four years from January 2014 to December 2017.

1.7.2 Limitations of the study

The researcher faced the following challenges in undertaking the study:

- A number of potential respondents uncomfortable about the motive were reluctant to participate in the study. The respondents lack knowledge that the research is solely for academic and has no disciplinary implications on them. To counter this, the researcher explained to the respondents that the information required from them remain anonymous and is only for academic purposes showing then evidence from college of course.

- The law enforcement agents ZRP through some commanders and members were not prepared to disclose some of the facts and information as they believe will lead to the organisation being viewed in bad light, especially where information on the organisation’s failures was sought. To address this limitation, the researcher sought permission first from the commanders highlighting the type of information that is needed. The researcher promised utmost confidential handling of data to the authorities of the organisation also assuring them that the research will be of use to the organisation.

- The time allowed to complete the research was determined by the period of study program. The research was confined to a research of a small magnitude permitted by the time available in order to suit the time allocated.

1.8 Definition of key terms
**Accident:** Means any incident involving a police vehicle whether being driven or not, whichever results in injury to a person or damage to property.

**C.I.D Bag:** Is the Z.R.P internal mail movement system that is used to transfer documents from one station to another without using postage stamps or the post office.

**Police driver:** Means any driver of a police vehicle who has been trained and authorized to drive police vehicles by a police driving school.

**Surcharge:** Make a driver to pay part or full cost of damages caused to a police or government vehicle during an accident in which the driver was to blame (Z.R.P Transport Policy 2000)

1.10 **Summary**

In the study, the chapter highlighted the background to the study that articulated the causes of accidents by police officers and in what numbers internationally, regionally and nationally. The chapter also highlighted possible challenges that were faced by the researcher in carrying out the research. Definitions of terms were also discussed.

---

**CHAPTER 2**

**REVIEW OF RELATED LITERATURE**

2.0 **Introduction**
This chapter reviewed existing literature related to the study under two sub headings namely theoretical framework and empirical evidence. Relevant previous researches were looked at. Secondary data have been collected from official government documents. Many other sources were used such as text books, newspapers, journals, Road Traffic Act Chapter 13; 11, and many others. The research gap will be established at the end of the chapter.

According to Cooper and Schindler, (2003). Literature review is the examination of recent or historical research studies, company date or industry reports that act as a basis for the proposed study. It is a summary of what has been written or said about the topic being researched on by other authorities. Hotaling et al, (2008), went on to explain that its main purpose is to critically analyse the theoretical and empirical research literatures which are available to justify the current study. Thus it aids to have undoubtedly understanding of the subject matter. The chapter will focus on the theoretical literature and empirical studies.

Empirical literature is derived from experiment and observation rather than theory (Thesaurus, 2002). According to Saunders et al, (2003), it also refers to the past studies that are similar to the present study. It helps establish the knowledge gap by showing how previous studies relate or differ from current study. Observations of other authors and theorists who hypothesize on the subject will be taken into consideration. During this process of reviewing related literature, it is worth to investigate the causes of involving police vehicles accidents and knowledge of gap is established at the end..

2.1 Organisational Policy Affecting Police Drivers

Figure 1. The Transport section Structure
The structure starts from the office of the Chief Staff Officer (Transport and Logistics), who oversees all matters relating to transport in the Z.R.P. The Senior Staff Officer (Transport Administration) is responsible for the procurement, distribution and disposal of all police vehicles. It is this office that monitors accidents involving police vehicles and puts in place preventive driver monitoring and accident preventive measures.

Senior Staff Officer (Technical services) is responsible for all issues relating to the maintenance and repair of all organizational vehicles. This section also deals with the training of technicians and procurement of spare parts (stores) at Police General Headquarters. In each province, there is a provincial transport officer who takes control of all vehicles and drivers in the province with the help of District Transport Officers. Each District Transport Officer deals with the management of all vehicles and transport personnel within his/her district. Station Transport Officers look after all Station vehicles and drivers.
According to the Police Outpost, October 2017, both Transport and Logistics are found within a supply chain. Planning, implementing and controlling movement of goods, services and personnel towards satisfying the customer have been identified as some of the key activities which define logistics while the actual movement essentially defines transport. Since transport is one of the most active components in a logistic function, it is incumbent upon all members within the organization to take a keen interest on the proper use and maintenance of this important resource at their disposal.

✦ **Suspension from Driving**

The Z.R.P. Transport Policy (2000), stipulates that whenever a police driver is involved in an accident, that driver is immediately suspended from driving police vehicles. A board of enquiry into the circumstances is instituted to determine the degree of liability of the driver involved. Re-instatement back to driving duties is done by an officer of the rank of a Superintendent or above after the recommendations of the board of enquiry. No re-instatement is done whenever a driver’s license has been cancelled by the court.

✦ **Surcharges**

The Z.R.P. transport policy shows that surcharges can be raised whenever a board of enquiry to an accident is of the opinion that the police driver is to blame for the accident. In severe cases, 10% of gross annual salary payable for 36 months may be deducted from the salary of the concerned driver.

✦ **Indemnification of Police Drivers**

Like any other public service driver, police drivers are indemnified by the provisions of Statutory Instruments 357/86 and 1/2000, against:

a) The death or injury of any other person other than the driver himself. The driver’s health issues are catered for by others sections of the driver’s conditions of service; and

b) Destruction of property, excluding member’s property or state property. Whenever the driver’s property is damaged, replacement or repair of it is dealt with some other sections of the police standing orders.

✦ **The Z.R.P Driver Training System**
Harare and Bulawayo Police Driving schools were authorized since 1962 by the Minister of Transport to issue driver’s licenses to police officers according to Statutory Instrument 916/1962 as repealed by Statutory Instrument 556/1983. The schools cover Northern region and Southern region respectively. Since then the police driving schools trained drivers and issued licenses for all classes of road transport in Zimbabwe. The schools also conduct other courses like the advanced driver training course and Driving Instructor’s Course.

.FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream

 FileOutputStream
d) Defensive Driving Course (D.D.C.)

D.D.C is a course that is aimed at addressing and imparting positive attitudes into the driver towards the prevention of road accidents. It covers concepts on the definition of preventable and non-preventable accidents, how to avoid collisions with vehicles behind, oncoming vehicles and at an intersection. It also covers the art of overtaking, and examined how mystery crashes occur. All other common types of collisions are examined and defenses against them suggested in this course.

❖ The Advanced Driver Training

The objective of the advanced driver training is for police drivers to be skilled of operating high powered vehicles in extremely aggressive and hostile driving conditions such as state motor Cade escorts, speed chase in pursuit of car-jackers using the siren, beacon lights and traffic law enforcement. The duration of the course is at least six weeks and subjects covered are as per novice standard light motor vehicle with advanced practical driving concepts. Generally, no one is allowed to drive a Police Patrol Car without the advanced grading.

2.2 Theoretical literature

Theoretical literature is literature concerned primarily with theories or hypothesis rather than practical considerations. Theoretical framework in this study will help the researcher remove absurdity in the understanding of accidents involving police vehicles. Thesaurus, (2002), further enlightened that theories help to explain observed facts, predict outcomes of relationships and to summarize knowledge. In this study theoretical literature around issues of accidents involving police vehicles are going to be reviewed. In this study theories allowed the researcher to understand and predict outcomes on a probabilistic basis.

2.2.1 System Theory

Figure 2.1 A Model for Traffic Operations

![Figure 2.1 A Model for Traffic Operations](image-url)
The components of the theory are the environment, the means of transport (vehicles) and the behaviour of man (Krug et al., 2000). The environment component comprises of the natural and the built environments and transport networks. The means of transport component comprises of the volume and quality of vehicles on the modes of transport. The behavior of man component comprises of demographic characteristic of road users (age, sex, education, socio-economic status, stage in life cycle), people’s perceptions of risk and people’s general behavior on the streets. Integrated in the systems theory is a system of highway codes and enforcement mechanisms designed to ensure that road users adhere to the controls and regulations of traffic flow for maintaining road traffic safety.

