

Research Brief

Understanding Motorcyclists' Risk Perceptions, Knowledge,
Attitudes, And Norms on Road Safety
Buenos Aires and Córdoba, Argentina

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Motorcyclist during peak hours on one of the main roads in Buenos Aires, Argentina.

Road traffic injuries and fatalities continue to be a significant global health and development challenge, with an estimated 1.19 million road traffic deaths worldwide in 2021.¹ In Argentina, over 4,486 road users were killed in traffic collisions in 2023, with motorcyclists accounting for 44% of all road deaths in the country.²

¹ Global Status Report on Road Safety 2023. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

² Dirección Nacional de Observatorio Vial (2023). *Informe de siniestralidad vial fatal año 2023*. Secretaría de Transporte, Ministerio de Economía. Argentina.

https://www.argentina.gob.ar/sites/default/files/2018/12/informe_de_siniestralidad_fatal_2023_feb2025_act.pdf

Motorcycle riders are among the most vulnerable road users, facing higher risks of crashes and injuries. Their safety is often compromised by a variety of vehicular, contextual, and human factors, among which the key risky behaviors are driving after alcohol use, speeding, and not wearing helmets. Sex, age, attitudes, norms, and beliefs are linked to those risky behaviors.

The percentage of motorcyclists exceeding the speed limit in Córdoba (62%) and Buenos Aires (55%) was higher than that of other road users. Helmet use among drivers in Córdoba was reported at 59%, and in Buenos Aires at 86%. Among passengers, helmet use was reported at 42% in Córdoba and 83% in Buenos Aires.³

This research brief presents findings from a 2024 exploratory study in Buenos Aires and Córdoba, Argentina, conducted by Vital Strategies in partnership with the National Scientific and Technical Research Council (CONICET) Argentina. The study focused on motorcycle safety, particularly speeding and related factors. It examined motorcyclists' perspectives on road risks and protective measures in Argentina.

Key Findings

- Practical and emotional reasons—such as time savings, cost, comfort, flexibility, and a sense of freedom—emerged as significant motivators for motorcyclists.
- Motorcyclists in Argentina are aware of the risks involved in riding. They believe riding a motorcycle is inherently dangerous but tolerate the risk. None of them reported believing there was no risk of crashing or falling.
- Overconfidence in one's ability to ride a motorcycle leads to riskier behaviors—such as speeding, weaving through traffic, or ignoring certain safety precautions—ultimately increasing the likelihood of crashes.
- Many participants were unaware of the actual speed limits on avenues and streets, with some incorrectly assuming lower limits for both in both cities.
- Speeding was widely accepted among motorcyclists, with many acknowledging that slightly exceeding speed limits was tolerated. However, riding at high speeds in urban areas was seen as reckless and unacceptable.
- Riding after consuming alcohol was generally not considered common by the riders, although some motorcyclists admitted that in certain situations, such as social gatherings, it was accepted.
- Nearly all participants viewed helmet use as a fundamental safety measure and a common practice among motorcyclists, though some admitted to occasionally forgoing it on short trips.
- Traffic enforcement was seen as inconsistent and more punitive than preventive. However, it was seen as the most effective way to ensure compliance.
- Many participants reported that crime and insecurity undermined safe riding, leading to risky behaviors such as running red lights or speeding, particularly at night or in high-crime areas where they felt most vulnerable.

³ Johns Hopkins International Injury Research Unit (2023a). *Status Summary Report: Road Safety Risk Factors in Córdoba, Argentina*. Baltimore. Johns Hopkins International Injury Research Unit.

Research Objectives

This study aimed to (a) explore motorcyclists' knowledge, attitudes, and perceptions of risk and exposure to crashes; (b) identify behaviors considered most risky and examine the beliefs surrounding them; (c) investigate the strategies motorcyclists use to mitigate risks and their motivations for self-protection; and (d) assess their views on public safety measures, such as infrastructure improvements, law enforcement, and public awareness campaigns.

The study also sought to identify differences by age, city, gender, and purpose of motorcycle use (general population vs. delivery riders). The findings aim to inform more effective road safety policies and interventions and their implementation, including strategic communication for social and behavior change programs.

