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## Effectiveness of Revised Traffic Regulations on the Rate of Road Accidents along Naivasha, Nairobi Highway, Kenya

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### **Abstract:**

*The study investigated the effectiveness of revised traffic regulations on the rate of road accidents along Naivasha-Nairobi Highway, Kenya. In this study, only the frequency occurrence of road accidents since the revision of traffic regulation and the challenges facing the effectiveness of revised traffic regulations on the rate of road accidents were studied. Descriptive research design was used. The target population was all the motorists (public service, commercial and private vehicle operators that had used Nairobi-Naivasha Highway for 5 years and above) and accident survivors having a combined population total of 12,033. A total of 284 respondents participated. The motorist respondents were drawn through convenience sampling while accident survivors were drawn purposively. A questionnaire was used to gather information from the motorists and accident survivors. The results obtained from the area showed that the frequency of accidents was high before the introduction of revised traffic regulations and subsequently low after the introduction of revised traffic regulations along Naivasha-Nairobi Highway. There also appears to be significant challenges such as corruption, remuneration, lack of good political will, high cost of driving lessons as well as lack of severe punishments among others affecting the effectiveness of revised traffic regulations on the rate of road accidents in the area. The findings from this study inform both the National and County governments of Nakuru and Nairobi to embark on policies and structures which would ensure that the public, motorists, traffic Police, NTSA and KeNHA are able to hold joint meetings that focus on creating civil education on the revised traffic regulations so as to reduce the rate of road accidents. It also advocates for members of the public to be sensitized on the importance of observing the Revised Traffic Regulations, proper road usage and importance of road furniture among others in a bid to reduce the rate of road accidents in the country.*

**Keywords:** Traffic regulations, road accidents, effectiveness, public service vehicles, highways

### **1. Introduction**

The study focused on the assessment of the effectiveness of implementation of Revised Traffic Regulations of 2012 on road traffic accidents along Nairobi-Naivasha roads. The current study is motivated by the persistent increase in road traffic accidents in Kenya despite revision of traffic regulations in 2012. Road Traffic Accident (RTA) is an unplanned occurrence of auto crash that may result in injuries, loss of lives and properties (Kual *et al.*, 2005). According to World Health Organization (WHO) report (2013), every year nearly 1.3 million people are killed in road traffic accidents worldwide and road crashes are the leading cause of death among people between the ages of fifteen and twenty nine. The report further observed that more than 90 percent of the world's road fatalities occur in developing countries, and half of these fatal victims are pedestrians, cyclists, and motorcyclists. Only 28 countries of the world's population have adequate laws to address the main risk factors, which are excessive speed, drunk driving, unserviceable vehicles, and failure to use crash helmets, seat belts, and child restraints. If no action is taken to reduce this carnage, the annual number of deaths from road traffic injuries could top 1.9 million by 2020 and become the fifth highest cause of death globally (WHO, 2013).

Enactment of proper traffic regulations coupled with sufficient enforcement is a prerequisite to effective and realizable road safety measures. For instance in Europe, the Organization for Economic Co-operation and Development (OECD) road safety annual report of 2011 appreciated France for her well spelt out traffic regulations policy and an overall improvement in road safety. This was observed during the first semester of 2010 as compared to the first semester of 2009. The number of fatalities decreased from 4,275 in 2008 to 2,473 in 2009 while at the same time, injury victims reduced from 73,390 to 72,315. Despite an increase in mobility, there was an overall continuous decrease in fatalities due to enactment and efficient enforcement of regulations regarding speed management, drunk driving and seat-belt use. However, despite the gains made, the study also observed that injuries involving motorcyclists for the period under review increased by 11.7% (OECD, 2011).

In Africa, the International Traffic Safety Data and Analysis (IRTAD) report of 2006 reiterated that despite the Continent's low levels of motorization, the region accounted for higher percentage of global deaths with Sub-Saharan Africa reporting between 150,000 and 200,000 deaths per year from traffic road accidents. In addition, the IRTAD study on traffic road safety within African countries identified common challenges such as Speed management or enforcement of existing speed limit regulations, drunk-driving, unserviceable vehicles, non-wearing of seat belts and helmets. The report cited that speed and drunk-driving regulations could provide immediate safety benefits, perhaps more quickly than any other single safety procedure through regulations enforcement and public education to modify behavior on the two fronts. On the other hand, technologies such as seatbelt reminder systems and seatbelt ignition interlocks could almost completely counter the non-wearing of seatbelts if introduced universally. However the report cited that this would require community and vehicle industry acceptance (IRTAD, 2011).

