

Research Brief

Understanding Motorcyclists' Risk Perceptions, Knowledge, Attitudes and Norms on Road Safety, Vietnam

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Motorcyclists during peak hours on one of the main roads in Hanoi, Viet Nam. Photo credit: Tang Ha, Voice of Vietnam.

Road traffic deaths and injuries continue to pose a significant global health and development challenge, with an estimated 1.19 million fatalities worldwide in 2021. Two-thirds of these deaths occur among people of working age (18–59 years), leading to substantial health, social and economic impacts on society. Motorcyclists and riders of other powered two- and three-wheelers account for 30% of fatalities, while occupants of four-wheeled vehicles make up 25%.¹

¹ Global Status Report on Road Safety 2023. Geneva: World Health Organization; 2023. License: CC BY-NC-SA 3.0 IGO. [Link](#)

Vietnam has one of the highest traffic fatality rates compared to other countries in Southeast Asia² with a road traffic mortality rate of 17.7 per 100,000 inhabitants in 2021, according to the WHO. Vietnam leads the world in the use of motorbikes. It is the most common mode of transportation in Vietnam. In 2024, 77 million motorbikes were registered³ and 73.2% of the population owns a motorcycle. Motorcyclists are also the most vulnerable road users; motorcycle-related traffic crashes account for about 80% of all road crashes in Vietnam, according to a report by the National Traffic Safety Committee (NTSC) and two-wheelers represent 57% of all traffic fatalities.

Key factors contributing to motorcycle crashes and their severity include human behaviors and risky practices, such as speeding, alcohol impairment, improper helmet use and distracted driving. Psychological factors, including attitudes, social norms, and environmental and vehicular conditions, also significantly influence riding behavior.

This research brief presents findings from a 2024 exploratory study conducted in Hanoi, Ho Chi Minh City and Da Nang, Vietnam, by Vital Strategies and the Transport Development Strategy Institute of the Ministry of Transport in Vietnam. The study focused on motorcycle safety, with a particular emphasis on speeding and other contributing factors.

Key Findings

- Motorcycles and motorbikes were favored for their maneuverability and convenience, making them the preferred mode of transport for commuting to work or school and for family-related activities.
- Riders, particularly those aged 18 to 29, often disregarded safety warnings due to their perceived confidence in controlling the motorcycle and their preference for speed, especially on empty roads.
- Despite being aware of the risks associated with riding motorcycles—such as speeding, poor road conditions, adverse weather (like heavy rain and slippery roads), drink driving, and not wearing helmets—many riders continue to engage in risky behavior. Concerningly large proportions of drivers reported occasionally exceeding the speed limit (33%), driving after drinking alcohol (6%) or driving their motorcycle without wearing a helmet (38%).
- More than one in four participants (28%) had been fined for administrative violations in the past two years and 40% had been involved in traffic crashes. Males were more frequently involved in traffic crashes and reported more dangerous driving behaviors than females.
- Very few riders reported consistently knowing the existing speed limits on various roads in the city, with only 16% correctly identifying the speed limit in residential areas.
- Despite acknowledging the risks, many participants—particularly young riders aged 18 to 29—highlighted certain short-term benefits of speeding, such as saving time in urgent situations and fulfilling personal needs.

² Viet Nam Road Safety Profile 2025. Asian Transport Observatory; 2025. [Link](#)

³ Experts discuss solutions to improve traffic safety for motorbike drivers. Viet Nam News; 2025. [Link](#)

- While most participants acknowledged the importance of helmets, practical challenges like inconvenience for short trips, discomfort in hot weather, and doubts about helmet quality influenced their use.
- Riding after drinking alcohol was commonly identified as dangerous. However, some younger participants admitted to taking risks in situations like being close to home or when experiencing peer pressure during social gatherings, particularly when in rural areas or places without widespread ride-hailing services.
- Concerningly, large proportions of drivers were not confident that they would avoid exceeding the speed limit (28%), driving after drinking alcohol (45%) or driving their motorcycle without wearing a helmet (39%).
- Participants recognized enforcement as a strong deterrent but admitted to engaging in risky behaviors—speeding or not wearing helmets—when there was no visible enforcement on the road.