Methodology

The study employed a qualitative methodology complemented by a supplementary quantitative component. Data were collected through in-person focus group discussions with 63 motorcyclists, 30% of whom were women. Participants were recruited from Córdoba and Buenos Aires, Argentina, including their metropolitan areas, and organized into eight focus groups. Each city hosted four sessions: two with riders from the general public and two with people who use motorcycles for work, such as platform workers (e.g., Uber, Rappi), couriers, and self-employed riders. Participants ranged in age from 18 to 49 and were further segmented into two groups: 18–29 and 30–49 years old.

A short, independently administered questionnaire collected quantitative data on participants' socio-economic characteristics, motorcycle use, and knowledge of traffic regulations. This supplementary component provided contextual insights to support and enhance the qualitative findings.

The Institutional Review Board (IRB) of the Biomedical Research Alliance of New York (BRANY) reviewed and approved this study.

Study Participants

Most participants had completed high school or higher education. About 84% reported riding a motorcycle every day or almost every day. Participants primarily rode low-displacement motorcycles. Most had not been involved in any crashes in the previous two months. About 9% reported having been involved in crashes without any damage or injuries, while approximately 7% were involved in crashes that resulted in damage or injuries.

A detailed description of the participants, methodology, and research tools is available in the [full report](#).

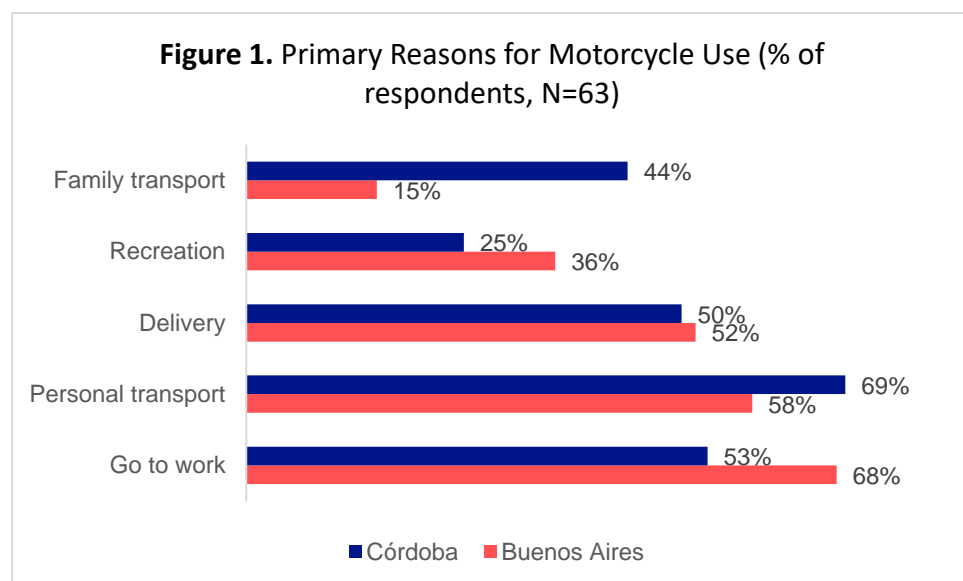
Study Results

The Motorcycle Experience

Study participants described various ways they learned how to ride. Most mentioned learning informally either by buying a motorcycle and riding it before getting their license, growing up in a family where motorcycle riding was common, or learning from friends and acquaintances who had motorcycles. It was less common to learn in formal settings or motorcycle schools, which are not widespread in Argentina, unlike driving schools for cars.

Key Factors Influencing Motorcycle Use

Motorcycles were widely regarded as practical and agile vehicles. Many participants highlighted their affordability compared to cars, particularly fuel efficiency and parking convenience. They also enabled riders to avoid using public transportation, which was often perceived as unreliable and unsafe. For some, motorcycles served functional purposes such as transporting family members or running errands (Figure 1).



Nearly 42% of respondents reported occasionally, and 13% reported frequently, carrying passengers. In addition, many participants—especially delivery riders—noted that motorcycles were essential work tools, allowing them to meet job demands efficiently and reliably. Beyond practicality, people said motorcycles offered a sense of freedom and enjoyment.

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My motorcycle is my main mode of transportation. It is more convenient than a car for parking or getting somewhere quickly.”

WOMAN (18-29 YEARS OLD), PRIVATE USER, CÓRDOBA

Understanding Risks of Motorcycle Riding

All riders acknowledged the inherent dangers of riding, recognizing the heightened risks compared to other transportation options, especially cars, which they called "safer." However, many accepted these risks as an unavoidable part of motorcycling rather than something that could be avoided.