In Nigeria, Sheriff (2009) observed that the country had the highest number of fatality per 10,000 vehicles in the world. According to the study, hardly a day passed without an occurrence of tragic traffic accident leading to loss of life and property, generally increasing morbidity and mortality rates as well as financial cost to the society and the individual involved. In addition, Balogun, (2006) lamented that fatalities from road crashes in Nigeria ranked the highest in the world, with hunger and gastroenteritis listed as second. However, Gana and Emmanuel (2014) cited the drastic reduction on road traffic accidents from 1988, when the government revised the traffic regulations which included formation of the Federal Road Safety Corps (FRSC), mandated to regulate road transportation and Traffic Law enforcement.

As earlier retaliated in the IRTAD (2011) report, traffic regulations require efficient enforcement which incorporates public participation through awareness campaigns to promote acceptance and compliance. This was further emphasized by Gana and Emmanuel (2014), based on their study on the FRSC in Nigeria. The study lauded the country's adequate regulations and FRC's outstanding role in creating awareness on traffic regulations and road safety measures to road users through public enlightenment campaigns across the country. However, the same study attributed the escalation of traffic road crashes in Nigeria to ineffective enforcement procedures. Based on the Nigeria perspective, it may be deduced that introduction of new regulations requires efficient and reliable mechanisms for enforcement and stake holders participation to ensure compliance. From this point of view, the concluded study examined the provisions of the 2012 Traffic Amendment regulations in Kenya and inquired on enforcement procedures including public awareness, challenges and their effect on compliance to regulations within the area of study.

In Kenya, use of technology based traffic enforcement operation was introduced in 2012 upon the enactment of the revised sections of Chapter 403 of the Traffic Act. Coincidentally, a road safety campaign program popularly referred to as the "RS10 project" was initiated in Naivasha as a pilot project incorporating WHO, World Bank, the Bloomberg Philanthropies, aimed at mitigating traffic crashes along Nairobi- Naivasha Highway, Kenya (WHO, 2012). Through the project, Naivasha Traffic office received donations of: Binar Speed Cameras, Breathalyzer Kits, a fully equipped ambulance, funds for road safety campaigns and training for traffic personnel. A mobile court was instituted along Naivasha-Nairobi Highway, Kenya and health officials from Naivasha Sub-County Hospital and local stake holders from transport sector were brought on board as members of the RS10 initiative. The study endeavored to examine effectiveness of enforcement procedures, challenges and opportunities for improvement on the implementation of the revised Traffic regulations within the area of study.

### *1.1. Purpose and Objectives of the Study*

The purpose of the study was to determine the effectiveness of revised traffic regulations on the rate of road accidents along Naivasha-Nairobi Highway, Kenya. The Study was guided by the following objectives:

- To assess the frequency of occurrence of road accidents along Naivasha-Nairobi Highway, Kenya before and after the introduction of RTR.
- To find out the challenges facing the effectiveness of revised traffic regulations on the rate of road accidents along Naivasha-Nairobi Highway, Kenya.

### *1.2. Research Questions*

- How is the frequency of occurrence of road accidents along Naivasha-Nairobi Highway, Kenya since the revision of traffic rules?
- What are the challenges facing the effectiveness of revised traffic regulations on the rate of road accidents along Naivasha-Nairobi Highway, Kenya?

## **3. Methodology**

The descriptive survey research design was employed in this study. The study was conducted along Naivasha-Nairobi Highway, Kenya. The target population was all the motorists (public service, commercial and private vehicle operators who had used Nairobi-Naivasha Highway for 5 years and above) and accident survivors having a total combined population of 12,033 from which a total of 284 respondents who participated was drawn. The sample was selected conveniently and purposively. First, various motorists were identified then the accident survivors. The questionnaires used were researcher-administered. A semi-structured questionnaire was used to obtain information about frequency of occurrence and challenges facing the effectiveness of the revised regulations in the area of study.

#### 4. Results

The following two research questions were answered:

- Research Question 1: How is the frequency of occurrence of road accidents along Naivasha-Nairobi Highway, Kenya since the revision of traffic rules?

In this section, the respondents were asked to indicate the frequency of occurrence of road accidents along Naivasha-Nairobi Highway, Kenya before and after the introduction of revised traffic regulations (See Tables 1, 2, 3 and 4).

Rating	Frequency	Percentage
Low	31	10.9
Same	16	5.6
Higher	237	83.5
Total	284	100.0

*Table 1: Motorists Rating of the Frequencies of Accidents before Introduction of RTR*

When asked to rate the frequencies of accidents before introduction of revised traffic regulations, 10.9% of the motorist respondents said that the frequency was low, 5.6% said that it was just the same while 83.5% said that the frequency was higher. It can therefore be concluded that the majority said that the frequency of accidents was high before the introduction of revised traffic regulations along Naivasha-Nairobi Highway. The information is as seen in Table 1.

