Drivers Fault versus Systems Failure: Road Safety and the Blame Game in Kenya

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INTRODUCTION

Road traffic crashes are a major concern globally, regionally and locally

- According to the third *Global status report on road safety,* road traffic injuries claim more than 1.2 million lives annually and have a huge impact on health and development (WHO, 2015; OECD/ITF, 2015).

- Road traffic injuries are the leading cause of death among young people aged between 15 and 29 years worldwide (Peden et al.,2004).

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Road traffic crashes are on an upward trend in Africa and Kenya

- Road traffic crashes in sub-Saharan Africa are projected to more than double from some 243,000 deaths projected for 2015 to 514,000 by 2030 (World Bank, 2014).

- With a Road Traffic Deaths per 100 000 population at 34.4 (By 2009 Estimates) Kenya is far above the global rate of 9.3 per 100 000.

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The human factor in road accidents

- The human factor is said to be the main factor in accident causation according to the police records 85% (Odero et al, 2003).
- It is therefore natural to blame the drivers for most accidents.
- Road safety is not a simple issue that can be dealt with using simple solutions.
- It is recognized that the traffic safety problem and its many-sided nature is a complex issue.

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The blame game continues

- Whenever accidents occur, the various actors and stakeholders blame each other.
- This paper hopes to find a lasting solution to the road safety problem in Kenya using a Safe Systems Approach.
- The approach is based on the principle that our life and health should not be compromised by our need to travel and that no level of death or serious injury should be tolerated on our road transport network.

Problem Statement

Road crashes/accidents are expensive

- Road traffic accidents exert a huge burden on Kenya's economy and health care services.

- Kenya, the economic cost of road crashes is 5.6% of the GDP (NTSA, 2015).

- With the increase in population, motorization, and urbanization, it is likely that there will be an increasing trend in traffic road accidents if no measures are put in place to deal with the issue.

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The complexity of road safety

- Road safety is a complex issue that requires a multidisciplinary approach.
- The road/traffic system must be addressed as a system and all areas of the system be focused on.
- It will be futile to focus on one area and forget the other areas because all the system components contribute to desirable and undesirable outcomes.
- All road users, the road, the vehicle and the environment must be considered among others.

