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Motorcycle, an Unforeseen and Scary Killer on Bangladesh's Roads

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Dear Editor,

Nowadays motorcycles have become very much popular as one of the main means of transportation and livelihood for many in Bangladesh as a result of hasty urbanization; they are cheaper to purchase, easier to navigate and park, faster to reach destinations, cost-effective, more inexpensive to maintain, and their insurance premiums are more affordable, etc.

Motorcycle ride-sharing services through mobile apps have become trendy in Bangladesh as nightmare traffic often means walking is faster than travelling by car or buses. People of different ages as well as many students are engaging in ride-sharing services. Moreover, a considerable number of independent riders, not involved in any ride-sharing companies, carry passengers.

Bangladesh Road Transport Authority (BRTA) states that the number of registered motorcycles was below 1.5 million in the country in 2015, increasing to almost 4 million by 2022. According to a World Bank funded research from Accident Research Institute (ARI) in Bangladesh University of Engineering and Technology (BUET), apart from the registered motorcycles, at least 1.5 million unregistered motorcycles run on the roads (1).

Motorcycles have high performance capabilities, but low stability. Most importantly, not all of them are designed for highway. So, when motorcycles crash, drivers and/or passengers are more likely to be severely injured or dead due to lack of protection. According to the World Health Organization (WHO), death risks in motorcycle accidents decrease by 40% if helmets are worn properly (2). Almost 88% of the motorcyclists who died in motorcycle accidents were not wearing a helmet at the time of the accidents, and 66% of the motorcyclists did not use helmets on a regular basis, ARI reported (2). Bangladesh Standards and Testing Institution (BSTI) is responsible for supervising the quality of helmets, but they did not even have a lab to test helmets till April 2022 (2).

According to ARI, 28.4 persons of every 10,000 motorcycles in Bangladesh are dying in accidents every year. This death rate in motorcycle accidents is the highest in the world (2). Death risks in motorcycle accidents are 26 times higher than that of four-wheelers. More than half of the accidents in the country occur because of high speed. After that, 37% of the accidents occur due to careless driving (2). Statistics by the World Life Expectancy based on information from

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183 countries puts Bangladesh on 106th place for having the highest road accident related deaths (3).

The Road Safety Foundation (RSF) in Bangladesh pointed out a number of major reasons behind the increasing trend of traffic accidents, such as defective vehicles, overspeeding, violation of lane discipline, forced overtaking, wild motorcycling specially by the young and teenage riders, carelessness of passengers and pedestrians, improper protective equipment, bad mood, unskilled drivers, incompetency and illness of drivers, unsettled wages and working hours, increased purchase of high-speed motorcycles, driving under the influence of drugs, people's disregard for traffic laws, operation of slow-moving vehicles on highways, defective road structure, lack of motorcycle-friendly highways and roads, all types of vehicles plying on the same road at the same time, ineffective traffic management system, inefficiency of BRTA, extortion on roads and highways, lack of public awareness, etc. (4).

There has been a sharp and alarming rise in the number of road accidents and related death over the last few years. This table, according to RSF, will illustrate the situation across the country clearly (4).

Table 1. Comparison of road and motorcycle accidents and related deaths

Year	Total road accidents	Motorcycle accidents	Death by road accidents	Death by motorcycle accidents
2019	4,693	1,189 (25.3%)	5,211	945 (18.1%)
2020	4,735	1,381 (29.2%)	5,431	1,463 (26.9%)
2021	5,371	2,078 (38.7%)	6,284	2,214 (35.2%)
2022	6,829	2,973 (43.5%)	7,713	3,091 (40.1%)
2023* (February and March)	925	362 (39.1%)	1,051	290 (27.6%)

* The report of January 2023 isn't available and the report of April 2023 has not been published yet.

Most of the accidents occurred on national highways, and following that on regional roads, rural roads, city streets and in other places (4). The research by BUET revealed that about 30% of the motorcycle accidents happened due to head-on collision, and about 50% of them died (2). According to the World Bank, Bangladesh comes first in the world in terms of motorcycle accident deaths (5).

