

Prevalence of Risky Riding Behaviors and Their Association with Traffic Rule Knowledge Among Occupational Motorcycle Riders in Metro Manila

Josiah Leila Macayan DELIMA^a, Samantha Emmanuelle DIMAYUGA^b, Flor Mikaela Figueroa GONZALES^c, Winonna Rose Nazares MALIGAYA^d, Nicanor ROXAS, Jr.^e

^{a,b,c,d,e} *Gokongwei College of Engineering, De La Salle University, Malate, Metro Manila, 1004, Philippines*

^a *E-mail: josiah_delima@dlsu.edu.ph*

^b *E-mail: samantha_emmanuelle_dimayuga@dlsu.edu.ph*

^c *E-mail: flor_gonzales@dlsu.edu.ph*

^d *E-mail: winonna_maligaya@dlsu.edu.ph*

^e *E-mail: nicanor.roxas@dlsu.edu.ph*

Abstract: With the rise of motorcycle use in Metro Manila, particularly among delivery and ride-hailing riders, understanding the factors behind their road behavior is vital. This study examined the relationship between traffic rule knowledge and risky behaviors among 194 occupational motorcycle riders. A survey assessed their knowledge and self-reported behaviors: Riding Beyond Limits, Speeding, Distraction, and Ignoring Rules. Most riders showed strong knowledge of distraction (78.87%) and ignoring rules (87.11%), but fewer demonstrated understanding of speeding (55.67%) and riding beyond limits (61.34%). MANOVA results revealed a significant overall effect ($p = 0.0221$), with higher knowledge associated with reduced distraction and riding beyond limits, but not with speeding or ignoring rules. Job-related pressures may override safety knowledge. Thus, beyond education, stricter enforcement and occupational policy reforms are needed. A holistic approach addressing both individual awareness and structural factors is key to improving road safety for occupational riders.

Keywords: Motorcycle safety, Traffic Knowledge Assessment, Risk-taking behavior, Urban transportation, Occupational Riders

1. INTRODUCTION

Motorcycles are a dominant mode of transportation in many urban areas across Southeast Asia, including Metro Manila, where traffic congestion, high transportation costs, and limited public transit options have driven their widespread use. While motorcycles offer practical advantages such as affordability, maneuverability, and efficiency, the growing reliance on them has led to a concerning rise in traffic-related injuries and fatalities (Statista, 2024). Notably, in 2023, there was a 19.1 percent increase in the average daily number of individuals involved in motorcycle-related road crashes compared to 2022, as seen in Fig. 1.1 (Statista, 2024). This trend presents not only a public health issue but also highlights the broader socioeconomic and occupational factors influencing rider behavior.

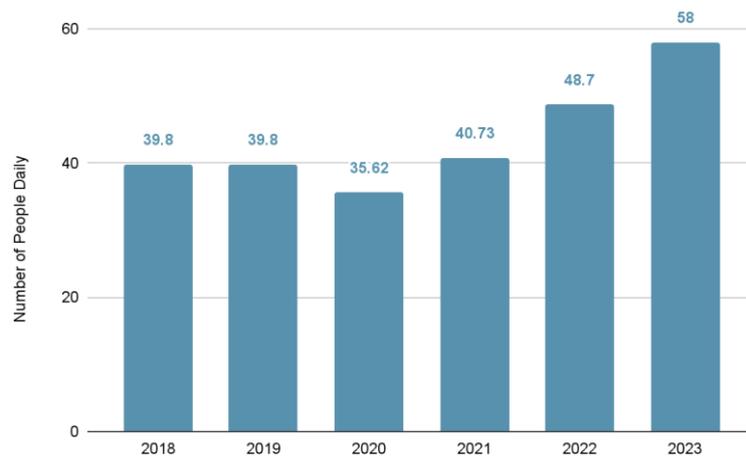


Figure 1.1. Average number of people involved in motorcycle-related road crash daily in Metro Manila in the Philippines from 2018 to 2023 (Statista, 2024)

Additionally, the rise of motorcycle-based gig economy jobs, such as delivery and ride-hailing services, has introduced new patterns of risk-taking behaviors on Metro Manila's roads (Ireland & Combe, 2024). Occupational riders often face pressures such as tight schedules, customer demands, and financial incentives, which may lead to risky behaviors, including speeding, traffic violations, or non-compliance with helmet use (Kitro et al., 2024; Laphrom et al., 2024). While prior research in the Philippines has examined environmental, infrastructural, or demographic factors related to motorcycle safety, few studies have investigated whether riders' knowledge of traffic rules translates to safer practices under these work-related pressures.

