



Editorial

# Underage motorbike driving in Pakistan: A neurosurgical burden heading towards societal disaster

Mohammad Ashraf<sup>1</sup>, Naveed Ashraf<sup>2</sup>

<sup>1</sup>Glasgow Neuro Society, Wolfson School of Medicine, University of Glasgow, Glasgow, Scotland, United Kingdom, <sup>2</sup>Department of Neurosurgery, Allama Iqbal Medical College, Jinnah Hospital Lahore, Lahore, Punjab, Pakistan.

E-mail: \*Mohammad Ashraf - mohammad\_5676@hotmail.com; Naveed Ashraf - drnashraf@yahoo.com



**\*Corresponding author:**

Mohammad Ashraf,  
President, Glasgow Neuro  
Society, Wolfson School  
of Medicine, University of  
Glasgow, Glasgow, Scotland,  
United Kingdom.

mohammad\_5676@hotmail.  
com

Received : 24 December 2021  
Accepted : 11 January 2022  
Published : 04 February 2022

DOI  
10.25259/SNI\_1261\_2021

**Quick Response Code:**



We are all familiar with the organized chaos where there is enough order to achieve the goal in a complex situation. But what if those at the helm turn a blind eye toward affairs demanding urgent attention; it is a recipe for disaster in the making for posterity. Before 2004, the market volume for the two-wheelers in Pakistan was below 0.1 million annual units. Thanks to the government's open policy, new manufacturers with lower prices entered the market, giving a preferred solution for individual mobility. Effectively, purchasing a motorcycle and driving it on public roads has little to no legislative barriers enforced, and the market has achieved 2 million annual sales.<sup>[2,6]</sup>

Motor vehicle accident (MVA) is the leading cause of traumatic brain injury (TBI) worldwide.<sup>[2]</sup> This etiology has a unique feature; motorbikes are involved in most MVAs and are idiosyncratic demographically. In the Western world, motorcycle rights organizations are struggling to promote personal freedom over safety which, according to them, is a personal choice. Cultural, social, and economic factors heavily influence the type of vehicle driven and involved in the accident. In Western countries, motorcycles are mostly for recreational use, although it is one of the easiest ways of transportation. Motorbike usage in developing countries necessitated out of easy access. Southeast Asian countries have the highest use of motorbikes, with low- and low-middle-income countries accounting for nearly 85% of all road traffic deaths globally.<sup>[4]</sup> Pakistan, with its population of 220 million, is the prototype of a developing country where motorbike use has exploded, and so has the magnitude of associated problems. It has led to a plethora of social and cultural changes in addition to the usual road safety concerns and the devastating issue of TBI. The transformation has its positives and negatives, although the overall influence has more downsides.<sup>[2]</sup>

In a tertiary national referral teaching hospital situated in Lahore, one of the densest cities in the world that caters to a nearly 22 million population, including the city itself and surrounding districts and villages, on average, we see approximately 1500 motorbike-associated MVAs annually in our Accident and Emergency (A&E) department referred to us for neurosurgical review. Of these, 340 (22.8%) are between the age of 10 and 20 and around 100–120 between 10 and 17 years (18 being the minimum age required to obtain a driver's license in Pakistan).<sup>[2]</sup> This number (1500) is, unfortunately, an underestimate and only one part of our department's annual TBI load due to several reasons. First, our department statistics are conservative as they do not account for those bike riders in A&E who were never referred for neurosurgical review. In addition, many secondary care and private hospitals receive a large number of head injury

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2022 Published by Scientific Scholar on behalf of Surgical Neurology International

patients but do not have a neurosurgical department/cover to manage these patients appropriately. From an ongoing prospective study yet to be published, we investigated epidemiology, etiology, and reasons for underage motorbike driving, among other outcomes: secondary care hospitals account for approximately 25% and private hospitals for 15% of our TBI referrals where the victim was an underage motorbike driver. This figure also excluded all other etiology of TBI patients seen annually. Finally, the number of underage motorbike riders with mild and moderate TBI seen at the surrounding centers not referred to neurosurgery remains undocumented.