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“I know it's my body on the line, and if anything happens, that's it. So yeah, I'm a bit nervous, but I still ride.”

WOMAN (18-29 YEARS OLD), PRIVATE USER, BUENOS AIRES

While most participants acknowledged the risks associated with riding a motorcycle, they rarely identified their own behaviors as primary risk factors. Instead, they emphasized external factors that contribute to unsafe riding conditions—particularly interactions with other road users, such as pedestrians, cyclists, and drivers of cars, taxis, buses and trucks. Reckless behavior by car drivers and operators of larger vehicles was often considered the greatest safety concern and a major source of danger for motorcycle riders.

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“Car drivers here don't understand motorcycles. Just yesterday, a pickup truck got way too close to me while I was riding in my lane—exactly as I should—and it nearly hit me.”

MAN (30-49 YEARS OLD), PRIVATE USER, BUENOS AIRES

Some of the other factors that, according to riders, affected their safety included poor road conditions, inadequate lighting and adverse weather, which were perceived to have a greater impact on motorcycle safety compared to four-wheeled vehicles. Notably, motorcycle delivery workers highlighted work conditions and time pressure that encouraged speeding, further increasing their exposure to dangerous situations. Some riders emphasized that proper motorcycle handling and experience were crucial for safety, as riding required more skill than driving other vehicles. Smaller motorcycles, while more affordable, often lacked stability and were frequently poorly maintained. The threat of robbery or assault also led to risky behaviors such as speeding and running red lights.

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“I work nights, and I ride fast. If I see a red light, and no one's around, I'll go through it. The fear isn't just about getting hit or crashing—it's about getting robbed.”

WOMAN (18-29 YEARS OLD), WORKER, CÓRDOBA

Notably, many riders did not recognize their risky behaviors as safety concerns without prompting. Moderators had to initiate discussions on issues like speeding, helmet use, drink-driving and distractions.

Confidence in Riding

During the discussion, motorcyclists reported that as they gained experience and confidence, their perception of risk tended to decrease. They became more comfortable navigating traffic, making quick decisions, and handling their motorcycles. However, this growing confidence sometimes led to overconfidence, which participants identified as a critical turning point. Notably, their confidence was not necessarily the result of years of riding experience but rather of their perceived ability to control the vehicle. Many noted that excessive self-assurance often resulted in riskier behaviors—such as speeding, weaving through traffic, or ignoring certain safety precautions, ultimately increasing the likelihood of crashes.

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“It is also about being overconfident. If you've got a lot of experience, you get cocky... you get cocky, and you kill yourself.”

MAN (18-29 YEARS OLD), PRIVATE USER, BUENOS AIRES

Riders' Knowledge and Perception of Speed Limits

Once prompted, participants acknowledged that speeding was common and widely recognized as risky. However, it was generally accepted as typical behavior among motorcyclists, especially younger men. In contrast, women appeared more cautious, while younger males were more likely to engage in risky behaviors, such as speeding or racing. In addition, some participants acknowledged that slightly exceeding speed limits was often tolerated, however, riding at high speeds within urban areas was considered reckless and unacceptable.

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“In a neighborhood, you can’t drive that fast. A child might run out, a pedestrian could appear, or someone playing ball could suddenly enter the street—there are countless possibilities, and it’s simply unacceptable.”

WOMAN (18-29 YEARS OLD), PRIVATE USER, CÓRDOBA

Riders frequently justified speeding by citing practical benefits, such as arriving at their destination faster, meeting delivery deadlines, or, at night, avoiding potential crime situations. Many also believed that their riding skills helped them manage the risks associated with speeding, leading to a tendency to engage in this behavior despite its dangers. The thrill associated with riding at higher speeds also contributed to the normalization of this behavior.

Those working in the delivery industry acknowledged frequently engaging in risky behaviors, such as speeding or running red lights, particularly when they believed it would help them meet deadlines or avoid delays.

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“We want to go faster because the faster we go, the more money we make. Everyone's like that. And when they stop, they do this [mimics a snake-like motion], trying to get ahead.”

MAN (30-49 YEARS OLD), WORKER, CÓRDOBA

When asked about existing speed limits, most riders opposed lowering them, arguing that the current limits were adequate. Many also expressed doubts about the effectiveness of reducing speed limits, believing they would not be respected in practice.

