

An Analysis of Police Perspectives on Road Fatalities and Road Users' Behaviour in the Umlazi Township, Kwazulu-Natal, South Africa

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Abstract

The objective of the paper is to analyse police perspective on road fatalities and road user's behaviour South Africa. These perspectives have not been fully explored in the South African context, with its road accident and fatality rates, and road user's behaviour. The paper did not aim to measure the degree of police perspectives to road fatalities and road users' behaviour in the KwaZulu-Natal (KZN) province but provide insight on some factors that might, if not sufficiently attended to by different administrators, contribute to the reduction of road fatalities and address road users' behaviour as a contributing factor. Data was obtained through the supervision of a questionnaire from 132 participants using stratified random sampling. The results showed that most of the respondents were of the view that driving at high speed, driver/passenger failure to wear seat belts, driver intoxication, and unlicensed driving were related in deadly collisions. This paper recommends an awareness campaigns for road safety to readdress road fatalities.

Keywords: Police, Road fatalities, Road traffic injuries, Road Safety, Road design, Vehicle design, Poor road user behaviour, Pedestrian, Prevention.

Introduction and problem formulation

Road accidents are a global phenomenon and seemingly the numbers increase unabated. The number of crashes of road traffic and linked deaths continues to increase worldwide, reaching a staggering 1.35 million in 2016, according to the "World Health Organisation's Global Status Report" on Road Safety 2018 (WHO, 2018). It is well documented that today global road accidents have become part and parcel of the community landscape and has indeed become imbedded, especially in so far how persons involved in these incidents are labelled and characterised. When behind the steering wheel of a vehicle, the human psyche seems to adjust to the activity ahead and in some persons, this evokes a particular type of character. A character that is sometimes not in line with their 'normal personalities' when outside

the vehicle. Under these conditions, people who are seldom violent or aggressive in public often exhibit road rage when incidents occur whilst they are driving a vehicle on the public road. In South Africa the KwaZulu Natal province has the second-highest road fatality rate due to road traffic injury in South Africa at 19.6%, following the Gauteng Province with 20.5% (RTMC, 2015). eThekweni municipality, in which Umlazi is located, is the biggest metropolitan area in KwaZulu Natal. The metropolitan's 2014 to 2015 road traffic vehicle crash data indicate that pedestrians are involved in 67% of road traffic injuries. Interestingly, unlike the global and national statistics, 19.2% of the injuries incurred in this locale are obtained by drivers, who are more at risk than passengers at 14%. Males in eThekweni represent a similar share of road traffic injuries as the national statistics at 74%.

Leedy and Ormrod (2015:44) indicate that a problem statement must address an essential question, like that the response can "make a difference" in a certain way and that it must progress the borders of knowledge, as well as the purpose and aims of the intended study. Without doubt, road fatalities are exceptionally high in South Africa. Current legislation (the National Road Traffic Act, 1996) is aimed at reducing the fatality rate on the one hand, but also need to keep in mind the developmental nature of the South African population. Upward mobility on economic activity has resulted in many South Africans venturing on the South African roads with less than ideal "road user maturity". Many South Africans consider their mobility as a form of status and independence, and this may impact the psyche of the driver. A form of entitlement may arise and it may impact the behaviour of the driver of the motor vehicle.

To direct the study the following hypotheses were formulated:

- **Hypothesis 1:** The Umlazi township of KwaZulu-Natal experiences challenges in improving road safety.
- **Hypothesis 2:** The nature of road fatalities in the Umlazi township is beyond the control of the relevant traffic law enforcement agency.
- **Hypothesis 3:** The development of enforcement strategies that severely punish deviant behaviour calls for effective collaboration in the Umlazi township.
- **Hypothesis 4:** Current strategies to prevent road fatalities in the Umlazi are perceived as ineffective.

1.2 Definition of concepts: road accident and driver behaviour

Woldu, Desta, and Woldearegay (2015:np) define a road accident as an accident that takes place or originates on a street or roadway open for public traffic that results in one or more people being injured or killed, and at minimum, a single moving vehicle is included. The Roads and Transport Authority's (RTA) definition involves crashes between vehicles, pedestrians and vehicles, animals and vehicles, and fixed problems. Road accidents may increase poverty inducing conditions such as creating productivity loss, damage of material, injuries, disabilities, deaths, and grief. The injuries and deaths caused by road traffic collisions are considered a severe problem that remains serious internationally and the existing trends state that this will be the case in the predictable future.