Expensive sports and heavy bikes have become a fad with society's upper-middle and upper echelon as only these societal classes can afford them. It has triggered a ripple effect and contaminated the huge segment of middle- and lower-middle-class kids who have easy access to motorbikes nowadays. Nearly, every one of them tries to replicate the machismo of biker gangs depicted in Hollywood movies and the easily performable daredevil bike antics by James Bond and Mission Impossible heroes in the CGI world, mostly with the help of stunt performers. The psyche at work is the same wherein a child attempts to jump like Spiderman or Batwoman. Essentially, this all is a fun-seeking behavior that perhaps reflects the prepubertal and pubertal fantasy world but leaves the individuals, families, and society scarred forever. In addition to recreation and pleasure seeking, motorbikes have assumed an extremely important economic role in countries like Pakistan. Rider deliveries of consumable and food items are now an established business transaction model, which works extremely well in off-work timings and keeps the economic engine moving. This has produced opportunities for the unemployed and poor sections of society. If one can catch hold of a motorbike, it results in a handsome payoff good enough to sustain a low-income family.

Bad culture, institutions, and social indifference carry the most blame. Many Pakistani families are guilty of encouraging their underage sons to drive a motorbike.<sup>[1,5,7,8]</sup> This is especially true for lower-middle-income households where young boys have to support their families and a motorbike is perhaps the most efficient way to carry out domestic chores. Society and law enforcement have turned a blind eye to the opposite echelon. Underage boys in private and top state schools drive independently to their institutions by their early to mid-teenage, despite the legal age of eligibility to sit a driving test being 18. Both parents and schools are aware of this activity. Still, both overlook a categorically illegal practice that has disastrous consequences as these underage boys engage in excessive risk-taking behavior such as dangerous speeding and street racing. While those in the developed world may find all this unusual, such behavior is unfortunately as prevalent as it is acceptable.

[Figure 1a] demonstrates underage boys driving with individuals seated on windows and sunroof, celebrating on the night of Pakistan's independence day. A traffic warden not photographed was present at the nearby check post, yet no action was taken. [Figure 1b] demonstrates a man sitting in a high-risk position above cargo in an open back of a minivan, without any safety harness whilst traveling on Lahore Ring Road, a high-speed intercity motorway with cars traveling at 60 miles per hour or above. To join this motorway, one must pay toll tax, and therefore, entrance is at all times gated and manned by an officer, yet such ludicrous and illegal scenery is often witnessed during one's commute. [Figure 1c] shows a father traveling on a two-person motorcycle with six other family members at a traffic light without any repercussions. Often, this is the typical family where boys are taught to drive motorcycles from a young (under)age to support their family. [Figure 1d] demonstrates a teenage boy driving his mother and younger siblings, a total of five passengers on a two-person motorbike. This best illustrates how underage boys carry out domestic responsibilities, of which helping family members commute tops the list. An entire country sees such imagery daily. The imagery also illustrates an important factor that contributes to morbidity and mortality. Lack of lifesaving helmet use. Less than 25% of all motorbike-associated TBI patients wear a helmet.<sup>[2]</sup> In cases where helmets are worn, it is usually only by the driver.

In addition to the emotional tragedy, there is a less appreciated consequence we as neurosurgeons have observed, facing families of the underage bikers, and one that has national implications. It is the economic decimation that such families face as male children contribute financially to households from a very young age; households where women culturally do not work. Their death leads to depreciating socioeconomic circumstances of the deceased kin at the individual/familial level and leads to loss of economic productivity at a national level. If we are to reverse these trends, which should be sooner than later, then this demands a massive rebound from the government, professional bodies, and civil society. In the short term, the police must be empowered; in the province of Sindh, 1400 underage drivers and their parents were fined a cumulative 2 million Pakistani rupees (US\$ 11,500) within 3 days alone!<sup>[5]</sup> This was following a strong mandate given on September 3, 2021, by the Sindh high court to curb juvenile driving.<sup>[1,5-6]</sup> As per the court's order, not only are the drivers and parents to be fined but also the vehicle is to be impounded. An affidavit is to be signed by the parents to promise their children would not be allowed to drive until legally eligible.<sup>[1,5,7]</sup> By November 2021, under this initiative, 30,529 juvenile drivers and 17,126 parents/vehicle owners were issued tickets totaling 32.4 million Pakistani rupees (US\$184,325).<sup>[7]</sup> We have presented our data investigating the burden of head injury patients from underage driving