Many participants were unaware of the actual speed limits—60 km/h on avenues and 40 km/h on streets—with some mistakenly assuming lower limits of 50 km/h for avenues and 30 km/h for streets in both cities.

In Buenos Aires, approximately 74% of participants correctly identified the speed limit on avenues, and 55% did so for streets. Awareness was lower in Córdoba, with 63% knowing the speed limit on avenues and only 41% knowing the speed limit on streets.



“Whether you lower or raise them, no one will follow them.”

MAN (30-49 YEARS OLD), WORKER, CÓRDOBA

Riders' Attitudes Toward Drinking and Driving

Although riding after consuming alcohol was generally not considered common by the riders, some motorcyclists admitted that in certain situations, such as social gatherings, it was accepted. Differences emerged between cities: in Buenos Aires, riding under the influence was largely seen as unacceptable, but in Córdoba, both work-related and private riders admitted it was common. A lack of alternative transportation, socializing with other riders, and spending time with friends were reasons given for drinking before riding.



“Sometimes I go out on my bike, have a few drinks, and before leaving, I drink plenty of water. If I still don't feel fit to ride, I call a Cabify”

WOMAN (30-49 YEARS OLD), WORKER, CÓRDOBA

When asked about the legal blood alcohol concentration (BAC) limits for motorcyclists in their cities, only 32% of participants in Buenos Aires provided the correct answer, compared to a significantly higher proportion—94%—in Córdoba. The most common mistake among participants in Buenos Aires was the assumption that a zero-tolerance policy for drink-driving was in place locally, reflecting the nationwide regulation. However, this policy has not been adopted in Buenos Aires City, which still permits a BAC limit of 0.02%. This contrasts with Córdoba, where the national zero-tolerance policy (0.0 g/l BAC) has been implemented, potentially explaining the confusion among riders in Buenos Aires.

Riders' Attitudes Toward Helmet Use

Nearly all participants regarded helmet use as a fundamental safety measure and a common practice among motorcyclists—one that has become even more widespread over time. Not wearing a helmet was generally perceived as unacceptable and highly risky. However, some participants acknowledged that there were situations where they might forgo wearing one, such as during short trips.



“If I am just going to buy some steaks, I might not bother with the helmet.”

MAN (18-29 YEARS OLD), PRIVATE USER, CÓRDOBA

There were noticeable geographical differences in riding practices. For example, some participants mentioned that protective gear was uncommon in certain neighborhoods, making riders stand out as potential targets. One participant expressed feeling self-conscious, saying, "I feel ridiculous with all my gear on—helmet, jacket, everything." (Man, 18-29 years old, private user, Buenos Aires).

Riders' Attitudes Toward Cell Phone Use

Although many acknowledged the risks of using a cell phone while riding, some riders admitted to frequently doing so, including for work-related purposes. To mitigate the dangers of distracted riding, some mentioned working in familiar areas, stopping to check their phones, or using hands-free devices.



“The phone—it is not that I tolerate it, but in my case, I have to use it because I work with it. You don't have a choice.”

WOMAN (30-49 YEARS OLD), WORKER, CÓRDOBA

When asked about other behaviors while riding a motorcycle besides cell phone use, some young riders mentioned wearing headphones or smoking.



“I listen to music with headphones, and sometimes I have to brake at intersections because I can't hear honking.”

WOMAN (18-29 YEARS OLD), WORKER, CÓRDOBA

Enforcement

Traffic enforcement was seen as inconsistent and more punitive than preventive. Penalties were viewed as ineffective, failing to deter unsafe behaviors. Some riders felt that enforcement disproportionately targeted those who rode motorcycles for work purposes. Despite these concerns, many acknowledged

that strong traffic enforcement was the most effective way to ensure compliance. While helmet checks appeared to be frequent, broader enforcement of traffic laws was perceived as lacking.

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“They stop people who are working—I always see them pulling over workers who rely on their motorcycles. But they don’t stop those without helmets, plates or proper gear.”

MAN (18-29 YEARS OLD), PRIVATE USER, CÓRDOBA

Factors Facilitating Safer Riding Behavior Among Motorcyclists

Study participants identified several factors that encouraged them to comply with traffic regulations and practice safer riding. These included experiencing crashes themselves or knowing someone who had, as well as the potential for financial losses, which made them more cautious. Older motorcyclists, in particular, recognized that a crash could result in serious physical and financial harm with lasting consequences.