Traffic accidents accept strong elements of man environment adjustment a well-known approach in geography (Muhlrad et al., 2005). The approach was transferred to studies of road accidents and was developed by Jørgensen and Abane, (1999) who made a heuristic adjustment of this basic model to suit road traffic accident analysis. The model is characterized by three main components:

- The vehicle which describes vehicles into its composition, age, technical conditions and safety equipment like seat belts in a car.
The environment, comprising the road system and the wider physical and built up environment. The physical environment splits further into different aspects such as; Daylight and climate (weather conditions and road conditions), urban or rural or populated situation of areas of residence and working areas.

The behaviour of the population, including its characteristics such as age and sex ratio as well as attitudes and general traffic behaviour. And it goes further into driving behaviour driving experience, driving style, risk compensation and risk driving (influence of alcohol and drugs). Superimposed on this model is a system of traffic laws, regulations and mode of enforcement designed to ensure that the population adheres to the controls and regulations so as to maintain some level of road safety i.e. traffic rules (speed restrictions, road signs), speed controls and convictions for various road traffic offences (Jorgensen and Abane, 1999).

Accordingly, systems Theory can be understood in three different levels. Firstly, the theory helps to identify the system of traffic laws, regulations and mode of enforcement designed to ensure traffic safety in Zimbabwe Police. Secondly the model helps to identify the multiple causes’ interplay of risk factors and prevention of traffic accidents that occur in the study area. Thirdly, the model assists in identifying/understanding the three major contributory factors of road traffic accident including human, mechanical (vehicle) and road environment factors. Driving becomes a complex system in which a large number of variables are interacting with each other but also with varying degree of dependence. Accident may be due to judgement errors, ignorance, incompetence, rule violation, lapses or carelessness, all of which are human errors (Lemming, 1969).

2.2.3 Socio Political ecology.

Zimmer, (1996), explains that political ecology is the combination of ecology and political economy contributed immensely to the political ecology approach in human geography. Mayer, (1996), introduced the political ecology of a concept which focuses on the relevance
of political and economic factors at different geographical levels in the study of accident risk as well.

The above explanation indirectly shows the importance of political ecology of accident concept when one is researching into any study such as how the community perceives risk in relation to road traffic accident in any country at local scale. This is strongly linked to available resources and capacity of the national and local authorities to put road safety strategies in place. The lack of resources and power to follow up on control and enforcement can result in lower motivation of police force. This is because government policy does have an influence on all the factors that cause traffic accidents, be it the quality of the road network, the associated physical environment, traffic engineering, the condition of vehicle or vehicle fleet stock or the behaviors and attitudes of road users. This relationship for example, can be expressed in the import of second hand vehicles for private as well as public transport from the developed countries. Sometimes this could be importation of vehicles nearly regarded as non-road worth in the view of the exporter in the developed country.

The buildup environment can influence the occurrence of traffic accidents in a locality. Planning for road construction to aid development should take into account the width of the road and the lay out of the junctions. Whether black spots will be improved or not rests on the shoulders of the state and further more regional or local authorities. In the same manner, the existence of the better roads, side facilities for pedestrians and safer crossing points to reduce traffic risk accidents rest with the authorities at different level. The existence of traffic laws and effectiveness with which they are implemented is largely the sole reserve of the ruling government. The power and willingness to focus on transport and accident risk as an economic problem and poverty problem in addition to a public health problem.

Moreover, the state attitudes towards traffic accidents will determine the sort of attentions the problem will receive. This is also a question of economic development and the availability of recourses, priority and the overall risk leveling the society in developing countries. The need for state policy Road Traffic Authority will increase when a high level of motorization is experienced in developing countries, hence facing a higher injury risk
(Smeed, 1953). With regards to the problem of high traffic accidents in Zimbabwe political ecology approach will help Police drivers to associate and integrate human-environment factor at local level and the traffic accidents at that specific place in relation to social, economic and political aspects and practice.

2.2.4 Geographical approach

According to Cutter, (1993), geographic scale is important in understanding technological hazards, their distribution, impacts and its reduction. Accidents such as road traffic accidents are also relevant to study of investigating the causes of accidents involving police vehicles within this subject. Land use pattern, types of road network, local business and activity pattern will influence the system risk in an area as well as the health risk of the population. There is also rural and urban differences, in urban areas there are more accidents, lower degree of injury while in rural areas there are lower accidents levels however more serious fatalities (Astrom et al, 2006). Time factor in the analysis of road accident pattern is also vital as it will be relevant to know trends in the accident patterns as well as time in a more specific way related to hours of the day, month, or season that people are more at risk of the traffic accident.

2.3 Empirical Evidence

A study that was carried out by National Highway Safety Administration of the USA (2000), most road traffic accidents that are associated with mobile phone usage occur due to the mental demand during the conversation and not due to the visual and motor processes like dialing or typing. Evidence to support these results can also be found by Consiglio et al, (2003). Remarkably, Consiglio et al, (2003), also found that the usage of hands-free phones deteriorates performance to the same extent as usual mobile phones. The findings indicate that mobile phone usage and driving compete for mental resources rather than for the manual response. However, assuming that the mobile phone would be used for writing text messages, visual and motor processes would be required to a greater extent. To which
extent the driver is distracted depends on the driver himself or herself, how demanding the respective task is and the driver's willingness to engage in the task (Ranney et al, 2000). In May 2010, a vehicle driven by an Austin (TX) in USA, police officer ran a stop sign and struck [a civilian] on his motorcycle. The officer admitted he was using a dashboard computer when he rolled through the stop sign (Friedman, 2013).

In 2009, President Barack Obama issued an executive order that essentially prohibited federal employees from texting when using government-owned electronic equipment while driving any vehicle (Ashton, 2010). It would seem that an executive order that has been issued by the president would apply to everyone, but according to Ashton, law enforcement officers are exempt for the executive order as well as the sample texting while driving law. Ashton goes on to say that many police officers regard themselves as invincible and engage in hypocritical behavior by enforcing the same prohibitions against driving while texting or making handheld cell phone calls that they appear to flout (Ashton, 2010).

Although police officers eyes may sometimes be physically focused on the road, with minds on other things, they may not be able to see things that are happening at every corner in front of them. Visual distractions for police officers consist of monitoring the on-board computer for information, monitoring the radar, checking and ensuring that the in car camera system is operating, and looking for suspects. Officers sometimes forget the dangers because they’ve become so used to juggling radios, phones and computers that give important information and fast communication with dispatchers, he said (Friedman, 2013). The key is learning and finding ways to efficiently handle these distractions. The Government may enact laws to help combat this growing problem, but (Friedman, 2013), found through research that many police departments do not have distracted driving policies. Police officers enforce the distracted driving laws for civilians; however, they are exempt from certain laws and the question many want to know is “who holds the police officer accountable? (Friedman 2013).”

In a special comparative investigation carried out in Unicoi’s, USA, blood alcohol levels of drivers involved in accidents were compared with a random selection of the greater the likelihood of being in the accident group. It showed that 47% of the accident group had been drinking (Denney, 1979). This case shows that whenever a driver consumes alcohol
or takes drugs, depending on the quantity and the effects of the alcohol on his driving, he moves from a state of being less likely to that of more likely to be involved in an accident.

The researchers found that drivers comply with the road signs if they are afraid of the negative consequences. In other words, the possibility of getting fined is a greater incentive to slow down than the possibility of encountering a crossing pedestrian. Yet, similar results were reported by Sommer, (2012), although she didn’t focus exclusively on road signs, she demonstrated that information perceived by the driver is rated and responded to according to the relevance for the driver. The latter is associated with the limited capacity of the working memory. Items that are not repeated are no longer remembered after a time-span of approximately 30 sec (Becher et al, 2006).

Schlag and Heger, (2002) conducted a literature review on road markings and found that lateral distance from the edge of the road increases when drivers are driving by night and the edge line is not visible. This effect can be compensated by applying white edge lines with a width of 20 cm. Under daylight conditions, the lateral position moves 23 - 41 cm to the right if edge lines are applied and 11 - 28 cm to the left if center lines are applied. It is, however, difficult to argue the extent to which the presence and width of edge or center lines affect lateral position, since lateral position also depends on shoulder width and possible hazards alongside the roads such as trees (van Driel, Davidse, & van Maarseveen, 2004). Although some researchers argue that road markings lead to an increase in speed, a meta study conducted by Van Driel et al, (2004) revealed that road markings can lead to both, an increase and a decrease in speed. The authors conclude that applying an edge line to a road without applying a center line increases the speed, whereas replacing the center line with an edge line decreases the speed.