The behaviour of a driver is based on the set of actions that he or she conducts in compliance with the driving regulations and the safety of people. Wang, Li and Lu (2013:113) define driver behaviour as the way of action of the driver at the time of driving in real situations of traffic with specific vehicles, environmental, and road conditions. The driver's behaviour might involve many elements, including the insight into traffic conditions, vehicle operation, decision-making, using navigation systems and cell phones, talking to other people inside the vehicle, drinking, eating, and applying cosmetics and so forth.

A fatality is simply stated as the quality or state of causing death or destruction (road safety report, 2019). Lehojla (2019:10) explains that road traffic fatalities as a death resulting from injuries sustained in a road traffic accident. This may involve a pedestrian, motorcycle rider, pedal cyclist, possessors of three-wheeled motor vehicles, an inhabitant of a pick-up truck or van, occupants of heavy vehicles of transport, individuals and bus occupants injured in other land traffic accidents like possessors of a railway train and animal riders.

The Collins Dictionary (Collins dictionary, online 2018:np) states that this concept refers to "anyone who uses a road, such as a pedestrian, cyclist or motorist." From this definition, it is clear that road users are by default categorised.

1.3 Literature review

1.3.1 The Nature of Road Traffic Fatalities and Road User Behaviour

Ncube, Cheteni and Sindiyandiya (2016:8) indicate that road traffic accidents have different causes. The key aim of all road traffic interventions and research is to identify and reduce the extent of these causes. These types of causes might be complicated and are professed to be impacted by politics and science (Ncube et al, 2016:9). A factor, or determinant, is a situation that subsidizes an accident. An amalgamation of factors or determinants such as driver capability, speed, vehicle condition, and environmental situations all come into play. As human mistakes are identified to be the most regular contributing factor to road accidents, vehicle flaws are relegated as playing a lesser role less. The role of vehicle flaws is not negated entirely though. For instance, according to the study of Rechnitzer, Haworth & Kowadlo (2000), in which the author identified that the role of vehicle flaws as important in the causation of crashes, the effectiveness of "Periodic Motor Vehicle Inspections" (PMVI) programs in minimizing crashes and defects was highlighted Overall, it appears that vehicle flaws are a contributing factor in more than 6% of crashes. Goliias & Karlaftis (2001) identified in their study, which evaluated the self-reporting behaviour of drivers in 19 European countries, that accident causing behaviour including reckless driving, speeding, seatbelt use, and consuming alcohol whilst driving. These authors further reported that the compliance with seatbelt use increases with education and age for both women and men. They also reported that drivers of Northern Europe chronicled a greater rate of compliance for seatbelt usage as compared to Eastern and Southern European drivers. Ortiz et al. (2017) reported that 2015, driver distractions culminated to 3447 deaths and 391,000 injuries in the United States of America (US). The authors concluded that in an observational study of road intersections in the US,

the distraction of drivers could be caused by sole, as well as multiple, distractors. These distractors, amongst others, such as associating with other road users, and the use of cell phones, were regarded as two distracting behaviours highlighted most by road users. Stanojević et al. (2018) implemented a “driver behaviour questionnaire” to review road user’s behaviour in three different nations in Southeast Europe, namely Bulgaria, Serbia, and Romania. The data thus obtained identified that regardless of socioeconomic and cultural differences, speeding was considered problematic in all three nations. Prat et al. (2015) in an observational study of driving interruptions on urban roads in Girona, Spain, observed 6578 drivers at nine randomly chosen urban locations, and identified that the three most common distractions that drivers experience include talking to a passenger, using a mobile phone, and smoking. Despite the possible variations, one of the tools used to explain the interaction, inter-relatedness and dynamics involved in vehicle crashes, is the “Haddon matrix”. This is an analytical tool helpful in classifying all the factors linked with a vehicle crash. The Haddon Matrix’s value in every cell depicts a different area in which the interventions can be found and applied for the improvement of transportation system safety (WHO, 2021)

Table 1: Phases of crashes - Road Safety Training Manual

FACTORS				
Phase		Human	Vehicles and equipment	Environment
Pre-crash	Crash prevention	Information Attitudes Impairment Police enforcement	Roadworthiness Lighting Braking Handling Speed management	Road design and road layout Speed limits Pedestrian facilities
Crash	Injury prevention during the crash	Use of restraints Impairment	Occupant restraints Other safety devices Crash protective design	Crash-protective roadside objects
Post-crash	Life-sustaining	First-aid skill Access to medics	Ease of access Fire risk	Rescue facilities Congestion

Source: Haddon (1980) (in Road Safety Training Manual, [sa]:1)

It is interesting to note that that the Haddon matrix lends itself to a variety of interpretations, depending on the need of the particular traffic authority. For instance, table 1 reflects the priorities and interpretations preferred by the South African authorities.