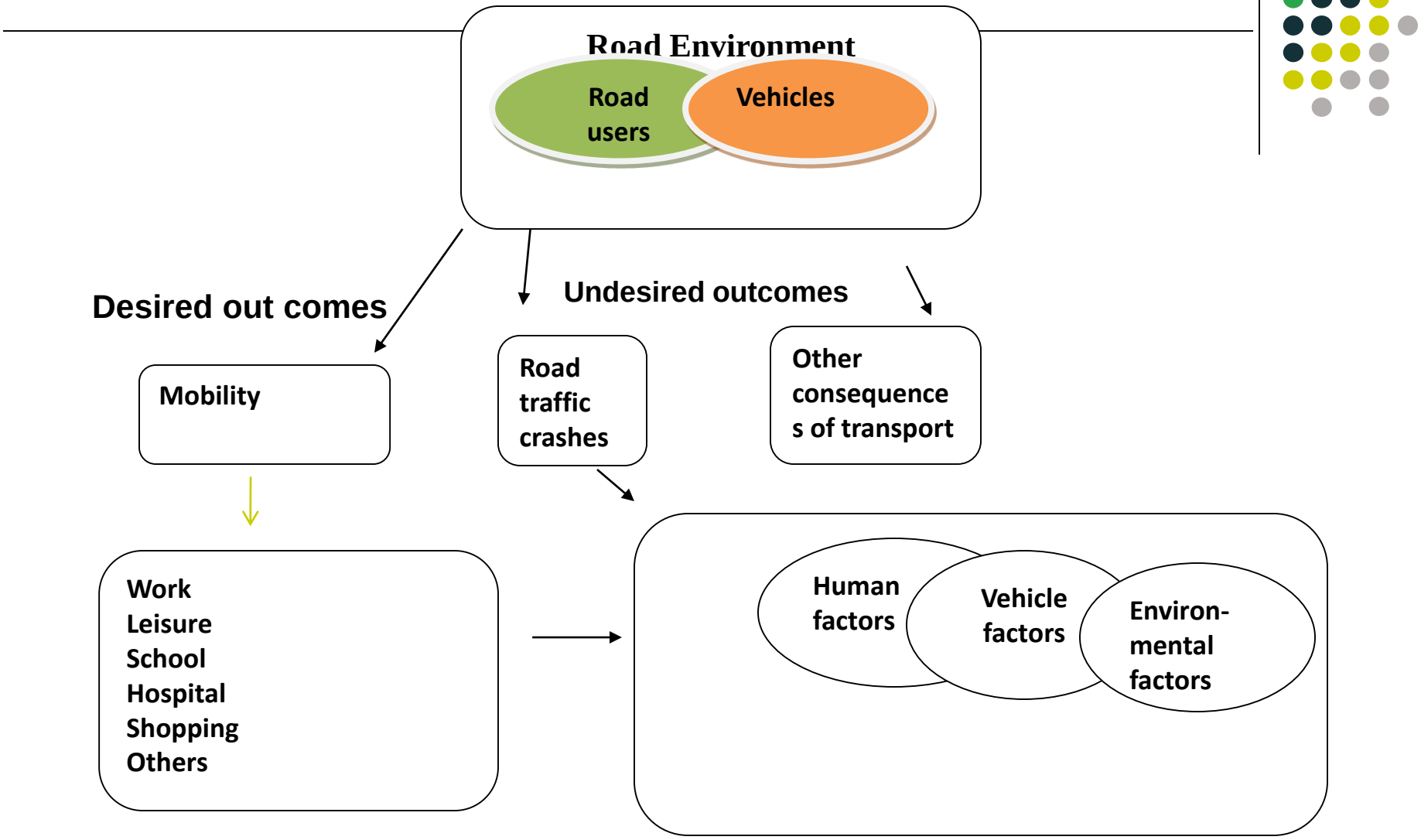
Methodology

- The study was conducted in Kisumu City in Western Kenya.

- The results utilized in this study was based on a field survey.
- Adopted a descriptive and cross-sectional design

- The study employed a two-stage cluster sampling technique.

CONCEPTUAL FRAMEWORK : ROAD AND TRANSPORT SYSTEM



Source : Adapted from Muhlrad & Lassarre, (2005)

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Interaction of factors

- A road traffic crash or collision is the outcome of interaction among a number of factors and subsystems.

- Road traffic crashes cannot be reduced to one “cause” only, – human, infrastructure or vehicle factors.

- One factor can be influenced through another- eg road design influencing driver behaviuor-(salgaa stretch and speeding).

Results and Discussions

Causes of *Boda boda* motorcycle accidents	Responses				
	Yes		No		
	Frequency	Percentage	Frequency	Percentage	Total
Speeding/careless riding	332	(89.7)	38	(10.3)	370 (100%)
Poor roads	75	(20.3)	295	(79.7)	370 (100%)
Drunk driving	209	(56.5)	161	(43.5)	370 (100%)
Wrong overtaking	96	(25.9)	274	(74.1)	370 (100%)

Source: Nyachieo (2015).

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Results

- Majority of the respondents mentioned careless riding/over speeding as the main cause of accidents (89.1%).

- Only 20.3% of the respondents associated poor roads with motorcycles accidents.

- Odero et al., (2003) observes that the main category of causes of motor vehicle-related traffic injuries, based on the Accident Cause Code classification used by the Kenya police, are human factors.

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Discussions

- Literature indicate that a number of factors contribute to the risk of crashes, including vehicle design, speed of operation, road design, road environment, and driver skill, impairment due to alcohol or drugs, and behavior e.g. speeding & racing.