Although road markings might have a negative effect on speeding behavior, this behavior is not associated with a higher road traffic accident risk. Becher et al, (2006) confirm that road markings increase speed, but they also conclude from their literature review that the observed speeds are more homogenous when road markings are present. Porter et al, (2004), confirmed that edge line and center line rumble strips have a positive effect on lane position but no effect on speeding behavior. Neis, (1986), for example, argues that many road markings are not visible under certain conditions for example rain and at night. In
order to be visible by night, road markings should reflect the lights from vehicle headlamps. The visibility (amount of reflected light) is dependent on various factors such as the width of the marking, the number of lines and the color. Under wet road conditions, raised pavement markers could be an option. Although colour is important, it is not the most crucial aspect of road markings. After an extensive review, Rumar and Marsh, (1998), concluded that, colour coding undoubtedly affects drivers’ behavior by transmitting a specific message to the road user.

A study conducted by Brilon et al, (2008), has revealed that the high accidents risk for older people at intersections is related to difficulties in interacting with other road users. In support Hancock and De Ridder, (2003), investigated driver behavior when approaching intersections and inclines and found that drivers identify possible hazards and respond with an "off the accelerator" action. This aspect is important, as familiarity is associated with the driver's expectations. The speed of the vehicle coming from the minor road was high when the traffic density on the major road was low, and vice versa. If the driver knows that the intersection is dangerous he or she will behave accordingly. One conclusion that can be drawn is that driving behaviour at transitions greatly depends on the driver.

There is a relationship between seasonality; weather and time factor in road traffic accident occurrence (CSA 1983, Jegede, 1988, Zhang et al, 1998). Fatal accidents mostly occur during winter season. Concerning the physical environment, various climatic threats and hazards such as heat, fog, high winds, snow, rain, ice, flooding, tornadoes hurricanes, and avalanches have effects on roads hence on traffic accidents, (Moen et al, 2005). The weather like heavy tropic rainfalls also threatens surface transportation and impact road way safety, mobility and productivity. It affects roadway safety through increased crash risk as well as exposure to weather related hazards. Weather impacts roadway mobility by increasing travel time delay, reducing traffic volumes and speeds and decreasing roadway capacity Odero et al, (1991). Weather and road conditions in terms of road qualities therefore have a role in the causes of traffic accidents. In the same manner, the situation of areas of residence and working whether in an urban or rural area determines the extent of traffic accident risk in an area.
The buildup physical and social environment with regards to road network, the types of roads, and quality of the road like black sport, road segments, lane width, junction layout, pot holes and other characteristics of the road have system also have strong effects on road safety in any place, Oluwasanmi, (1993) The area planning and land use patterns perspective has also an impact on traffic accidents, the existence of squatter buildings, traffic calming schemes in residential areas, restricted driving areas as well as traffic separation in a place does matter for road safety, and this is because they have strong bearing on traffic generating activities as well as problems and solution of traffic safety efforts (Shibata et al, 1994).

Carrick et al, (2010), analyzed the crashes sustained by vehicles driven by law enforcement officers in Florida. They found that the common types of collisions were rear-end and backing-up type crashes and usually most of them occurred during the daytime, under favorable driving conditions, and during their routine operating mode. Noh, (2011), compared the characteristics of fatalities in crashes involving passenger vehicles between law enforcement officers and non–law enforcement groups. The results indicated that the two groups showed a substantial difference in crash time, the occurrence of their first harmful event, roadway function class (rural/urban), road surface condition, emergency use, rollovers, point of impact, vehicle maneuver, age and sex of the driver, seating position, and the use of restraints and airbags.

Concerning crashes that occurred during pursuit by police, Dunham et al, (1998) reported that approximately 40% of all pursuits resulted in a crash, 20% ended with injuries, and 1% resulted in a fatality in the United States. Rivara and Mack, (2004), evaluated the characteristics of fatal crashes related to police pursuits in the United States. The results showed that these fatal crashes often occurred at high speeds in the dark on local roads. In addition, most of the pursued drivers had prior driving violations. Hutson et al, (2007) reviewed fatalities resulting from police pursuits in the United States from 1982 to 2004. The results showed that collisions with solid objects accounted for 3,175 (59%) of the fatalities in vehicles pursued by the police and collisions with other moving vehicles accounted for 1,434 (80%) of the fatalities among occupants of vehicles not directly involved in the pursuits. Nevertheless, in the existing literature, few studies have examined
factors that affect the level of the injury severity sustained in crashes involving on-duty police cars.

One of the studies used 4-year (2005–2008) data from the road accident database of the National Police Agency in Taiwan and found that a total of 473 crashes involving on-duty police cars including 61% on routine patrol duties and 39% on an emergency run (responding to an emergency call or pursuing suspects/offenders) were used to explore the effect of risk factors on the severity of injury caused by crashes. Severity of injury in the traffic crashes was classified into 3 categories: fatality, injury, and property damage only. The distribution of injury severity included 2 fatal crashes, 129 crashes with injuries, and 342 property damage only crashes. The data showed a small number of fatal crashes, which was insufficient to analyze the effects of a variety of factors on those leading to fatalities. The study included 2 fatalities in the category of crashes resulting in injuries. Those resulting in fatalities/injuries accounted for approximately 28% of the total crashes. In addition, crashes involving police cars on routine patrol resulting in injuries and property damage only accounted for 16.7 and 35.7%, respectively. Crashes involving police cars during an emergency run resulting in injuries and property damage only accounted for 11.0 and 36.6%, respectively.

The types of crashes were classified as follows: head-on collisions, angle collisions, sideswipe collisions, rear-end collisions, run-off-road or overturns, collisions with fixed objects, and crashes involving motorcycles or pedestrians. The 3 highest percentages of crashes resulting in injury were those involving motorcycles (84%), run-off-road/overturn (75%), and collisions with fixed objects (65%). The injury crashes involving pedestrians had a lower frequency (only 1 case); however, a higher frequency (48 cases) of motorcycles was found in crashes resulting in injuries.

Another research classified the age of drivers into various groups by 10-year intervals from young to investigate factors that contribute to traffic crashes involving specific age groups (Ma and Yan, 2014). According to the report of National Police Agency of Taiwan (2009), the age distribution of police officers in 2008 was as follows: 9.1% 30 years old or younger, 37.8% 31 to 40 years old, 42.8% 41 to 50 years old, 9.8% 51 to 60 years old, and 0.5% 61 years old and older. Due to the small percentage of officers over 60 years old, this study
combined this age group with those aged 51 to 60 to provide a larger sample size. In addition, regarding the differences across gender for police officers involved in on-duty crashes, the data show that male police drivers were involved in 99.6% of crashes, which is considerably higher than those of female police drivers (0.4%). The percentages of total police officers male and female were 95.3% and 4.7%, respectively.

The research was supported by Odero et al, (1997), who also found out that in developing countries men are more at risk than women of being injured in crashes. The preponderance of males may be attributed due to their greater exposure to traffic and other associated factors. Concerning drivers the relevance of gender to road safety has long being recognised and it is the contribution of male drivers to accidents which has attracted much attention (Dopson et al, 1999). This is because driving as a profession is mostly dominated by men.

Work shifts of police officers in Taiwan were classified into 3 groups: (1) day shift (6 a.m. to 6 p.m.), (2) evening shift (6 p.m. to 12 p.m.), and (3) night shift (12 p.m. to 6 a.m.). Generally, the working time was 8 hours per day; however, the work shifts may extend to 12 hours per day in special circumstances. The distribution of crashes causing injury involving on-duty police cars and the time of day they occurred found that more crashes resulted in injuries during the evening shift (32%) than those that occurred on the day shift (27%) and night shift (22%).

