

COVID-19 Pandemic and Lessons Learned for Traffic Accidents Prevention

Coronavirus 2019 (COVID-19) originated in Wuhan, Hubei Province, China, in late December 2019 and has now spread to almost the entire world.^[1] This pandemic not only initially presented itself as a health problem, but it affected nearly all social, psychological, economic, cultural, and political dimensions, especially in Iran, a country that is nowadays under the most severe and oppressive sanctions. One of the effects of COVID-19, which attracted attention, especially in its beginning, was its impact on traffic accidents. In fact, it should be remembered that traffic accidents existed as a global pandemic long before the current health crisis. Indeed, road traffic injuries are the 10th leading cause of mortality in the world with about 1.3 million deaths per year worldwide.^[2] Almost half of those killed in accidents are pedestrians, cyclists, and motorcyclists.^[3] According to the latest WHO data published in 2018, road traffic accidents deaths in Iran reached 21,831 or 6.50% of total deaths.^[4] However, the main query is: how did COVID-19 influence the incidence and severity of traffic accidents? According to the Iranian traffic police chief, there was a 70% reduction in traffic accidents at the beginning of the corona outbreak. He also noted that road traffic has decreased by about 15%–20%, and despite the reduction in the number of accidents, their intensity has increased.^[5] The same trend can also be found in other parts of the world. The Spanish Directorate General of Traffic detected a 70% drop in the number of accidents on intercity roads compared to the same period in 2019. Based on their report, the case fatality rate increased slightly at the same time. Furthermore, excess speed was the cause of about 30% of these accidents. In the United States and the United Kingdom, cases of vehicles exceeding speed limits have been doubled during the lockdown.^[6] Moreover, during this period, according to the head of the Iranian traffic police, exceeding speed limits have been one of the most important causes of road accidents.^[5] This increase in speed may be due to low levels of traffic in city streets and intercity roads during lockdown and restrictions. Studies have shown that empty roads increase the risk of traffic crashes since they trigger speedy driving and simultaneously a decrease in driver attention levels.^[7] This also accords with Inada *et al.*'s study which concluded that the COVID-19 lockdown in Japan triggered the speed-related traffic violations that caused fatal motor vehicle crashes during part of the lockdown.^[8] Therefore, one of the lessons learned during traffic limitations during the COVID-19 crisis is that speed is still one of the main causes of traffic crashes. Speed restriction is often used as an effective way to increase road safety. The ultimate goal of speed limitations is reducing traffic crashes and their severity and as a result, decreasing the death

number. Various strategies have been proposed to achieve this goal. In urban areas, traffic calming by using physical methods such as road narrowing and the creation of speed bumps and rumble strips is one of the main strategies. Law enforcement by the police is another method. Unfortunately, many cities in Iran, especially small ones, do not have intelligent surveillance systems that based on visual information gathered by smart cameras for traffic monitoring. Equipping such cities with this system can play an important role in traffic control. In intercity roads, using medium-speed vehicle registration system and more police crackdowns against offending drivers can help decrease traffic crashes caused by exceeding the speed limit. In all cases, training drivers and encouraging them to follow traffic rules, especially avoiding speeding, can be helpful in preventing accidents.

The fact that the number of accidents during the coronavirus pandemic has decreased but its severity has increased, as in the past, shows that the role of the human agent much more than in the past. Therefore, the rules and regulations related to obtaining a driver's license should be reviewed. Teaching social and urban life lessons is essential for children from elementary school to college.

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