Table 2 reflects another version of the matrix as applied by the United States Department of Transportation. Interestingly, this traffic authority includes, as a dynamic, socio-economic factor into the equation. With regards to pre-crash conditions, the cultural norms expressed in this table are the norms that permit speeding, running red

lights and driving whilst under the effect of alcohol is particularly interesting. In essence, this particular study is concerned with these socio-economic dynamics. The researchers are of the view that Table 2 reflect a more comprehensive version of the Haddon matrix and would suggest the inclusion of the socio-economic dynamics into the road safety training manuals in South Africa.

Table 2: Phases of crashes - Highway Safety Improvement

Phase	Human	Vehicle/ Equipment	Physical Environment	Socioeconomic
Pre-Crash	Poor vision or reaction time, alcohol, speeding, risk-taking	Failed brakes, missing lights, lack of warning systems	Narrow shoulders, ill-timed signals	Cultural norms permitting speeding, red-light running, driving under the influence
Crash	Failure to use occupant restraints	Malfunctioning safety belts, poorly engineered airbags	Poorly designed guardrails	Lack of vehicle design regulations
Post-Crash	High susceptibility, alcohol	Poorly designed fuel tanks	Poor emergency communication systems	Lack of support for emergency medical services and trauma systems

Source: (Haddon 1980) (in Highway Safety Improvement, United State of America (USA) Department of Transportation)

According to the report of the WHO (2021), there are different factors linked with the vehicle's contribution to accidents. Understanding these factors allows the establishment of countermeasures, which in turn can be formed and prioritised for application over long-term and short-term periods. In the pre-crash phase, it is important to identify all the countermeasures that prevent the crash from taking place. The crash-phase is linked with countermeasures that avoid injury from taking place or reducing its severity if it occurs. In the final stage, the post-crash phase, is included all the activities that decline the negative results of the crash after it has taken place.

2.1 Research design and methodology

2.1.1 Research design

This paper implemented a correlational research design to explore the relationship between variables using statistical analyses. For application in this paper, the researchers gathered data from law enforcement officials (RTIA/AARTO, RTMC/NTP, DMPD) involved in Umlazi, as well as motorists and community members' perceptions on the behaviour of road users contributing to the road fatalities of Umlazi township (KZN).

2.1.2 Quantitative research approach

For this paper, a quantitative research approach was followed by the researchers in order to answer the research questions. The approach assisted the researcher in displaying and categorising the precise results of this paper, mostly because of the

numerical data from the fundamental representation of the results. Supporting this statement, Mofokeng (2006:6) stated that numbers develop a coding system through which various variables and cases and might be compared. The systematic alterations in scores are given or interpreted meaning based on an actual world that they present. The numbers have the benefit of being accurate and allows the application of similar meaning in various cultural, social, and linguistic contexts. Another key benefit of numbers is that they can be accessed through inferential and descriptive statistics (Bless & Higson-Smith in Chiliza, 2004:10). Quantitative sources of data were further collected in the field based on the causative factors leading to road traffic fatalities and poor road user behaviour in Umlazi. A checklist in the form of a questionnaire was developed to collect individuals' (respondents) information. The aim of gathering this data was to examine the trends and patterns of poor road user behaviour that indicatively contribute to road traffic fatalities in Umlazi. The quantitative data was examined by using a "Statistical Package for Social Sciences" (SPSS) software. The program was used to generate various statistical tables of different types and in simple statistical computations.

2.1.3 Ethical considerations

The paper has obtained ethical approval from the Tshwane University of Technology's Ethics Committee, and the Traffic Police Department in KZN. Participants signed informed consent forms, in line with ethics guide set by the Tshwane University of Technology Code of Ethics (TUT, 2016).

3. Results and discussion

The researcher made a comparison between the responses provided by the law enforcement agencies officials (DMPD, RTIA and RTMC), versus the responses provided by the motorists and community members.

When one is to consider the response, where the law enforcement respondents (at 64%) strongly confirmed that a coherent safety plan is absent in Umlazi, supported by 58% of the motorist respondents, then it seems evident that the potential to improve the safety potential of the road user is indeed possible. It is recognised in order to draft such a safety plan, relevant and contextualised data is required. In this regard, the discussion of this paper highlights that challenges are experienced in collecting data associated with road fatalities and road user behaviour.