Concerning the effects of the environment, police officers driving on roads with a low speed limit during emergency responses or pursuits significantly increase the probability of crashes causing injuries by 15%. Although previous studies have found that high speed limits increase the likelihood of severe injury, Boufous et al, (2008) had a mixed generalized ordered response model for examining pedestrian and bicyclist injury severity level in traffic crashes. Accid, (2011), found that police officer driving in excess of lower posted speed limits and slower vehicle traffic increases the risk of crashes resulting in injuries. Additionally, police officers on the evening shift on an emergency run significantly increase the probability of crashes causing injuries by 17%. The impact of the different times of day on the severity of crashes is consistent with previous findings that driving in low lighting conditions increases the probability of serious injuries (Abdel-Aty, 2003).
Moreover, police cars on routine patrol or on an emergency run in rainy conditions significantly increase the probability of crashes causing injuries by 7 and 9%, respectively. (Jung et al, 2014), found that driving on wet and slippery roadways during rainy weather with poor visibility can cause the driver to lose control of steering and braking, which leads to traffic crashes.

Mayer, (1996), noted that there is an effect of state policy and action are inherent in political economy, and are therefore a major concern of political ecology. Political ecology and health are closely linked in the sense that, it provides a useful perspective for gaining an understanding of human-environment interaction to cause an increase or decrease of traffic accident at various geographical levels (central versus local) and in different areas in developing countries.

A study done by Savolainen et al, (2010), found that civilian vehicles that failed to pull over to allow police cars pass on an emergency run have a greater probability of causing crashes resulting in injury than vehicles that give way to them. This suggests that the government should raise public awareness of the importance of yielding to a police car with its light and siren activated to reduce the probability of crashes causing injuries and delay in responding to an emergency situation (Savolainen et al, 2010). Educating the public and enhancing enforcement of the law requiring vehicles to yield to police cars in emergency or pursuit driving is essential.

2.4 Gap Analysis

Reviewing related literature enabled the researcher to examine the historical and latest developments in policing road accidents and establishing a gap. This was pertinent as it enabled the researcher to avoid duplication of work done by others. It is apparent that there was a deficiency of studies relating to the causes of accidents involving police vehicles in Zimbabwe considering that all the cited literature was done outside the country. Consequently, there was a boundless need for localizing the study and create home-grown solutions to improve the effectiveness of police driving contact.
This study had one similar objective to the research by (Thompson M, 2014), to investigate the causes of accidents involving police defenders. His study comprised the whole organisation and that the distribution of defenders was minimized in Harare province since the vehicles were solely for off road driving. Hence, this was likely to bring different results emanating from distinct challenges faced by the police in managing its already depleted fleet as a result of accidents. This study intends to focus on the effectiveness of policing and remedies to the challenges faced by the police and local authority.

This research had a similar research methodology to other researches cited in the sense that it used similar research design and data collection methods which emphasised the use of questionnaires and interviews. However, this study went a step further to use direct observations to obtain first hand research data which could not be obtained through the other instruments mentioned above.

Another notable difference between this study and previous researches is that of theoretical start point. Previous researches did not mention any theories to justify the existence of accidents involving police vehicles. The differences and similarities between the current study and previous studies has been noted thereby establishing knowledge gap.

2.5 Summary

This chapter dealt with the conceptual and theoretical framework, empirical research findings have been explored, and justifications of the current study was raised. This chapter presented information on causes of accidents. This was done through analyzing relevant theoretical and empirical evidence from different authorities from different countries across the world with past researches which studied the police accidents. The study is underpinned by the System theory, the Political ecology and Geographical theory.
CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter focused on the methodology adopted in carrying out this research. According to Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them (Kothari, 2004). The chapter discusses a chain of activities that was done by the researcher and considered the research design that was used and justified the choice for such a design. It also covers population size, sample size, sampling techniques and the data collecting instruments that were accepted. Pilot testing of data collecting instruments, data collection and data analysis procedures were discussed. Each and every procedure undertaken was be justified. The chapter concluded with a summary.
3.1 Research Design and Justification

In this research study, research design helped to identify the research problem clearly and justify its selection and spells out the strategies that the research adopts to develop information that is accurate, objective and meaningful. The researcher used a descriptive case survey method.

By using a descriptive case study survey method, this study has the objective of finding out the causes of accidents by police. According to Zikmund et al (2010), a survey is a descriptive research study with the objective of measuring people’s awareness, knowledge, behaviour, opinions and attitudes about these accidents. A descriptive design was used for the purpose of testing theory in this study, identifying problems with current police practice, justifying current practice, making judgments, or determining what others in similar situations of police training situations are doing.

This study used descriptive survey design as the relevant approach to this study because it provides the perceptions and views of the respondents about the phenomenon being studied. This method was chosen as most appropriate because it allows collection of standardized data through questionnaires and interviews for easy comparisons. The researcher used both quantitative (questionnaires) and qualitative (in-depth interviews) as methods of enquiry.

3.2 Target population

Sidhu, (2001), defined population as the aggregate or totality of objects or individuals regarding which inferences are to be made in a sampling study. According to this study, target population refers to individuals that have one or more characteristics in common that are of interest to the researcher and in this case it was the accidents involving police vehicles. The proposed research elements of the study comprised of types of population totaling 400, which were the 200, ZRP drivers, and 200, Officers in Charge Stations. A population, defined according to this study as police drivers and officers in charge of stations in Harare province, which the research focuses upon and to which the results obtained by testing the sample was be generalized.
3.3 Sampling Procedures and Sample Size

The researcher in this study used probability and non-probability sampling methods which allowed selecting a group of people, behaviors or other elements with which to conduct a study.

The researcher used simple random sampling and purposive sampling techniques to select participants for questionnaires and interviews. For respondents of questionnaires a simple
random sampling was used. Simple random sampling technique is preferred because it is simple to administer, cheaper and takes less time. Simple random technique was ensuring that all population elements have an equal chance of being selected into the sample. Van Darlen, (1978), proposed a 10-30 percentages as the range for a representative sample which the researcher will apply in getting the sample size of the entire group. For the population, cards were written “yes” and “no” was placed in a hat and those who pick a yes were given questionnaires. The sample selected can therefore be said to be representative of the whole population.

Purposive or judgmental sampling methods were also used to select respondents for the qualitative method. Kothari, (2004), noted that the strength of purposive sampling lies in the fact that it selects respondents that are typical of the population needed with required information. Also these are the exact people who are directly involved with the respondents. As such less time was spent in identifying the bona fide potential participants. Purposive or judgmental sampling enables the researcher to use judgment to select police officers that best enables him to answer research questions and to meet objectives. The researcher chose 40 respondents from police drivers and 40 officers in charge stations who are drivers as well. Interviews were also conducted from the respondents, five from each category.

3.4 Table of Sample size

Table 3.1 Statistical presentation of the sample size

<table>
<thead>
<tr>
<th>Target population</th>
<th>Number</th>
<th>Sampling procedure</th>
<th>Sample size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZRP Police Drivers</td>
<td>35 Questionnaire</td>
<td>Simple Random sample</td>
<td>40 out of 200</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>5 Interviews</td>
<td>Purposive sampling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Officers in Charge</td>
<td>35 Questionnaire</td>
<td>Simple Random sample</td>
<td>40 out of 200</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>5 Interviews</td>
<td>Purposive sampling</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5 Research instruments

The researcher used mixed methods of research in this study which are questionnaires, interviews schedules, observation guides and a self-report survey so as to triangulate the evidence. This study used semi structured questionnaires which were based on the study’s research questions as the basic tool to collect data pertaining the causes of accidents. In-depth interviews were employed as these enabled the researcher to ask standardized questions and to collect uniform data from the police drivers, and the Police Officers’ in Charge of police stations. A both qualitative and quantitative data presentation and analysis technique was used to analyse the data. The study seeks to investigate the causes of accidents by police officers.

3.5.1 Questionnaires

There are a number of instruments for collection of data such as the questionnaire. Wegner, (2006) explained that a questionnaire is a systematically prepared form or document with a set of questions deliberately designed to elicit responses from respondents or research informants for the purpose of collecting data or information. The researcher used a questionnaire which has a collection of questions as it asks questions which the researcher has interest to know by determining the extent to which the respondents view the causes of accidents. The study used closed-ended and open ended questions to assist the researcher to make questions clear and also make an analysis of data easier. These enabled the researcher to ask standardized questions and to collect uniform data.