Research Objectives

This study investigated the human factors contributing to risky behaviors among motorcyclists, including speeding, driving under the influence of alcohol, improper helmet use and carrying extra passengers.

The objectives were to:

- Explore motorcyclists' experiences, knowledge, attitudes, risk perceptions and social norms related to risky road safety practices.
- Gain insights about effective road safety interventions, including about developing targeted communication materials, mass media campaigns, and messaging strategies for social and behavior change programs.
- Provide behavioral insights to guide policy recommendations and enforcement strategies for improved road safety.

Methodology

The study used a qualitative research design through focus group discussions, complemented by a quantitative survey component to provide additional context. Data was collected from Sept. 27 to Oct. 12, 2024, in three major Vietnamese cities: Hanoi, Ho Chi Minh City and Da Nang. A total of 14 focus group discussions were conducted, including two pilot sessions in Hanoi and 12 official sessions across the three cities, involving 166 (48% male and 52% female) participants.

A brief, independently administered questionnaire collected quantitative data on participants' socio-economic characteristics, motorcycle use and knowledge of traffic regulations. While limited in scope, this quantitative component contextualized and enriched the qualitative insights derived from the focus group discussions.

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

Study Participants

The participants ranged in age from 18 to 49 and were segmented into two age groups: 18 to 29 and 30 to 49. About 50% of respondents were delivery or ride-hailing drivers, most of whom had a high school education only. The remaining participants represented a range of occupations, including students, office workers, professionals, teachers, laborers and homemakers.

About four out of 10 participants had children, with a significant difference between those aged 18 to 29, among whom about 27% had children, compared to 87% among those riders aged between 30 and 49 years.

Study Results

The Motorcycle Experience

Motorcycles were the participants' main mode of transport. Among the 166 study participants, over 90% held a driver's license, predominantly A1-class (up to 175cc). However, 7% of those aged 18–29 and 8% of female participants reported not having a license.

Driving experience varied among participants: 110 out of 166 had more than five years of riding experience. Notably, 40% of those aged 18–29 reported over five years of experience, compared to 92% in the 30–49 age group.

Key Factors Influencing Motorcycle Use

Motorcycles and motorbikes were favored for their ease of maneuverability and convenience for personal use. They were the preferred mode of transport for commuting to work or school (50%) and for family-related activities (47%). About 30% of respondents reported regularly transporting children on motorcycles, and about 61% reported doing so occasionally.

Participants aged 18 to 29 highlighted flexibility, speed, ease of use, and a sense of freedom and independence as key reasons for choosing motorcycles. In contrast, those aged 30 to 49 cited primarily economic factors—lower fuel and maintenance costs—as essential, particularly for those with moderate or low incomes. This group also emphasized the practicality of using motorcycles to transport family members, such as taking children to school or commuting to work.

Geographic differences also influenced motorcycle use. In Hanoi, heavy traffic congestion and an underdeveloped public transit system made motorcycles the most convenient option. In Da Nang,

shorter, narrower roads and limited public transport drove preference. In Ho Chi Minh City, participants valued motorcycles for their speed and flexibility, especially during tidal flooding and peak-hour traffic, allowing them to navigate flooded areas more easily than cars.

Understanding Risks of Motorcycle Riding

Participants across all groups clearly understood the risks associated with riding motorcycles. The main risks identified included speeding, poor road conditions, weather (heavy rain, slippery roads), and dangerous behaviors such as riding after consuming alcohol and not wearing helmets. Despite being aware of the risks, many riders continued to engage in risky behaviors. In the quantitative survey, 40% of respondents reported being involved in a crash in the last two years, with higher rates among male participants. When asked if they had been fined in the previous two years, 28% reported receiving fines; 53% among them were ride-hailing or delivery riders. Among those who received fines, 34% were fined for not wearing helmets, compared to 6% for speeding and 4% for driving under the influence of alcohol. Some respondents reported fines for running red lights, using the wrong lanes, driving in the opposite direction and driving on the sidewalks, among other violations.