- It is therefore not fair to apportion the biggest percentage of blame on the driver.

- From the study results on the causes of *Boda boda* motorcycle accidents in Kisumu, most of the factors relate to the behavior of the driver and not the road and road environment.

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Discussions

- Boodman (1968) indicate that “the safety of the system is measured by the ability of the system to perform the tasks for which it was intended without experiencing losses due to accidents”.
- Boodman further observes that, accidents are failures of the system, failures which have their origin in four aspects.
- 1st the physical apparatus of the system for example the road infrastructure.
- 2nd the people involved in the system's operations for instance the drivers.
- 3rd the procedures for operating the system this may include traffic regulations,
- 4th the environment in which the system operates which may include the road, road infrastructure other users,

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Discussions

- It is therefore necessary to look at aspects of the system to address all the issues in road safety in Kenya.
- It is possible that by putting a lot of emphasis of the driver skills and behavior, very little attention is given to the other aspects for instance other road users e.g. pedestrians, road infrastructure and regulations all of which are equally important.

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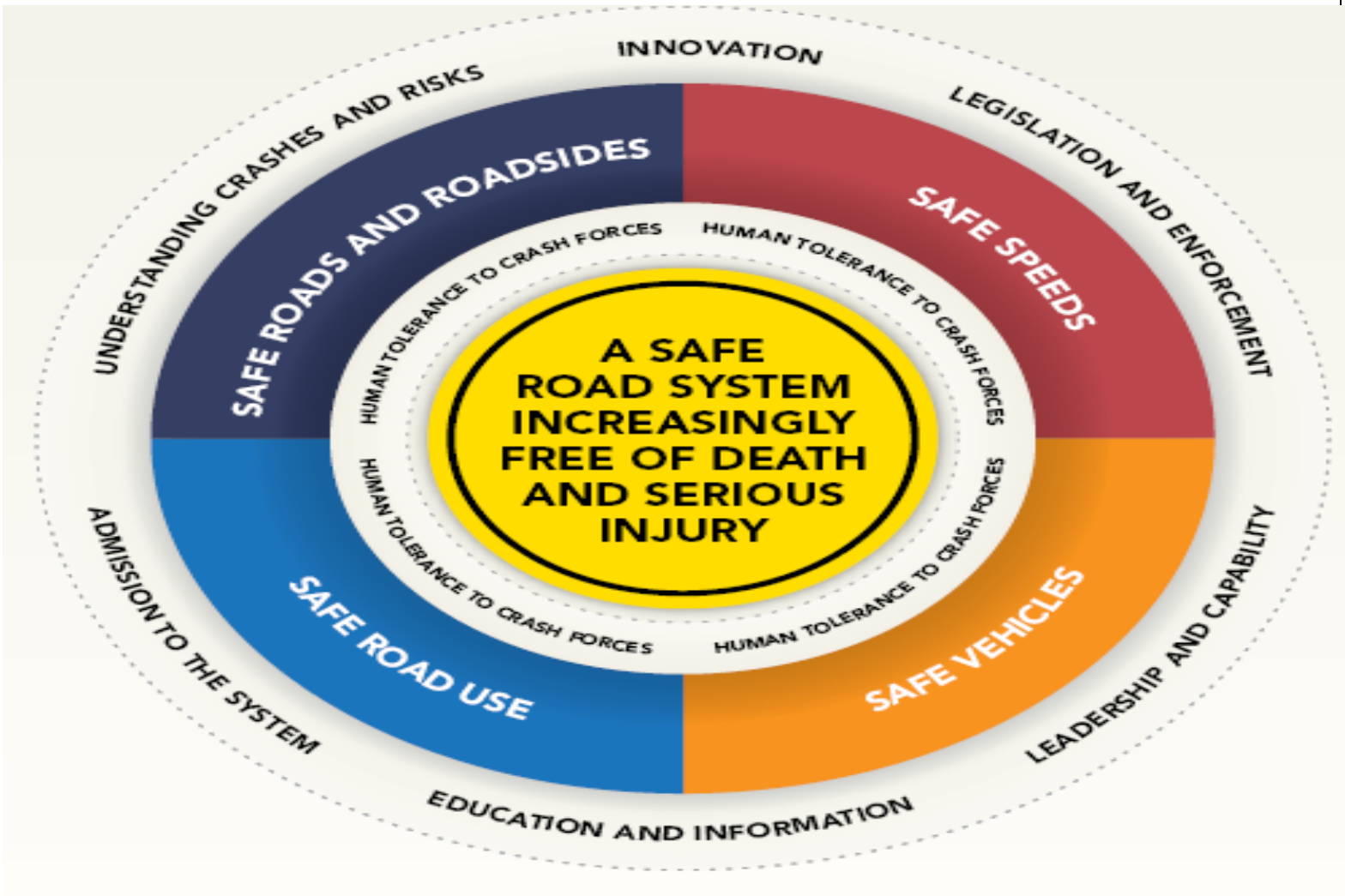
Discussions