The questionnaires were administered by the researcher at the Harare Driving School to Officers In Charge stations (35) and Police drivers (35). The researcher left the
questionnaires in the hands of people of authority. The data sort included age, marital status, level of education, and nature of duties preferred and years of service that has been spent at the current station among other major aspects of the study.

**Merits and Demerits of the Questionnaire**

The researcher has chosen to use a questionnaire for the following reasons; it is cheaper to administer considering the topic of investigating of accidents involving police vehicles. Large amounts of information can be collected from a large number of police drivers in a short period of time. The use of questionnaires enabled the respondents to express their facts and opinions concerning the cause of accidents because of guaranteed privacy, anonymity and confidentiality. This helped remove the aspect of victimisation as no names will be involved. The researcher sees it fit to use questionnaires as the use of questionnaires is convenient for both the researcher and respondent as the respondents completed at their own time at the comfort of their homes. In this study, the use of questionnaires helped to increase reliability since there is no room for the researcher to influence the response of interviewees.

According to Tayie, (2005) the questionnaire always has a low response rate. Only those respondents who are interested in the study responded. In this study the researcher made sure the questionnaires were administered in person to the drivers through their superiors, which gave the exercise some gravity and high chances of securing returns. To be quick, the researcher used the police mail system (C.I.D. Bag) which was faster than the post office service. Another challenge associated with the use of questionnaire is that there is no provision for clarification of unclear questions by the respondent (Tayie, 2005). The researcher therefore had to make all questions as simple, straightforward and unambiguous as possible.

**3.5.2 Interviews**
The researcher used interviews as an instrument to gather data on the causes of accidents. According to Borg and Gall, (2011) an interview is an interaction in which oral questions are posed by the interviewer to elicit oral response from the interviewee. The interview is going to be conducted over the phone for some managers with a busy schedule and some in person who are available in their offices. Interviews were conducted with 5 purposively sampled police drivers and 5 police officers in charge. The same questions included in the questionnaire were used in the interviews. This technique brings forth the triangulation method used to confer responses elucidated through questions in order to have a deeper understanding of the issues under study.

**Merits and Demerits of Interviews**

Interviews were used in the study as they provide opportunity for detailed feedback and clarification from the Z. R.P management. The researcher used the structured interviews because they are flexible in the sense that the researcher has room to clarify answers provided by the interviewees and the interview ensures further probing by the researcher on all key facts of the study. The researcher gets all the answers from the semi structured interview guide to enhance reliability. Interviews are flexible and they allow some appraisal of the validity of the responses. This ensures that the same questions are presented to respondents.

However, there are demerits associated with interviews. The researcher could get biased answers, which may be influenced by presence and could end up asking leading questions unintentionally. Respondents can feel uneasy and adopt avoidance tactics if the questioning is too long. To do away with this, the researcher shall avoid hate language. The researcher avoids confrontations but instead try to negotiate with the target group under study where it warrants. An ethical consideration of the target group was dully respected to avoid arguments. The researcher avoided many and long questions and only ask those that are short and relevant. The researcher used structured interview and it helped clarify points as well as words and concepts, and it gave room to the researcher to correct ambiguities about causes of accidents.
3.6 Data Collection procedures

Data collection procedures include setting of the boundaries for the study, collecting information through unstructured or semi-structured observations and interviews, documents and visual materials as well as establishing the protocol for recording information (Creswell, 2009). The researcher collected data through making appointments with respondents through telephones, letters, e-mails, and social media. Letters was used to get hold of the responsible authorities, that is, Police Staff College in trying to seek permission to carry out the study and some was forwarded to relevant police sections in order to get relevant information in carrying out the study.

Distribution and administration of questionnaires was done by hand or through research assistants and the same methods were used to retrieve them. Sufficient questionnaires will be prepared and physically delivered to all respondents for completion. The respondents was given a grace period of five days for thorough completion of the questionnaires. The researcher also used telephones in a follow up to remind the respondents of the appointment date. Distribution by hand helped to ensure accountability and nothing will be lost during the process as the questionnaires or interview schedules were delivered personally. These methods mentioned above helped the researcher to timely collect data. Secondary data was collected from official police documents.

3.7 Validity and Reliability/Pilot study testing

According to Kirk and Miller, (1986), validity is briefly defined as the degree to which the findings are interpreted in a correct way and reliability is the degree to which the findings are independent of accidental circumstances of the research. Babbie, (1989:141) says: “Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration”. The most common methods for demonstrating validity are referred to as content-related, criterion-related, and construct-related validity (Campbell, 1960).
Sidhu (2001), says that the validity of a questionnaire must be established prior to its use in the solution of a problem. To test for content validity of the questionnaire and interview guide, five (5) questionnaires and two (2) interviews were administered in a pilot study to seven police drivers and officers in charge respectively who were undergoing a defender familiarization course at Harare Driving School. The pilot study was used to reveal the gaps and defects on the instruments so that they can be corrected. Pre-testing was done to improve suitability of language, unclear and to clarify all items (Lancaster, 2005). After the pre-test, the researcher corrected those questions which respondents had found difficult to answer and those that were misleading. The drivers who participated in the pilot study will be deliberately excluded from the study target population. The pilot study was used to reveal the gaps and defects on the instruments and they were corrected accordingly.

Handerson, (1980; 223), reliability is; ‘…a measure of consistency or stability of tests over time or with its use by different rates.” If the measurement is reliable, then there is less chance that the obtained score is due to random factors and measurement error. The researcher used a pilot study to test reliability of interviews and questionnaires. Hair et al, (2008), summarised reliability as the fact that similar conclusions drawn are reached at even if a different researcher was to use the method of a similar study. Triangulation will also enhance validity and reliability that is multiple sources as information. Data triangulation using different sources of data, theory triangulation applying different perspectives to the same data source, investigator triangulation using different researchers and methodological triangulation using multiple methods were used in this study (Patton, (1990).

3.8 Presentation and Analysis of data

Thematic analysis of data was selected in this study. The data collected through questionnaires was validated and simultaneously entered into an EXEL and a prepared Statistical Package for Social Science (SPSS) computer software version 22.0 after a range of variables based on the questionnaire and interviews are coded. These statistical data was presented in explained graphs, tables and pie-charts after running frequencies of different
variables such as age, gender, perceptions of respondents using SPSS. Data was first presented, then interpreted and further transcended to give the significance and the appropriate meaning. Responses from interviews corroborated the data from questionnaires.

3.9 Ethical considerations

Best and Kahn, (1993), suggest that ethical considerations demand writing research findings in a moral and responsible way that does not injure the humane of respondents. In this research the researcher followed research ethics because they have important implications for the negotiation of access to the organisation and the collection of data. Ethical issues and access inferred by this research design was considered throughout the study.

In this study, respondents was not compelled to participate, but rather was informed of the consequences, demands and risks of participating in the study, and be assured that both confidentiality and anonymity was observed since failure to do so was going to affect research results. An ethical guideline was developed to act as a framework in guiding the research process. In addition, to ensure impartiality and confidentiality for the respondents, the questionnaire was constructed and data scrutinized in such a way that information would not be traceable to individuals and organizations. Participation in this study was exclusively on voluntary basis. Participants were informed of their right to withdraw at any time without penalty. Engel and Russel, (2013), devised that participants must feel no anxiety or distress whatsoever during or after the study as data collected will only be used for research purposes.

3.10 SUMMARY

This chapter outlined the research design and instruments that was used in this study, outlining their strengths and weaknesses and their justification for being used in the research. The researcher went on to describe the population and sampling procedure that
was adopted giving reasons for their adoption. The validity and reliability of research instruments was tested by the pilot study. Finally the researcher outlines the procedures that were adopted in presenting data and how the analysis was done. The following chapter will present and analyse data that will be collected.
CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter focused on data presentation and its analysis in investigating the causes of accidents involving police vehicles in Harare province. The data presented and analysed under this chapter was collected from respondents of 40 police drivers and 40 officers in charge stations collected through questionnaires and interviews from Harare Province. All questionnaires were returned and the interviews was conducted hence the return rate was 100%.