40% of bikers were solely responsible for accidents in 2022 according to RSF, Nirapad Sarak Chai and Bangladesh Jatri Kalyan Samity (Organizations working on road safety in Bangladesh) (6). Moreover, Trucks, covered vans, pick-up vans and buses hit, ran over or collided with motorcycles.

Situation worsens significantly on Eid days. On 2022 Eid-ul-Fitr, at least 97 people died in motorcycle-related accidents across the country; 178 road accidents took place, and 249 people were killed from April 25 to May 5, 2022, according to RSF. The same scenario continues countrywide; 285 people died in 240 road accidents from April 16 to April 29 during Eid-ul-Fitr 2023; 133 people died (46.7% of the total road accidents deaths) in 127 motorcycle accidents (52.9% of all accidents), according to RSF (4). Even regarding the 1st accident that took place on the historic Padma Bridge of Bangladesh after it was revealed, 2 motorcyclists were killed on the night of June 26 in 2022 (4).

RSF stated that the number of road accidents in the capital city Dhaka increased by 97.7% in 2022, and the number of casualties from accidents increased by some 79.6% in the same time year. Most of these accidents happened at night (34%) and early morning (21.6%). This sudden increase occur mostly due to increasing intolerance among people, tendency to cross the roads anywhere at whim, talking or keeping the eyes on mobile phones while crossing the roads and rise in the number of vehicles (4).

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According to the WHO, developing economies recorded higher rates of road traffic injuries, with 93% of fatalities coming from low-and middle-income countries (LMICs) (7). In Bangladesh, poor, low-income and middle-income people are mostly the victims of road accidents (6). Students account for the highest number of deaths (1,237 (16%)) caused by road accidents across the country in 2022. 81.4% of the victims were working people aged 18-65. In most cases, the dead or injured people were the main provider of the family (6). According to ARI, road accidents caused damage for about Tk. 1.09 trillion between 2018 and 2021, while RSF reported that road crashes damaged human resources for over Tk. 180.46 billion in 2022 in Bangladesh (6). These losses included the cost of treatment to the lost productivity of the deceased or those disabled by their injuries. Some family members need to take time off work or university to care for the injured one. Undesirably, this problem is under-reported and widely neglected, which also worsens the fatality of road accidents in Bangladesh (8).

Though accurate data is the prerequisite to reduce road accidents, the government has no accurate data, according to the people working on road safety in Bangladesh. All the accidents are not reported in the media. Other than death, many accidents and news on people suffering disability are not recorded. If recorded properly, the real figure of road accidents would be much higher. The World Bank and the WHO also have acknowledged this fact (3-9).

Motorcycle crash injuries (non-fatal) and deaths are preventable. A universal helmet law is the single most effective way to save lives. The Centers for Disease Control and Prevention (CDC) states that Motorcycle helmets are 37% (for riders) and 41% (for passengers) effective in preventing deaths; helmets lessen the risk of head injury by 69% (10).

Accidents and deaths exist due to failure in adopting modern policies to establish order on roads and lack of enforcement and monitoring of laws. There is no way out of this disarray unless measures are taken to change entire road management, create awareness to produce skilled drivers, fix working hours for drivers, increase the potential of the BRTA, enforce traffic laws, separate lanes for slow-moving vehicles on highways, prevent extortion, and properly execute Road Transport Act of 2018. Evidence-based public awareness campaign also can lessen the morbidity and mortality. Motorcyclists might not be able to control many factors, but they can control their own risky practices.

More noticeably, Sustainable Development Goal 11 (SDG 11) is about "making cities and human settlements inclusive, safe, resilient and sustainable." To accomplish this goal, the first priority is ensuring road safety.

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Conflict of Interests

The authors declared no conflict of interest.

Authors' contributions

Conceptualization, methodology and original draft preparation, K. D; formal analysis, writing, review and editing and approval of final manuscript, K. D, Sh. D**,** Sh. O. P; Data curation, K. D., Sh. O. P; Validation, Sh. D**,** Sh. O. P; Investigation, K. D, Sh. D; Writing, Sh. D**,** Sh. O. P.

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