Additionally, concerning large proportions of participants reported at least occasionally exceeding the speed limit (33%), driving after drinking alcohol (6%) or driving their motorcycle without wearing a helmet (38%) in the past two months.

Confidence in Riding

Participants aged 18 to 29 were more likely to take risks, particularly speeding and not wearing helmets in situations they perceived as safe or when needing to travel quickly. Their perceived confidence in their ability to control the motorcycle and preference for speed often led them to disregard safety warnings, especially on empty roads. However, they also acknowledged that these behaviors could result in serious crashes, especially when faced with unexpected situations.

Participants between 30 and 49 years old often demonstrated more caution and a conservative approach to risk management, compared to participants aged 18 to 29. Despite high recognition of the increased likelihood of crashes and injuries associated with risky behaviors, a concerning proportion of participants reported low confidence in their ability to avoid these behaviors—even if they wanted to. Specifically, 28% were not confident they could avoid exceeding the speed limit, 45% were not confident they could avoid driving after drinking alcohol, and 39% were not confident they could avoid riding without a helmet.

Riders' Knowledge of Speed Limits

When asked about existing speed limits, many participants gave incorrect answers. For example, only 16% correctly identified the speed limit in residential areas, on roads with central dividers, or on one-way streets with two or more motor vehicle lanes, while 7% were unsure, and the rest provided incorrect responses. The accuracy was slightly better for two-way streets or one-way streets with a single motor vehicle lane, with 37% answering correctly. When asked about the appropriate speed limit in school zones and whether speeds should be adjusted, up to 98% of respondents recommended reducing the speed limit in these areas, with 54% specifically suggesting a 30 km/h speed.

Riders' Attitudes Toward Speed-Related Risks

Speeding was regarded as one of the most significant risks across all focus groups. Participants acknowledged that riding over the speed limit increases the likelihood of crashes and makes it difficult to react promptly to unexpected situations, such as potholes or vehicles suddenly emerging from side streets. Participants across all locations emphasized that speeding significantly reduces their vehicle control ability. This was especially critical when facing situations such as other vehicles encroaching into their lane, pedestrians crossing the street, or poor road conditions like potholes or slippery roads.

The 18 to 29 age group, particularly in Ho Chi Minh City, tended to be more accepting of speeding, with the 30 to 49 age group demonstrating more caution, particularly when transporting passengers.

When surveyed about speeding behavior in the past two months, approximately 33% of respondents admitted to sometimes exceeding the speed limit. Among them, riders aged 18-29 (39%) reported speeding more frequently than those aged 30-49 (27%). Regional differences were also observed: Respondents from Ho Chi Minh City (38%) reported speeding more often, followed by Da Nang (33%) and Hanoi (31%). These findings align with the qualitative discussions, highlighting a greater tendency for risky driving behaviors among younger riders and in specific cities.

Conditions That Promote Speeding

Despite acknowledging the risks, many participants, particularly younger riders (18-29 years old) pointed out certain short-term benefits they believed could be gained from speeding. These benefits were mainly associated with saving time in urgent situations and meeting personal needs. Younger riders mentioned that speeding allowed them to enjoy the sensation of speed, and speeding allows them to challenge themselves or satisfy personal preferences. The feeling of excitement while riding at high speeds was often a reason for ignoring safety warnings. They were also often influenced by their peers. However, they admitted that they might not fully understand the dangers of speeding until they experienced a crash or witnessed severe consequences. In contrast, the older (30-49) age group showed more caution regarding speeding. They acknowledged that the risk of crashes outweighed the short-term benefits of saving time. This group also emphasized the responsibility of driving safely, especially when carrying children or elderly people, and therefore, they generally adhered to speed limits. However, some

participants admitted that they would exceed the speed limit in urgent situations, but typically only on highways or empty roads.

Regarding geographical differences, in Da Nang, riders said they sometimes exceeded speed limits on empty roads and in areas with minimal traffic police presence. In Hanoi, participants often sped to avoid traffic congestion, especially during rush hour on major roads. In Ho Chi Minh City, speeding was common when trying to escape severe traffic jams during peak hours. Participants often chose to speed on less crowded streets or during cooler nighttime conditions.