Another response found that that driving at high speed, driver/passenger failure to wear seat belts, driver intoxication, and unlicensed driving often resulted in deadly collisions. In the case of this paper, however, the researchers also established, based on the results obtained that 76% of the participating law enforcement officials and 55% and 56% (motorists and community member respondents) thought that the nature of road accidents are caused by human, road as well as vehicle factors. Respondents, however, did shift the emphasis more towards the human element, as a statistically significant number of traffic law enforcement respondents (76%) thought that motorist's behaviour is a key causative factor. The respondents representing motorists and the community were less assertive on this matter, but both groups did

record a high number of “uncertain” opinions.

The assessment of the challenges to prevent road fatalities in Umlazi was done to draft strategies of enforcement that punish deviant behaviour in the study location. This development was geared towards initiating enforcement strategies, inclusive of those strategies aligned to severely punish the deviant behaviour of road users in the Umlazi Township. This type of strategy was supported in the Road Safety Training Manual ([sa]) which highlighted the link between road fatalities and road user’s behaviour.

Although Gqaji (2011) contends that government attempts to provide safe transport systems and infrastructure, the majority of the respondents agreed with the statement that human, vehicle and road infrastructure contribute to the nature of road fatalities in the township Umlazi. Besides infrastructure, it seems also that, based on the response, a particular concern is the use of alcohol and its correlation to road fatalities. The respondents, motorists/drivers included, agreed this represents a particular challenge.

Moreover, according to the report of OECD (2019), it is assessed that the behaviour of road users is considered as an essential determinant of a nation’s performance of road safety. Human factors are the major causes of road crashes. In South Africa, jaywalking by pedestrians is accepted as a major problem with a contribution of 24% to the accumulated number of fatalities for 2018. Inappropriate speed and speeding are also main issues, as is “hit and run”. Moreover, driving under the influence of alcohol is, amongst other reasons, a significant contributor to road fatalities in South Africa. Considering the figures of 2018 around 3.4% of fatal crashes occurred due to intoxicated drivers, - cyclists and - pedestrians. Another problem identified is distractions. For instance, vehicle drivers tend to use mobile phones while driving. In this regard, the “National Road Traffic Act” specifically provides that no person is allowed to drive a vehicle on the public road whilst using a cellular phone or mobile or any other device of communication.

Moreover, OECD (2019) confirmed that wearing seat belts has become obligatory in South Africa since 2005. All new types of motor vehicles have to be tailored with seat belts for all the passengers. It is the responsibility of the driver to ensure that children are seated with a proper child restraint. According to the World Health Organisation’s 2013 Global Status Report on Road Safety, South Africa had one of the lowest rates of seat belt use in the world, with 59 percent of drivers and 67 percent of passengers wearing seat belts. (WHO;2013)

The importance of strategic plans for road safety in South Africa was discussed, including the provincial focus of KZN. Amongst others were cited the current [2019 - By the time of conducting this study] (KZN Premier - Mr Willies Mchunu) indicating that the strategy on road safety in KZN Province is anchored and escalated on the ‘Operation Valingozi’. This initiative is aimed at education and awareness campaigns under the theme ‘Road Safety is Our Collective Responsibility’. The South Africa Road Safety Strategy (2011-2020) highlighted that the Department of Transport (DoT) is recognised as the principal Ministerial authority for safety of roads in South Africa. A coordinated and informed effort to enhance enforcement and education regarding poor behaviour of road use is envisaged. This is done in

considering global recommendations and the best practice advise from the WHO for developing nations, South Africa included. That such a need exists, even expressed at the local (Umlazi) level, is evident when one is to consider the results of statements from the respondents. The vast majority of respondents, amongst all three groups, acknowledged (law enforcement at 68%, motorists at 55% and community members at 60%) that the current prevailing strategies in Umlazi as “ineffective”. This seems to indicate that a new strategic path for Umlazi has become a matter of importance and one that cannot be postponed much longer if the road fatality rate in the area is to be constrained.

In terms of the hypotheses the following outcomes were realised:

Hypotheses 1 was confirmed by the study in that respondents clearly identified multiple, constant, deviant behaviour; Ignorance of road rules by motorists; the use of alcohol by motorists; Reckless driving by motorists; road users do not have the necessary skills to identify a hostile environment; and road infrastructure/designs in Umlazi do not accommodate road users as critical challenges to road safety in Umlazi.

Hypothesis 2 was partly supported by this research). However, it was confirmed that human, vehicle, and road infrastructure factors are contributory aspects to the nature of the road. These aspects, especially road design and infrastructure, fall outside the ambit of law enforcement. The situation has gravitated to such a state that the perception is that it is beyond the control of the DoT, which was partly confirmed, especially by the law enforcement participants themselves.