Rating	Frequency	Percentage
Low	3	10.3
Same	2	6.9
Higher	24	82.8
Total	29	100.0

*Table 2: Survivors Rating of the Frequencies of Accidents before Introduction of RTR*

After the study, it was found that 10.3% of the accident survivors said that the frequency of accident before the introduction of revised traffic regulations was low, 6.9% said that it was just the same while 82.8% said it was higher. It can therefore be deduced that the majority said that the frequency of accidents was high before the introduction of revised traffic regulations along Naivasha-Nairobi Highway. The information is as shown in Table 2.

Rating	Frequency	Percentage
Low	219	77.1
Same	26	9.2
Higher	39	13.7
Total	284	100.0

*Table 3: Motorists Rating of the Frequencies of Accidents after Introduction of RTR*

After the study, it was found that 77.1% of the motorist respondents said that the frequency has been low after the introduction of revised traffic regulations along Naivasha-Nairobi Highway, 9.2% said that it was just the same whilst 13.7% said that the frequency was high. It can therefore be alluded that the majority said that the frequency of accidents was low after the introduction of revised traffic regulations along Naivasha-Nairobi Highway. The information is as shown in Table 3.

Rating	Frequency	Percentage
Low	21	72.4
Same	4	13.8
Higher	4	13.8
Total	29	100.0

*Table 4: Survivors Rating of the Frequencies of Accidents after Introduction of RTR*

The concluded study established that 72.4% of the accident survivors said that the frequency of accident after the introduction of revised traffic regulations has been low, 13.8% said that it was just the same while 13.8% said it was higher. It can therefore be eluded that the majority said that the frequency of accidents was low after the introduction of revised traffic regulations along Naivasha-Nairobi Highway. The information is as shown in Table 4.

- Research Question 2: What are the challenges facing the effectiveness of revised traffic regulations on the rate of road accidents along Naivasha-Nairobi Highway, Kenya?

In this section, the respondents were asked to indicate the challenges facing the effectiveness of revised traffic regulations on the rate of road accidents. The views were analyzed by constantly comparing emerging categories till the views could be condensed into a few points. The results are as shown below.

Challenges Facing RTR	Frequency	Percentage
Lack of awareness of RTR	66	21
Legal ambiguity	19	6
Corruption	75	24
Poor remuneration of officials	34	11
High cost of driving lessons	22	7
Lack of severe punishment	41	13
Legal complication	16	5
Inadequate personnel	19	6
Inadequate financial resources	21	7
Total	313	100.0

Table 5: Challenges Facing the Effectiveness of Revised Traffic Regulations

The respondents (both the motorists and the accident survivor victims) were asked to give their perceptions on the challenges facing the effectiveness of revised traffic regulations. 21% (66 respondents) of the respondents gave the challenge as being lack of awareness of revised traffic regulations, 6% (19 respondents) were for legal ambiguity, 24% (75 respondents) were for corruption, 11% (34 respondents) were for poor remuneration of the enforcement agents, 7% (22 respondents) were for high cost of driving lessons, 13% (41 respondents) were for lack of severe punishment, 5% (16 respondents) were for legal complication, 6% (19 respondents) were for inadequate personnel while 7% (21 respondents) were for inadequate financial resources. The information is as shown in Table 5.

## 5. Discussion

The present study established the existence of numerous challenges that impeded the effective enforcement of the revised traffic regulations within the study area and highlighted on possible solutions. In regard to lack of awareness on the revised traffic regulations and road safety in general, this study is proposing serious use of the media and physical road side awareness campaigns for public education. In a related study by Mishra *et al* (2010), it was established that in India, most of the roads and highways were blocked, disrupted and diverted to narrow lanes and by-lanes resulting to poor visibility at night thereby causing numerous accidents. The scholars proposed education and mass media action as a means of helping ameliorate the frequency of road accidents. They also observed that the frequent vandalism of road signs and erection of unmarked bumps along the roads and highways were among the leading causes of road accidents. Mishra *et al* observation also replicates the present study which established that most of the accidents were caused by lack of adequate road signs as a result of vandalism. For example, the respondents along Nairobi-Naivasha highway informed the concluded study that some members of public were vandalizing the erected road signs for scrap metal sales and for making charcoal burners or poultry houses. Residents were also found to be erecting bumps haphazardly at undesignated places in protest after occurrence of traffic road accidents along Naivasha-Nairobi highway, leading to occurrence of more accidents. The present study also agrees with Mishra *et al* findings that lack of road safety awareness among road users is a great challenge on the reduction of traffic road accidents.