**Figure 1:** Captured during day-to-day commute in Lahore, Pakistan. (a) Underage drivers celebrating Pakistani Independence day while driving recklessly on a public road. (b) A man traveling on a highway on the back of a minivan without any safety harness on top of the cargo. The highway is toll gated, and its entrance is always manned; a speed limit of 60 miles per hour applies. (c) Shows a seven-passenger family on a stop signal of a public road on a two-passenger motorbike. (d) Shows an underage child transporting five family members on a two-passenger motorbike, including, what is most likely, three minor siblings, and one adult in the back who most likely is his mother.

and it's reasons to our own provincial disaster management authority and engaged in talks with Punjab police and local government. Similar measures like those by Sindh Government are to be enacted with a zero-tolerance policy for underage driving instructing traffic wardens to keep an active lookout. The exact penalty is yet to be decided.

Long-term improvements require a cultural change. Educational institutes need to adopt a zero-tolerance policy for underage driving. The motor legal system of the country requires a massive overhaul. At the minimum, car insurance must be mandatory for any driver who wishes to drive

a particular vehicle. The neurosurgeon's role is essential, as this specialty was "relegated" TBI patients. Nationally, initiatives by neurosurgeons that have demonstrated positive change include the ThinkFirst Chapter in Peshawar that targets school-going children bringing cultural change by educating youngsters on road traffic safety and making smart decisions.<sup>[3]</sup>

This catastrophic setting urgently demands that those stewarding the society put their act together as the avalanche of destruction is about to roar. Let us call the time otherwise; the grist to the mill will become the nemesis of society.

## REFERENCES

1. Haider H. Karachi Traffic Police Slaps Juvenile Drivers With Rs. 28.1 Million Fines, ProPakistani; 2021. Available from: <https://www.propakistani.pk/2021/10/12/karachi-traffic-police-slaps-juvenile-drivers-with-rs-28-1-million-fines> [Last accessed on 2021 Dec 23].
2. Hussain SS, Kamboh UA, Bukhari SA. Outcome of adolescent bike riders after road crash with and without safety measures in a developing country. *Pak J Neurol Surg* 2017;21:23-30.
3. International Chapter of the Year Award, Think First; 2019. Available from: <https://www.thinkfirst.org/international-chapter-year-award> [Last accessed on 2021 Dec 23].
4. Murray C, Lopez A. *The Global Burden of Disease*. Vol. 1. Cambridge, MA: Harvard University Press; 1996.
5. Over 1, 400 Under-Age Drivers Fined in Three Days, The Nation; 2021. Available from: <https://www.nation.com.pk/07-Sep-2021/over-1-400-under-age-drivers-fined-in-three-days> [Last accessed on 2021 Dec 23].
6. Pakistan Motorcycles Industry-Facts and Data, Motorcycles Data; 2021. Available from: <https://www.motorcyclesdata.com/2021/10/25/pakistan-motorcycles/#:~:text=indeed%2c%20the%20milestone%20of%201,record%20of%201.9%20million%20sales> [Last accessed on 2021 Dec 23].
7. Shah W. Nearly 30, 000 Vehicles Impounded in Operation Against Underage Drivers in Karachi; 2021. Available from: <https://www.propakistani.pk/2021/11/19/nearly-30000-vehicles-impounded-in-operation-against-underage-drivers-in-karachi> [Last accessed on 2021 Dec 23].
8. Taking Responsibility: Jail Parents of Underage Motorcyclists, The Express Tribune, The Express Tribune; 2021. Available from: <https://www.tribune.com.pk/story/1805849/taking-responsibility-jail-parents-underage-motorcyclists> [Last accessed on 2021 Dec 23].

**How to cite this article:** Ashraf M, Ashraf N. Underage motorbike driving in Pakistan: A neurosurgical burden heading towards societal disaster. *Surg Neurol Int* 2022;13:37.