Riders' Attitudes Toward Drinking and Driving

Riding after drinking alcohol was frequently mentioned as a dangerous behavior. Participants recognized that alcohol-impaired reflexes increase crash risks and lead to overconfidence, causing behaviors like speeding or ignoring traffic signals. Many described feeling slower and less alert after drinking, making it harder to react to sudden stops or pedestrians.

While most acknowledged the dangers, some still saw practical reasons for driving after drinking, citing convenience and social obligations. Some participants—especially younger people and those in rural areas—admitted to accepting the risk in certain situations, like when their home is nearby or during social gatherings. Drinking and driving was often seen as socially acceptable, particularly in rural settings, where refusing a drink could be challenging due to peer pressure or cultural norms. This was more pronounced among younger participants, who felt greater pressure to drink even when they needed to drive later.

A few younger men (18–29) believed they could handle a small amount of alcohol and still drive safely, perceiving that drinking "just a little" wouldn't significantly impair their abilities despite evidence to the contrary.

A few participants in the 30–49 age group admitted that in some business or social situations, they couldn't refuse alcohol and had to drive afterward.

Among other factors that contributed to drink driving was a lack of transportation alternatives. In Da Nang, drink driving remained more common, particularly in suburban areas with limited transportation options. In Hanoi, many participants reported finding alternative ways to avoid driving after drinking, such as using taxis or asking friends for a ride. In Ho Chi Minh City, participants often used ride-hailing services as a safer alternative after drinking at social events.

Riders' Attitudes Toward Helmet Use

All participants agreed that helmets were crucial for protecting the head and reducing the risk of death in collisions. Many shared stories of severe crashes where helmets had saved lives. Participants in the 30-49 age group particularly emphasized wearing helmets when carrying children or elderly passengers.

Helmets were also seen as a way to comply with traffic laws and avoid fines, especially among older participants who consistently wore them to follow regulations. Some noted that helmets provided a sense of safety and confidence, particularly on busy roads or at higher speeds.

Despite recognizing the benefits, some participants admitted to occasionally not wearing helmets or not wearing them properly. According to the quantitative survey results, 3 out of 10 respondents who reported receiving fines in the previous two months were fined for not wearing helmets, and 38% of all survey participants reported sometimes riding a motorcycle without a helmet. During the discussions, the participants described various situations that motivated them not to wear helmets, including:

- **Short Distances:** Younger participants (18-29) often skipped helmets for quick trips or when traveling near home, citing inconvenience. This was common in Hanoi and Ho Chi Minh City, especially during short nighttime rides or in less crowded areas. However, they consistently wore helmets for long-distance or high-speed travel. In contrast, the older age group (30-49) showed a more cautious attitude, wearing helmets even for short trips and emphasizing responsibility, especially when transporting children or elderly people.
- **Hot Weather:** Participants, especially in Ho Chi Minh City, reported discomfort wearing helmets in hot weather. They noted that helmets caused heat and sweating, leading some to forgo wearing them.
- **Helmet Quality:** Some expressed concerns about helmet quality, feeling that many available helmets did not meet safety standards. This uncertainty led them to question the effectiveness of wearing helmets if protection was not guaranteed.

Riders' Attitudes Carrying Passengers

According to Article 30 of Vietnam's Road Traffic Law (Law No. 23/2008/QH12)⁴, operators of motorcycles or mopeds are generally permitted to carry only one passenger. However, specific exceptions allow for up to two passengers in the following cases: transporting a sick person for emergency medical treatment, escorting a person who has committed an illegal act, or carrying a child under the age of 14. Carrying more than the permitted number of passengers outside of these exceptions constitutes a violation of the law. Findings from the quantitative survey revealed that 11% of study participants admitted to frequently violating this law by carrying more than one adult, and 45% occasionally carried more than one adult.