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“I’ve ridden motocross, so I have decent bike-handling skills, but I’ve had two crashes and many falls. Those experiences made me slow down and ride more cautiously. Becoming a father also made me ease off the throttle.”

MAN (18-29 YEARS OLD), WORKER, CÓRDOBA

Stricter enforcement of traffic regulations was frequently mentioned as a key factor influencing safer riding practices, as well. Other factors included public health campaigns, training and education, and licensing and regulation.

Public Health Communication Campaigns

Participants had mixed reactions when asked about the importance of public health communication campaigns. Some viewed them as ineffective, while others considered them valuable for influencing rider behavior. Many suggested that longer campaign durations and choosing the right communication channels could enhance impact. Some participants emphasized social media, with one noting, “It needs to be on Instagram or TikTok because if not, I won’t see it.” (Woman, 18-29-years old, worker, Buenos Aires). Others preferred TV, arguing that “if it’s on TV, you have to watch it until it’s over.” (Woman, 18-29 years old, worker, Córdoba).

There was also debate over the most effective content. Some advocated for family-centered messages and real-life consequences. Others favored strong, high-impact visuals, such as crash

scenes: "I saw an ad... a taxi, a bloodstain, everything in gray, a yellow taxi, red blood, and a broken motorcycle, saying, 'We share the same road, but these are the consequences.' It leaves an impression." (Man, 30-49 years old, worker, Córdoba).

Conversely, some young riders proposed using humor to engage younger motorcyclists: "I think there should be more information, maybe through humor." (Man, 18-29 years old, worker, Buenos Aires). Others highlighted self-care and caution, with one suggesting a message like, "Don't get cocky" or "They don't see you, don't let your guard down, think about yourself." (Man, 8-29 years old, worker, Buenos Aires).

Training and Education

Participants emphasized the need to improve knowledge of safe riding practices and promote responsible behavior. Many also emphasized the importance of integrating road safety education into school curricula, recommending the use of real-life testimonials and graphic content to illustrate the consequences of risky behaviors. One of the participants noted: "They should start teaching traffic safety in high school when kids are 14 or 15. At that age, you think you're invincible, and that's when most start driving." (Man, 30-49 years old, private user, Córdoba)

Licensing and Regulation

Participants strongly criticized the motorcycle licensing process, citing a lack of rigor and inconsistencies across jurisdictions. Many advocated for stricter requirements, particularly more practical tests. As one young participant put it, "There should be a driving test, you know, that makes people prove their skills." (Man, 18-29 years old, worker, Buenos Aires). Similarly, another participant from Córdoba noted that "the motorcycle test is just weaving between a couple of cones and coming back" (Woman, 18-29 years old, private user, Córdoba).

Recommendations

This study provides key insights into the knowledge, attitudes and behaviors of motorcyclists in Buenos Aires and Córdoba, offering a foundation for developing targeted road safety strategies that address the unique challenges faced by motorcycle riders.

Based on its findings, we recommend that the cities of Buenos Aires and Córdoba:

- Coordinate efforts across jurisdictions to combat crime and improve road safety.
- Integrate knowledge, attitude and behavior-related indicators as a component of existing road safety data collection efforts. Use analysis to inform policies, initiatives and strategic communication campaigns.
- Sustain media campaigns paired with enforcement to gradually change drivers' attitudes, behaviors, and norms related to risk factors, traffic law compliance, and the safety features of quality protective equipment. The campaign message should target and be tailored to specific clusters of motorcyclists (e.g., delivery workers) and address drivers' misconceptions (e.g., that driving a few km over the limit is acceptable, short distances are safer, or they can easily manage road situations), and build on behavioral barriers and facilitators (e.g., emphasizing the family and messages from peer

groups). Consider improving the enforcement agency's image, e.g., through media campaigns for the public and “procedural justice” training for enforcement agents. Enhance these efforts with public relations.

- Streamline and strengthen the driver’s licensing process.
- Consider addressing young drivers’ safety by implementing mandatory training rather than relying on family and friends for instruction and putting the responsibility on parents/guardians for new drivers’ safety.
- Consider reviewing and regulating business practices, e.g., to reduce pressure on delivery motorcyclists and prioritize safety.
- Invest in road infrastructure improvements and public transportation while enhancing road signage and maintenance.
- Promote the Vision Zero approach to road safety with the message “We all share the road,” emphasizing collective responsibility and inclusivity. This approach helps avoid stigmatizing or placing blame on specific groups.