Hypothesis 3 was confirmed/supported by this study in that respondents agreed that there is a direct correlation between road traffic fatalities, causes of accidents, and response strategies. The swaying factor that moved the dial distinctly towards the notion that enforcement strategies that severely punish deviant behaviour call for effective collaboration is found in a question that was related to the use of alcohol. The vast majority of all participants overwhelmingly confirmed this particular matter as a prime road fatality-causing aspect.

In respects of hypothesis 4 the outcomes partially confirmed/supported the hypothesis. The high number of vehicle accident related casualties provides implies that whatever strategies are being pursued are ineffective. There were, however, mixed views amongst the respondents as to the effectiveness of the strategies in place at the time of conducting the study.

4. Recommendations

4.1.1 Awareness campaigns for road safety to readdress road fatalities and road user behaviour

Awareness campaigns for road safety are everyone’s responsibility and as such should be carried out daily. This will constantly remind all road users of the essence of the road safety measures. To facilitate effective transformation in road safety, the need is to deliberately transform attitudes towards safer roads by everyone involved. This underlines the urgency for adopting various road safety measures.

4.1.2 Re-training of Municipal Traffic Police officials

It is important for the municipal traffic police in Umlazi to implement intensive and contextualised training, which will specifically equip Municipal Traffic Police officials with the skills to protect pedestrians, drivers, children and the traffic police themselves. The municipal traffic police should update their manuals and train the officials on how to execute their daily mandates with a specific emphasis on local traffic safety. The role of professionalism should not be underestimated. If Municipal Traffic Police officials professionally conduct themselves, the road users might do the same and treat the officials with respect; as a result, roads will be safer for all road users.

4.1.3 Addressing insufficiency of Municipal Traffic Police (staffing capacity and recruitments)

The DoT of KZN Province should train and recruit more traffic officers to make sure an even distribution of traffic officials on all roads, not only during periods of peak traffic, but at all times. This recommendation is in response to an interview with the traffic officials in which they expressed that they are short-staffed and this impacts negatively on road safety. They claim that some road users take advantage of it and consequently do not follow the rules of the road. The researchers also recommend that the Department consider employing tertiary graduated students who studied in the field of traffic and municipal policing. This would not just lift the perceived status of the occupation but also impart another degree of knowledge and insight that basic training cannot always produce.

4.1.4 Re-visitation of existing laws, policies and regulations

The researchers are of the view that the National DoT of South Africa should revise all traffic related legislation to focus not just on the free flow of traffic, but in particular, align legislation with traffic safety as a definitive objective. A practical suggestion/example can be to ensure that all vehicles that are older than 15 years should frequently undergo roadworthiness tests before renewing their vehicle license. The practice of carpooling and car-sharing must be actively endorsed by the government, and if possible, even be regulated by locally appropriate legislation (i.e. By-laws). The overloading of passengers and the prevalence of non-roadworthy vehicles should be considered as top priorities and legislation to curb the “might” of the taxi industry should be considered.

4.1.5 Developing effective pre-law enforcement strategies

It should be recognised that legislature in itself is not regarded as a safety measure. It is advisable, prior to commencing legislation, to promote a positive attitude amongst the social groups and population through promotional campaigns. Once a new law gets functional, it is important to notify the road users regarding the intent and content of law.

4.1.6 Calling for collaboration between all relevant stakeholders

The municipal traffic police need to engage the community, private sector and businesses who are directly included in making a positive impact on road safety to become involved and contribute towards road safety. These stakeholders need to be identified and sourced from, as is the case with this study, Umlazi. The unique circumstance prevailing in each area is often the reason why generic, or so-called national plans and strategies, are less effective.

Conclusion

South Africa is presented with some identifiable and recognisable challenges in preventing road traffic fatalities and address unacceptable road user behaviour. The number of pedestrians and other road users who are killed daily road is increasing, not just in Umlazi, but nationwide, mainly due to some road users who do not follow the rules of the road enacted in Legislation. There are a variety of dynamics at play, all of which should be understood by the policymakers and the law enforcer alike. The challenges as outlined in this paper should, amongst others, encourage policymakers to review the current pieces of legislation and policy directives with the aim of re-aligning their approaches by looking at microcosms, such as Umlazi. Viewing a myriad of microcosms would eventually bring to the fore the national culture and the national attitude towards all the causative factors as discussed in this paper. Only then, by investing in microcosmic studies (and acting decisively on it), will the local communities be served by appropriate strategies that address the particular needs and in the process improve the quality of life where it matters most. In their neighbourhoods, where they deserve to be safe, deserve to thrive, and where their views and opinions mean something.

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