Quantitative data from the close ended questions were subjected to quantitative analysis using SPSS version 21 and narrative analysis was employed for the analysis of qualitative data from open-ended questions and interviews. As the study sought to establish the causes of accidents involving police vehicles in Harare province, data was presented in statistical tables, pie charts graphs and in narrative form. The data was presented analysed and interpreted in accordance with the following study objectives:-

- To examine and determine vehicle related causes to road accidents involving police vehicles in Harare province;
- To establish all driver related factors causing accidents involving police vehicles in Harare Province; and,
- To establish the common places and times at which accidents involving police vehicles are occurring in Harare Province.
To evaluate different road safety measures taken by local authorities to prevent accidents in Harare Province

4.1 Data analysis, results and interpretation

4.1.1 Demographic data of respondents

The study sought personal details in terms of gender, age, driver training and experience to determine whether they had any bearing to the ever increasing number of accidents involving police vehicles in Harare province. The data presented in table 4.1 below was collected through questionnaires.

4.1.2 Response rate

Response rate is the total number of people participating in the research divided by the number of people who are asked to participate, Babbie (2009). It is given in the form of a percentage. The higher the response rate reduces the chances of bias response. The response rate determines reliability of the results collected and is an indicator of how much confidence can be placed on the research results.

Table 4.1: Demographic data of Police Drivers and Officers in Charge stations in Harare Province.

<table>
<thead>
<tr>
<th>Demographic item</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>69</td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>
### Age (Years)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19&amp; below</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20-29</td>
<td>23</td>
<td>34</td>
</tr>
<tr>
<td>30-39</td>
<td>35</td>
<td>50</td>
</tr>
<tr>
<td>40-49</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>50 and above</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>

### Driver Training

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>51</td>
<td>73</td>
</tr>
<tr>
<td>Advanced</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>

### Experience

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>58</td>
<td>82</td>
</tr>
<tr>
<td>Rural</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary data

**Questionnaire response rate**

Questionnaire was the main research instrument used to collect primary data. According to Sivo et al (2006), questionnaires are relatively easy to administer and efficiently gather large amounts of data at low costs. Table 4.1 above reflects that all 70 questionnaires distributed were returned, making a 100% and the response rate was good enough to reach generalized conclusions. Data analysis proceeded since the response rate was
acceptable. The questionnaires were successfully completed by both police drivers and Officers in Charge stations in Harare Province.

**Gender**

Table 4.1 above indicates that out of the 70 comprising police drivers and officers in charge, 48 of them were males. It constitutes 69%. There were 22 were female respondents who constitute 31%. The data presented indicates that the Z.R.P has more male drivers involved in road accidents than female drivers and both genders were proportionally involved in road accidents with the police vehicles. The findings tally well with Dopson et al, (1999), assertion that drivers the relevance of gender to road safety has long been recognised and it is the contribution of male drivers which has attracted much attention because driving is a profession that is mostly dominated by men.

**Age**

According to table 4.1, 23(34%) of the police drivers and officers in charge were 21-30 years old, 35(50%) of them were 31 to 40 years old, 11(16%) of them were 41 to 50 years old and none of the respondents were below 20 years of age or above the age of 50 years. Krainner (2006) suggested that one demographic factor particularly significant is age. Data presented in table 4.1 indicates that the big number of respondents is of middle aged men and women. They are mature people in terms of their age and decision making as well as job experience.

The high frequency of these responses being involved in accidents could mean that they are the most operational drivers when conducting police business. They are also exposed to the risk of being involved in accidents than any other driver. Drivers aged 50 years and above in the organization were less involved in accidents probably due to the fact that the retirement age is 50 years. The researcher noted that the respondents showed overwhelming commitment to be part of the research study.

**Driver training**

Table 4.1 shows that 51(73%) of the police driver and officers in charge under-went standard vehicle driver training while 219(27%) went for advanced driver training. The
results revealed that drivers who undergo standard driving are at risk of being involved in accidents compared to an advanced driver. This is in unison with the ZRP Driver Training Policy (1989) where the objective of the advanced driver training is for drivers to be skilled of operating high powered vehicles in extremely aggressive and hostile conditions, speed chase pursuit of car jackers. The duration of the course is at least six weeks and subjects covered with advanced driving concept.

**Experience in driving**

Table 4.1 presents that 58(82%) of the police drivers and officers in charge had rural driving experience while 12(169%) of them had urban driving station experience. The prevalence of accidents in urban stations was in congruence with the volume of traffic in the province. The issue of experience was supported by a study done by Hancock and De Ridder (2003), who noted that experience is crucial as familiarity is associated with the driver’s expectations. A study also done by Oluwasanmi (1993), revealed that the build-up physical and social environment with regards to road network, the types of roads and quality of the road like black sport, road segment, lane width, junction layout pot holes and other characteristics of the road have system also have strong effects on road safety in place. The finding was also highlighted by the Geographical Approach where it was found that there also rural and urban difference, where there are more accidents in urban areas as compared to rural areas.

Types of accidents involving Police vehicles \( n=70 \)
The graph in fig. 3 presents the type of accidents that police drivers were involved in while driving Police vehicles during the period under study. Drivers who lost control of the vehicle and ran off the road had the highest frequency of 31 (39%). Drivers who had their vehicles to get involved on intersections were the second highest at 20 (25%) while contacts with other vehicles were 12 (25%) and 5 (6%) of the driver hit pedestrians. Incidents involving pedestrians were minimal, they were also encountered by the police drivers. A study by the National Police Agency in Taiwan (2009), found that the three highest percentages of crashes resulting in injury were those involving motor cycles, run off/overturn and collisions with fixed objects. There is also a similarity where accidents involving pedestrians had a lower frequency. Another confirmation comes from the Systems Theory, where Lemming (1969), who found that accident may be due to judgement errors, ignorance, incompetence, rule violation, lapse of carelessness, all of which are human errors.

Table 4.2 Authority to drive the Police vehicles (Government Authority)

n=70
Table 4.2 presents data in relation to how many police drivers and officers in charge had authority to drive the Police vehicles and those who had no authority. The table indicates that 70(100%) respondents from questionnaires and interviews of the drivers had government authority to drive police vehicles. The results confirm the ZRP Driver Training manual (1989), stipulates that no one is allowed to drive a police vehicle without a government authority. Police drivers use a log book where the vehicle is subject to handover and take over to only qualified drivers with the authority to drive police vehicle.

**Establishment of vehicle-related causes of accidents**

The questionnaire was aimed at establishing vehicle related causes of accidents. Table below present data gathered from the 70 police drivers and officers in charge who were involved in road accidents

**Table 4.3 Vehicle-related causes of accidents**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyre blow-out</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Defective suspension</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Defective steering</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brake failure</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 4.3 shows that 55 (79%) of the police drivers and officers in charge indicated that the vehicle had nothing to contribute to the occurrence of the accident. Twelve (18%) of the respondents attributed the cause of their accident to tyre blow outs and defective suspension 1(1%). Majority of the respondents, exonerated vehicle defects in most accidents and therefore it implies that driver related causes were behind most accidents. The results could indicate the supervision of police vehicles roadworthiness by the transport section according to ZRP Transport Policy, (2001). Most of the drivers interviewed blamed the tutorship program that is done after completion of the driving course but above all they indicated the lack of supervision of drivers.

Establishment of Environment-related factors causing accidents

Police drivers and officers in charge were asked to indicate the environment related factors that caused them to get involved into an accident they were asked to choose from visibility, weather, wet road surface and congestion. Their responses are presented in pie chart below.

Figure 4.2 Environment-related factors causing accidents. N=70
Source; Primary Data

Fig 4.2 shows that 38(55%) of the respondents attributed the cause of their accidents to congestion. A total of 22(55)% of the respondents indicated that the accidents were caused by the poor conditions (environmental factors) while 7(10%) of the drivers attributed their accident to whether and visibility 3 (4%). Roads are not tallying with the ever increasing vehicles being imported into Zimbabwe. In a study that was carried out by Robert, (1995), found that with the ever increasing motorization in China leading to congestion has started to experience this problem to a massive scale, which was not existent before. The study has similar results with this study as the major cause of accidents is congestion. The police officers are not spared with this ever increasing import of used vehicles from Japan. Police officers interviewed highlighted the problem of congestion even though at times the police drivers will not be at fault. One officer in charge said “it’s not the driver at fault, look at tall grasses and potholes “

The study is a confirmation of Systems Theory which states that environment, comprising the road system and the wider physical and built up environment. The physical environment splits further into different aspects such as; Daylight and climate (weather conditions and road conditions), urban or rural or populated situation of areas of residence and working areas. These responses from questionnaires and interviews were coming from qualitative findings of the research.