⁴ Vietnam National Assembly. *Law on Road Traffic No. 23/2008/QH12*, enacted November 13, 2008. [Link](#)

Riders' Attitudes Toward Other Risky Behaviors

- **Cell Phone Use:** Many participants admitted using their phones while driving. Those aged 18 to 29 viewed phone use as an essential part of daily life, believing they could manage both driving and phone use without posing a danger. However, many acknowledged experiencing near-crashes due to distraction. The 30-49 age group admitted to using phones occasionally while driving but generally tried to limit this behavior to urgent situations.
- **Running Red Lights:** Some participants, particularly those aged 18 to 29, admitted to running red lights in urgent situations or when there was no traffic police presence. They felt it saved time despite being aware of the increased crash risk.
- **Changing Lanes Without Signaling:** Changing lanes without signaling was reported as common behavior, especially in high-traffic areas like Hanoi and Ho Chi Minh City. Participants admitted sometimes forgetting to signal or feeling it was unnecessary when there were fewer vehicles.

Enforcement

Study participants from both age groups emphasized the impact of increased traffic enforcement. Many admitted that fines and penalties motivated them to alter their behavior. Participants in the 30-49 age group often reported reducing their speed or stopping driving after drinking after receiving fines or because they feared getting fines. In contrast, those in the 18-29 age group reported adjusting their behavior only when they noticed a visible police presence or automatic speed monitoring systems.

Some participants from Da Nang and suburban areas of Ho Chi Minh City mentioned that the presence of traffic police and monitoring systems was inconsistent, particularly on less crowded roads or at night. Many disregarded speed limits or helmet use when they felt they were not being monitored. They only complied when passing through more populated areas or during peak hours when traffic police were more visible.

Factors Influencing Riding Behavior Among Motorcyclists

Participants mentioned various factors that influenced their riding behavior, including:

- Road safety campaigns promoting safer driving behaviors.
- For the 30-49 age group, family responsibilities were a key motivator for adopting safer driving behaviors and complying with traffic regulations. They felt a strong duty to protect their family members and were less willing to take risks, especially when it came to drinking and driving. Family expectations also created positive pressure, helping them maintain safer driving habits.
- Younger participants (18-29) admitted that peer pressure often influenced their behavior, particularly regarding drinking and driving or speeding. They found it challenging to refuse alcohol at social events and were reluctant to be seen as “different” by opting for safer alternatives like taxis or ride-hailing services.

- Participants reported that witnessing crashes or encountering crash scenes on the road prompted them to be more mindful of their speed. Some shared personal stories of crashes involving friends, which heightened their awareness of speeding dangers.

Recommendations

This study highlights key insights into the knowledge, attitudes and behaviors of motorcyclists in Vietnam, providing a foundation for developing effective road safety strategies tailored to the unique challenges faced by motorcycle riders.

Based on its findings, it is recommended that road safety authorities at the national and the city level:

- Continue to adopt an integrated, comprehensive approach to road safety, incorporating public education, law enforcement and traffic monitoring, while improving infrastructure and public transportation options to motivate and facilitate adoption of safe road behaviors.
- Facilitate the availability and adoption of comfortable and affordable high-quality helmets.
- Integrate knowledge, attitude and behavior-related indicators as a component of existing road safety data collection efforts to inform policies, initiatives and strategic communication.
- Maximize the deterrent effectiveness of enforcement by increasing the visibility of police and expanding automated monitoring systems such as speed cameras to raise drivers' perceptions of the risk of being detected. Enhance enforcement efforts through integrated public relations and communication strategies.
- Increase motorcyclists' compliance—and their confidence in complying—regarding speeding, drink driving and helmet wearing by sustaining targeted media campaigns paired with visible enforcement to positively influence road safety attitudes, behaviors and norms.
- Ensure road safety campaigns are evidence-based and resonate with at-risk drivers, using real-life stories that can heighten perceived personal risk and perceived severity of consequences, and outweigh perceived potential benefits of risk behaviors.
- Incorporate “We share the road” messaging to highlight the vulnerability of motorcyclists and encourage more considerate driving behavior.
- Engage positive social influence in road safety campaigns by partnering with civil society organizations, such as the Vietnam Women's Union and national Youth Union, and with families and key influencers to increase reach and engagement in encouraging positive road safety norms for all road users.