

## Short Communication

# COVID-19 Pandemic: A Miracle or Mirage in Preventing Road Traffic Accidents - A Data Exploration

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## Abstract

The year 2020 will be associated with the COVID-19 pandemic, which has tainted a few million individuals (affirmed cases) all throughout the planet, causing countless passings. Some public governments reacted by forcing lockdowns to diminish the spread of contamination and expected passing's, yet this had contrary monetary and social repercussions (joblessness, business insolvencies, and so forth), Every year, around 1.35 million individuals are killed on street from one side of the planet to the other; really, this is frequently the eighth driving clarification for death and furthermore prompts up to 50 million wounds every year. One beneficial outcome of the actions executed to manage the spread of COVID-19 was the decrease of auto collisions, on both metropolitan and interurban streets; this came about during a checked fall inside the quantity of traffic-related wounds and fatalities.

**Keywords:** COVID-19; Road Traffic Accident; Lockdown

## Introduction

COVID 19 is a severe form of ARDS caused by the novel corona virus. Its first few cases were seen in the Wuhan province of China in November 2019 and was soon declared a pandemic by WHO in March 2020. The ARDS caused by corona virus has no cure whatsoever and the damage done on the lungs is irreversible. So far 4,067,517 people have died from this deadly disease. Globally as of 16<sup>th</sup> July 2021 188,655,968 confirmed cases of COVID-19 have been reported to WHO [1]. In India total of 31115789 cases has been reported out of which 954326 were reported in Odisha. Thus, the best way is to prevent the spread of the disease which can be achieved by wearing a mask and keeping a safe distance from one another. Hence, the whole world has come to a halt due to the 'lockdowns' which have been imposed by most of the countries in desperate attempt to control such a raging uncontrollable viral disease.

These lockdowns have reduced our daily lives to working from home, losing jobs and various other changes have been seen in societal and financial patterns. In many ways it has proved to be a boon as people are working from home, spending more time with family, taking more care of their hygiene than ever, all the while surviving on the minimum resources.

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The government of India also enforced a strict nationwide lockdown from 24<sup>th</sup> March 2020, which was initially announced to be for 21 days but continued till May 31<sup>st</sup>. From 1<sup>st</sup> of June 2020 resumption of services in phased manner was declared and termed as "Unlock 1".

## Effect of Lockdown on Road Traffic Accident

With most of the global population on a "lockdown" status, road traffic volumes and mobility activities in general have immensely dropped (Clarke, 2020; google LLC, 2020). The reduced traffic which now moves on roads is evidently less exposed to another significant health problem called Road Traffic Accidents. Due to empty roads, lesser people on the streets, drivers tend to over-speed and use mobile phones which distract them while driving. The condition of roads is also worsening due to inadequate care taken during the lockdown period as there is a sheer lack of manpower and manual laborers.

According to WHO,

- Approximately 1.3 million people die each year because of road traffic crashes.
- Between 20 and 50 million more people suffer non-fatal injuries, with many incurring a disability because of their injury.
- Road traffic crashes cost most countries 3% of their gross domestic product.
- More than half of all road traffic deaths are among vulnerable road users: pedestrians, cyclists, and motorcyclists.
- 93% of the world's fatalities on the roads occur in low- and middle-income countries, even though these countries have approximately 60% of the world's vehicles.
- Road traffic injuries are the leading cause of death for children and young adults aged 5 to 29 years.
- The risk factors are over-speeding, driving under influence, use

of mobile phones while driving, not wearing helmets and seat belts, unsafe road infrastructure, unsafe vehicle condition.

- Road traffic injuries can be prevented. Effective interventions include designing safer infrastructure and incorporating road safety features into land-use and transport planning, improving the safety features of vehicles, improving post-crash care for victims of road crashes, setting, and enforcing laws relating to key risks, and raising public awareness [2].
- The comparative data of number of Road Traffic Accidents in India and Odisha during lockdown has been depicted & the new regulatory motor vehicle amendment bill, 2019 implemented since 1<sup>st</sup> September 2019 has been mentioned.