Table 4.4 Establishment of driver-related factors causing accidents

Police drivers and officers in charge were made to indicate the driver-related causes that contributed to their involvement in road accidents. Data collected from the responses is presented in table below.

n=70

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving whilst on the phone</td>
<td>29</td>
<td>41</td>
</tr>
<tr>
<td>Drunken driving</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

47
Table 4.4 indicates that 29(55%) of the respondents drove whilst on the phone resulting in accidents occurring, 1(1%) of the respondents indicated that the accidents were as a result of the drunken driving, 6(10%) police driver turning in front of oncoming 4(5%) were following too close, 9(13%) was excessive speed, 13 (19%) of the respondents indicated that fatigue caused them to lose control of the vehicle resulting in accidents occurring and 8 (11%) of the respondents indicated that there was no element of driver fault in their accidents. Data presented shows that 89% of the accidents vehicles were due to driver fault (human error) whereas 11% were due to other causes. The worst driver fault presented in table 4.4 was driving whilst on phone.

In chapter two researchers found that the most prevalent cause of accidents where drivers lost control of the vehicle without disturbances from other road users is the use of cellphones while driving. Ashton, (2010), found that many police officers regard themselves as invincible and engage in hypocritical behaviour by enforcing the same prohibition against driving while texting and making handheld cellphone calls that they appear to flout. It is against this background that in 2009 President Obama issued an executive order to prohibit drivers from texting when using government owned electronic equipment while driving any vehicle. Driving under the influence of alcohol is at the bottom which indicates that the police drivers are a disciplined law enforcement where they parade and inspected before commencing of duty.

<table>
<thead>
<tr>
<th>Failure to give way</th>
<th>6</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following too close</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Driving above speed limit</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Fatigue or tiredness</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>There was no driver fault</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>
Interviews were conducted with one of the police driver saying that “ndinenge ndaneta ini” meaning that she would have been tired. This implies that there would be no full application of mind and body to a particular endeavor, to the complete exclusion of everything not relevant to that endeavor. One officer in charge interviewed indicated that it is the responsibility of supervising the behaviour of other road users. Therefore their driving standard should be above reproach that is drive to set a good example.

Table 4.5 Establishment of ways of controlling the rate of accidents involving Police vehicles.

<table>
<thead>
<tr>
<th>Response</th>
<th>Ways of controlling</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Refresher course regularly</td>
<td>28</td>
</tr>
<tr>
<td>B</td>
<td>Governing of police vehicle speed</td>
<td>7</td>
</tr>
<tr>
<td>C</td>
<td>Spot checks and supervision by instructors</td>
<td>19</td>
</tr>
<tr>
<td>D</td>
<td>Cancellation of government authority</td>
<td>11</td>
</tr>
<tr>
<td>E</td>
<td>Other</td>
<td>5</td>
</tr>
</tbody>
</table>

Source; Primary data

Police drivers and officers in charge were asked to suggest ways of controlling the occurrence of accidents involving the Police vehicles and the following were the findings from respondents.

A) Twenty eight (33%) of the respondents suggested that all police drivers were supposed to be sent to driving schools for refresher courses regularly.

B) Seven (10%) of the respondents suggested that the speed of the police vehicles allocated to urban police stations should further be governed to a safer speed.

C) Nineteen (27%) of the respondents were of the opinion that driving instructors were to make spot checks and supervise the driving conduct of police drivers.
D) Eleven percent (20%) of the respondents were of varied opinions that included the cancellation of authority to drive police vehicles to all police drivers who are found on the wrong side.

E) The other Five percent (10%) other

4.4 Summary

This chapter presented and analysed data gathered from 80 respondents as the study investigated the causes of accidents involving police vehicles in Harare province. The study objectives guided this process and a number of findings were highlighted.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter covers summary of major research findings, conclusions and recommendations as they arise from the study. The whole purpose being to try and minimise at all cost accidents involving police vehicles in Harare Province. Additionally, results from this study could inform and aid policy makers, educators, researchers, and
legislators and educational programs that would all lead towards improving not only police drivers but nationwide safety.

5.1 Summary of the major findings of research

The study was conducted to investigate the causes of road accidents involving Police vehicles in the Zimbabwe Republic Police (Z.R.P) from 2014 to 2017. It is against this background that the purpose of the study was to establish the causes of these accidents. The study established the following findings.

Both male 48 (69) and female 22(31%) drivers were proportionally involved in road accidents driving police vehicles. All police drivers are compelled to have a government authority to drive police vehicles. The bigger number of police drivers who were involved in road accidents involved police vehicles was of middle aged men and women that is 30-39 with 35(50%). Police drivers with rural experience involved in accidents were more frequently involved in accidents than their counterparts.

The vehicle related causes of accidents involving police vehicles, it was noted in the interviews with the OIC stations that in recent vehicle population has increased considerably in Harare Province while the road infrastructure remains the same. No vehicle fault had high frequency 55(79%) However, most of the public vehicles on the roads are in bad condition of service that is used to the extent that some of them are not road worthily.

On the driver related causes of accidents majority of respondents, both from questionnaire and interviews, mentioned that, driving while using cell phone is one of the human behaviour factors contributing to the cause of road traffic accidents involving police vehicles 29(41%). The various tasks entailed in using a cellular phone each require a different amount of time, mental energy, and coordination, leading to potentially different complications of the driving task and resulting risk of collision. In this sense there is a high risk associated of being involved in traffic accidents due to the tendency of drivers using mobile phone while driving in Harare province.
The common places and times at which accidents are occurring involving police vehicles is at major intersections. Police drivers seem had no knowledge of black spots so that they could drive according to the hazard. The accidents are prone during congestion time 22(31%) usually caused by the unruly behaviour of commuter omnibuses (combis) and pirate taxis (mushika shika )

The local authority must put in place some measures such as humps, to prevent the prolonging road traffic accidents in Harare Province. Respondents mentioned at least local authority make road safety activities one of the priorities in their budget allocation and distribution and to repair and replace road signs towards road safety in the province.

5.2 Conclusions

Basing on the findings highlighted above, the study drew the following conclusions:

- Human error (driver fault) was the major cause of accidents involving the police vehicles in Harare Province.
- Use of excessive speed in the circumstances was the major driver fault that tricked drivers into accidents.
- Both the vehicle and environmental factors were not the root causes of the accidents involving police vehicles.

5.3 Recommendations

Based on the results of the study, the following suggestion might be worth exploring in order to increase road traffic safety with police vehicles:

About Police Drivers

- In order to track down cell phone-related road accidents, police should be required to record among other factors, whether or not a cellular phone was present at the time of the accident. Laws should be imposed to restrict the use of cell phones when
driving. Government should develop a comprehensive educational effort aimed at drivers to promote the responsible use of cellular phone while driving.

- The traffic police should strengthen surveillance and enforcement to net drivers who drink alcohol beverages and then drive their vehicles to reduce those accidents which occur during weekends and at night.
- All drivers should participate regularly in refresher driver training courses so that the predictable bad habits acquired can be reduced.
- The Government should develop a comprehensive educational effort aimed at drivers to promote the responsible use of cellular phone while driving.

About environment and road network

- The Government under responsible ministries should make sure road signs are repaired and replaced every time when needed especially in towns and in high population areas.
- Traffic rights and roundabout are important features to be considered in improving smooth flow of vehicles.