- Moving away from the simplified model for road safety action to a systems approach requires that considerable effort be put into acquisition of knowledge of the nature of crashes.
- As crash factors relate to human as well as to physical and technical components of the road and transport system, detailed analysis of road crashes may require a multidisciplinary approach (Mohan et al., 2006).

Recommendations OR

WAY FORWARD

The safe systems Approach



Source: NZ Transport Agency (2012)

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Safe systems approach

- **Safe vehicles;** emphasis on collision survivability- design to reduce occurrence and consequences of crashes thro’ technology and road worthiness.
- **Safe roads and road sides;** incorporating safety features into the road design from the start to reduce the risk of crashes occurring, and the severity of injuries if a crash does occur thro’-

Road users segregation; different types of road user should not share the same space e.g safer routes for vulnerable users- a cycle routes & footways

Traffic Segregation**:** It is also desirable to segregate traffic that is moving in different directions or at different speeds – for example, by soft crash barriers separating opposite lanes of traffic. .

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Safe systems approach

Safe speeds: To aid crash avoidance & reduce severity of human body’s physical trauma- establish appropriate speed limits, Enforce existing limits and educate road users.

Safe road use: All encouraged to use roads safely thro’ road user education- have risk aware drivers, all road users to comply with road rules, use of safe speeds e.t.c.

Move from Traditional to Safe System Approaches (Differences)

	TRADITIONAL	SAFE SYSTEM
What is the problem?	Accidents	Fatalities and serious Injuries
What causes the problem?	Human factors	People makes mistakes, people are fragile
Who is ultimately responsible?	Individual road users	System designers
What is the major planning approach?	Incremental approach to reduce the problem	Systematic approach to build a safe road system
What is the appropriate goal?	Optimum number of fatalities and serious injuries	Zero fatalities and serious injuries

Swedish Transport Administration (2015).

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Paradigm shift

Paradigm Shift: From Reactive To Proactive Measures

1. Sector wide planning and action targeted to risk avoid responding to incidences
2. Identifying and analyzing system risks instead of Investigating only one road crash
3. Increasing system wide improvements and not Incremental improvement
4. Auditing and responding to system-wide performance versus Auditing and reporting on accidents

Success Stories

It works

- Today, safe systems are considered to be international best practice in road safety by the WHO) & the Organization of Economic Cooperation and Development (OECD).
- In New Zealand, the National *Road Safety* Strategy *is* based on the *Safe System approach* as the best practice approach for delivering road safety.
- Sweden has one of the world's lowest traffic-related fatality rates.
- The number of road deaths in the Netherlands decreased by an estimated 30%. between 1998 and 2007

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Finally

- All parts of the road system must be strengthened together with multiplying the protective effects and if one part of the system fails, the other parts will still protect people.

Thank you

BE SAFE ON THE ROAD