## Findings from Comparative Studies

1. In a retrospective observational study carried out in a Tertiary Care Referral Centre in North India stating orthopedic trauma says the number of injuries suffered due to RTAs in 2020 during the lockdown was less than what was seen in 2019, however the number of RTAs significantly increased in phase 2 (4<sup>th</sup> May to 31<sup>st</sup> May 2020) of lockdown from that of phase 1 (25<sup>th</sup> March 2020 to 3<sup>rd</sup> May 2020) [3]. The number of road traffic accidents in two phases of lockdown in India.
2. On a cross-country analysis of the effect of COVID 19 pandemic on driving behavior and road safety done in two countries, Greece and the Kingdom of Saudi Arabia (KSA) states 'there was a 41% decrease in the number of road traffic accidents from February 2020 to March 2020 in Greece. However, with fewer cars on the streets it was seen that more drivers were blowing the speed limit [4].
3. In a study of the impact of COVID-19 on road traffic accident by Hamid [5], of Aga Khan University hospital in Karachi states that the no of injuries and fatalities from road traffic accidents have greatly reduced during the lockdown as most people stayed at their homes abiding by the social distancing norms and avoiding the use of vehicles. It states that out of those who needed to go out their homes most of them used other modes of travelling like walking and bicycling, even various forms of public transport on road also decreased thereby reducing traffic.
4. A retrospective study to compare the spectrum and outcome of trauma victims who presented to the Emergency Department (ED) from April 2020 (lockdown period) to a similar season matched control arm of April 2018 (non-lockdown period). The study was conducted with 403 trauma victims (trauma prevalence: 9.7%) from April 2020 as compared to 667 trauma victims (trauma prevalence: 10.8%) from April 2018. It states that during the period of April 2020, there was a significant decrease in the number of trauma patients especially due to RTA in comparison to April 2018. Apparently, there was an absolute decrease of -39.6 during the lockdown [6].
5. Another study on mandated societal lockdown and road traffic accidents by Qureshi et al. [7], states that there was a considerable reduction in accidents resulting in minor or no injuries but no reduction in accidents resulting in serious or fatal injuries. It was inferred after an in-depth statistical analysis using data from Statewide Traffic Accident Records System maintained by Missouri State Highway Patrol.

6. A write up on COVID-19 lockdown and reduction of road traffic accidents in Tarragona province in Spain states that the no of accidents per day fell by 74.3% in the period from March 16<sup>th</sup> to April 26<sup>th</sup>, 2020, in comparison with those in Feb 14<sup>th</sup> to 20<sup>th</sup> 2020. A decrease in the number of severe traffic accidents and the reduction of traffic accidents on weekends/holidays was more intense compared to weekdays [8].
7. In a time-series study which was conducted in Japan during their lockdown period from March to May 2020, using police-reported fatal Motor Vehicle Collisions (MCVs) between January 2010 and February 2020, a comparison was done between the forecasted number of speed related fatal accidents to that observed in each month to which it was seen that the observed number was well within the forecasted number. The reason for fatal MCV was deduced to be over-speeding [9].
8. An article published on Times of India on Feb 8, 2021, states that fatality rates in road accidents in Odisha dropped by nearly 11% by 2020 as compared to 2019 [10].

## Interpretation

Drawing an inference from all the studies conducted in the lockdown period due to COVID-19 pandemic, it is safe to say that the number of road traffic accidents during the above said period is lesser than pre-lockdown times. However, some studies do state that the accidents resulting in minor or no injuries have reduced but those which result in grave injuries and fatalities are constant. The most important cause of the accidents was over-speeding as per majority of the studies [11-13].

## Conclusion

Even though a decrease in the number of RTAs have been noted, we must make sure there is no surge in the post COVID 19 era. The accidents which happen due to negligence of drivers can be minimized by creating more traffic rules and their more stringent implementation. People need to be educated about the traffic safety and rules and awareness must be created amongst them.

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