In addition, the concluded study found that the state of some Kenyan roads are poor, full of potholes and are not properly maintained hence the frequent accidents witnessed. To emphasize on road worthiness and road transport safety policy, Peek-Asa & Heiden (2008) postulates that for accidents to be subsequently ameliorated, the roads must be regularly inspected for traffic-worthiness during construction and repairs. They further advocate for a central and unified road safety and enforcement agency which should be administered by sufficient and efficient staff for successful policy enforcement. The paper strongly advocates for Kenya to adapt the Peek-Asa & Heiden's proposal on formation of a central traffic regulation enforcement entity. The creation of a sufficiently financed and autonomous agency would greatly reduce corruption, role conflicts, legal ambiguities and other logistical constrains.

## 6. Conclusions

- Citizen's awareness of revised traffic rules is very effective in reducing the rate of road accidents. Reduced rate of road accidents cannot be achieved in situations where people lack some degree on awareness of the revised traffic regulations. Awareness campaigns and civic education is very necessary to ensure that road users are aware of what is expected of them while using the Kenyan roads.
- The study reveals that before the introduction of the revised traffic regulations, the frequency of road accidents was relatively high as compared to the periods after the intervention through introduction of the revised traffic regulations. The reduction may be attributed to the strict nature of enforcement, introduction of technology in speed limit, harsh penalties among others measures to reduce the high incidences of road accidents.
- The study findings show that the implementation of revised traffic regulations is faced with numerous challenges which are impeding the realisation of the rules and regulations which are to reduce the rate of road accidents that constantly claim the lives of many Kenyans. It was found that Corruption, lack of awareness of RTR, lack of severe punishment, poor remuneration of officials, high cost of driving lessons, inadequate financial resources, inadequate personnel, legal ambiguity and finally legal complication were major challenges facing the effectiveness of RTR.

## 7. Recommendations

- The government should put in place a policies which ensures that the public, motorists, traffic Police, NTSA and KeNHA are able to hold joint meetings that focus on creating civil education on the revised traffic regulations so as to reduce the rate of road accidents.
- Members of the public need to be sensitized on the importance of observing the Revised traffic regulations, proper road usage and importance of road furniture among others in a bid to reduce the rate of road accidents in the country.
- The County of Nakuru, Nairobi and the national government of Kenya should embark on allocating sufficient funds for the highway upgrade, logistics and sensitization of the public on the need to observe the revised traffic regulations. These measures would significantly reduce the rate of road accidents within the area of study and the country in general.

## 8. References

- i. Balogun, S., (2006). Development in Road Safety in Nigeria. Accessed on April 4<sup>th</sup> 2017 from [https://academia.edu/35838443/development\\_in\\_Road\\_Safety\\_in\\_Nigeria](https://academia.edu/35838443/development_in_Road_Safety_in_Nigeria)
- ii. Gana, A., and Emmanuel, J., (2014) Road Transportation and Traffic Law Enforcement in Nigeria. West African Journal of Industrial & Academic Research Vol.11 No.1 June 2014 136
- iii. IRTAD (2014). Road Safety Annual Report 2014. Accessed on April 6<sup>th</sup> 2017 from <https://www.nrso.ntua.gr/irtadreport>.
- iv. Kaul, A., Sinha, U. and Kapoor, K. (2005). An Epidemiological Study of Fatal Accidents in Allahabad Region. Journal of Indian Forensic Academics. Vol. II JMT 3(1) 38-47
- v. Mishra B, Sinha ND, Sukhla SK, Sinha AK. (2010). Epidemiological study of road traffic accident cases from Western Nepal. Indian J Community Med. Vol. 35(1) :115-121
- vi. [6] OECD, (2011). Annual Report on Road accidents. Performance on Straight Road Volume 2011 (2011), Article ID 607652,
- vii. Peek-Asa C, and Heiden EO. (2008). Injury control: the public health approach. In: Wallace RB, editor. Maxy Rosenau-last public health and preventive medicine. 15th ed. New York (NY): McGraw Hill.
- viii. Sheriff, M. A. (2009). Traffic Education and Safety in Nigeria. Nitours Journal Vol. II, Kano. Volume 4 pages 123-131.
- ix. WHO, (2012). Protecting the most venerable on the Roads in Kenya. Road Safety in Ten Countries. Switzerland Geneva.
- x. WHO. (2013). Global Status Report on Road Safety 2013. Switzerland Geneva