About vehicles

- To protect the vehicle from use of excessive speed by drivers, police vehicles be governed to maximum of 60km/h.
- There is a need of establishing a permanent control unit (Vehicle examination unit) for regular vehicle inspection of all vehicles at least once a year and certificate of approval should be provided to the qualified vehicles.
- The traffic police should strengthen surveillance and enforcement to net drivers who drink alcohol beverages and then drive their vehicles to reduce those accidents which occur during weekends and at night.
- Traffic Police officers to be deployed at all major intersections.

5.4 Further suggestions for the study
This study only focused on establishing causes of accidents involving police vehicles. In the future, studies may also be expanded to rural areas to compare the variances between urban and rural areas.

5.5 Summary

This chapter presented the conclusions that were derived from the research findings and also the recommendations proposed. It was concluded that this study should be understood as a challenge to the police as an organisation, policy makers and social researchers.

REFERENCES


Best, J.W.B, and khan, .., 2006. Research in Education Belmonmt; Wadsworth publishing Company

Borg ,W.L.B, and Gall, M.D., 1983. Education research in Education and Introduction, new York, Longman


Dopson, A. J., Baguley, C.J. & Hills, B. (1999). Road safety in Developing Countries; An overview. Overseas Centre. Transport and Road research Laboratory, Crowthorne, and Berkshire, United Kingdom.

Dowing, A. J., Baguley, C. J. & Hills, B. (1999). Road Safety in Developing Countries: Transport and Road Research Laboratory, Crowthorne, Berkshire, United Kingdom.


Muhlrad N, Lassarre S. 2005 Systems approach to injury control. New Delhi, Macmillan India Ltd.

Mayer, J. D. 1996. The political ecology of disease as one new focus for medical Geography. Progress in human Geography. 20 (4), 441-456


SPSS 16.0.2 2008. Command Syntax reference, SPSS Inc, Chicago 111

Thompson, P., Brooks, K., & Hammett, S. T. 2006. Speed can go up as well as down at low contrast: Vision Research, 46(6-7), 782-786. doi: 10.1016/j.visres.2005.08.005


Zhang, J., Fraser, S., Lindsay, J., Clarke, K., Mao, Y. (1998). Age specific pattern of factors Related to fatal motor vehicle traffic crashes: Focus on young and elderly drivers; 112(5): 289-95.

Zuckerman, M. Sensation seeking: beyond the optimal level of arousal. Hillsdale, NJ, Erlsbaum, 1979

Legal documents


Road Traffic Act Chapter 13:11


Websites


APENDIX A

Questionnaire for Police Drivers And Officers In Charge Of Police Stations

Topic


Instructions

The researcher is pursuing the above study in partial fulfillment of the requirements of a BACHELOR OF BUSINESS ADMINISTRATION HONOURS DEGREE IN POLICE AND SECURITY STUDIES OF BINDURA UNIVERSITY OF SCIENCE EDUCATION
1. The researcher kindly request that you complete the following short questionnaire regarding which should take no longer than 10 minutes of your time.

2. Although your response is of the utmost importance to us, your participation in this survey is entirely voluntary. Please do not enter your name or contact details on the questionnaire. It remains anonymous. Information provided by you remains confidential and will be reported in summary format only.

3. Where applicable, please tick [✓] the relevant answer or write your response in the spaces provided.

4. After completion of the questionnaire Kindly It will be collected in person from you or return it by C.I.D Bag to:-
   SERGEANT UTETE A.T
   Z.R.P HARARE DRIVING SCHOOL
   CY 34 CAUSEWAY
   Cell 0772612398

**SECTION A: DEMOGRAPHIC INFORMATION OF RESPONDENTS**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender:</strong></td>
<td>Male</td>
</tr>
<tr>
<td><strong>Age:</strong></td>
<td>20 years and below</td>
</tr>
</tbody>
</table>
3. Driver training: Standard  
4. Advanced  

5. Experience: An urban station  
6. A rural station  

6. Any type of an accident you were involved in? 
   Run off the road (Lost Control)  
   Intersection  
   Contact with another vehicles  
   Hit an object  
   Hit a pedestrian  

7. Did you have authority to drive the Police vehicle (Government Authority)? 
   Yes  
   No  

SECTION B: ESTABLISHMENT OF VEHICLE-RELATED CAUSES OF ROAD ACCIDENTS INVOLVING POLICE VEHICLES

From the list given below, identify the cause of accident involving police vehicles you witnessed. Explain your answers when necessary.

<table>
<thead>
<tr>
<th>Vehicle defect</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyre blow out</td>
<td></td>
</tr>
<tr>
<td>Defective suspension</td>
<td></td>
</tr>
</tbody>
</table>
Defective steering

Brake failure

State any other vehicle-related cause of the accident:

a) ..........................................................

b) ..........................................................

c) ..........................................................

d) ...........................................................................

SECTION C: ESTABLISHING ENVIRONMENT-RELATED FACTORS CAUSING ROAD ACCIDENTS TO THE POLICE VEHICLES

With reference to the accident that you witnessed involving a Police vehicle, identify environment-related factors that caused the accident. Explain your answers when necessary.

<table>
<thead>
<tr>
<th>Environmental factor</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility (e.g. light)</td>
<td>..........................................................</td>
</tr>
<tr>
<td>Weather</td>
<td>..........................................................</td>
</tr>
</tbody>
</table>
State any other environment related cause of the accident you witnessed:

a) ...........................................................................

b) ............................................................................

c) ............................................................................

d) ............................................................................

SECTION D: ESTABLISHING DRIVER-RELATED FACTORS CAUSING ACCIDENTS

1. a) What do you think is the driver related factor causing accidents involving Police vehicles in Harare province?

<table>
<thead>
<tr>
<th>Driver related factor</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver on the phone</td>
<td></td>
</tr>
<tr>
<td>Drunken driving</td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td>Following too close</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Following too close</td>
</tr>
<tr>
<td>Following too close</td>
<td>Speeding</td>
</tr>
</tbody>
</table>

**SECTION E: ESTABLISHMENT OF WAYS OF CONTROLLING THE RATE OF ACCIDENTS INVOLVING POLICE VEHICLES**

1. Suggest ways that can be done by the local authority to control the rate of accidents involving Police vehicles in Harare Province
   a) ........................................................................................................
   ........................................................................................................
   ..... 
   b) ........................................................................................................
   ........................................................................................................
   ..... 
   c) ........................................................................................................
   ........................................................................................................
   .....
2. Suggest any ways that can be used by ZRP to control the rate of accidents involving Police vehicles in the Z.R.P

a) ......................................................................................................................
   ......................................................................................................................
   ...... 
b) ......................................................................................................................
   ......................................................................................................................
   ...... 
c) ......................................................................................................................
   ......................................................................................................................
   ...... 

Thank you for sparing your precious time.

APPENDIX B

Interview guide for Police drivers and Officer in Charge stations

1. Are you aware of what the ZRP Transport policy provides in relation with driving police vehicles?
2. Through your experience what do you think are the major causes of accident involving police vehicles you witnessed?
3. With reference to the accidents that you witnessed involving a Police vehicle, what are environment-related factors that caused the accident?
4. What do you think was the major contributor of accidents involving Police vehicles in Harare province?
5. When the accident occurred, comment whether the driver was suspected to be on the mobile phone or was under the influence of alcohol.

6. State any other driver-related factors that might have contributed to the occurrence of this accident.

7. Through your experience do you think all Police drivers in Harare province have enough knowledge on road safety measures?

8. Suggest any ways that can be used to control the rate of accidents involving Police vehicles in the Z.R.P.

   Thank you for sparing your precious time.

---

**APPENDIX C**

**Application to carry out dissertation research**

ZimbabweRepublicPolice Harare Driving School
P.O BoxCY 34 Causeway

**HARARE**

3 September 2017

The Officer in Charge

PGHQ Transport
Sir


The above subject matter refers.

I am an undergraduate student at Bindura University of Science Education pursuing a three-year Bachelor of Business Administration (Honors) Degree in Police and Security Studies.

I hereby apply for permission to do the research focusing on the causes of accidents involving police vehicles in Harare Province in partial fulfillment of Degree requirements. The study is purely an academic endeavour and not for any ulterior motive. I believe that the findings of the study and subsequent recommendations of this study will be of significance to the police organisation, society and government.

Thank you in advance.

Utete Amos T.
(Student Number B1542850)