Crucially, a gap persists in examining the relationship between occupational riders' traffic rule knowledge of formal traffic regulations and their riding practices. Hence, this study aims to examine the relationship between occupational motorcycle riders' knowledge of traffic rules and their engagement in risky on-road behaviors in Metro Manila. Specifically, the research seeks to: (a) assess the level of traffic rule knowledge among delivery and ride-hailing riders by testing their understanding of common Philippine traffic regulations; (b) determine whether a significant relationship exists between higher traffic rule knowledge and reduced engagement in risky riding practices; and (c) identify which specific types of risky riding behaviors are significantly influenced by traffic rule knowledge.

2. LITERATURE REVIEW

2.1 The Rising Prevalence of Motorcycle Usage in the Philippines

Over the years, there has been a steady increase in motorcycle ownership in the Philippines. This is backed by data from the Asian Development Bank, highlighting that the number of registered motorcycles surpasses the total number of registered vehicles (Asian Development Bank, 2020). Fig 2.1.1 illustrates the consistent increase in motorcycle registrations in the Philippines from 2017 to 2023, showing a clear upward trend. Starting at 4.16 million in 2017, registrations rose to 8.47 million by 2022, almost doubling over the five-year period. Although there is a slight drop to 6.83 million in 2023, the overall pattern still reflects substantial growth in motorcycle ownership.

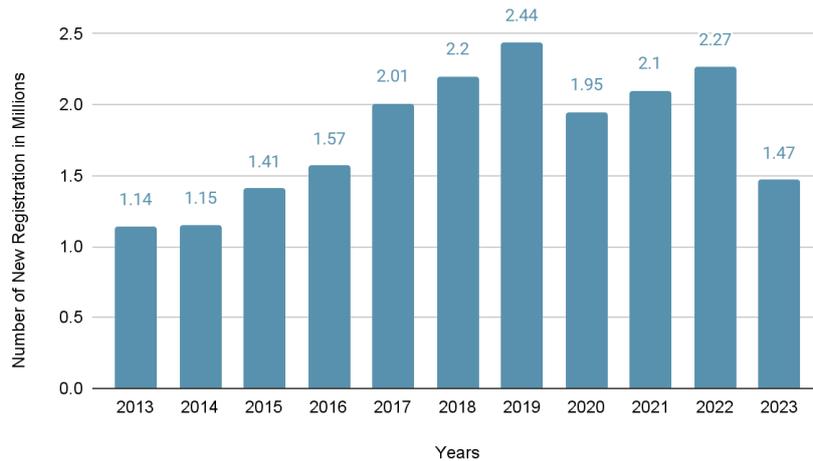


Figure 2.1.1. Total Number of Registered Motorcycles in the Philippines from 2017-2023 (Statista, 2024)

This rise can be attributed to a variety of socio-economic factors, particularly rising fuel prices, transportation fares, and the inadequacies of the public transportation system (Kamid et al., 2024). In bustling, congested cities, motorcycles are able to offer quicker travel times with their ability to easily navigate through congested areas, making them a cheaper and more flexible alternative to cars (Sigua, 2010).

Beyond individual commuting needs, the rapid growth in motorcycle ownership is also closely correlated to the growth of e-commerce and the rising demand for motorcycle-based services such as ride-hailing and delivery. The popularity of platforms such as Angkas, JoyRide PH, and Move It serves as a reflection of the need for affordable and convenient paratransit services in urban areas (Rosales, 2024). The demand for motorcycles is further fueled by the expansion of e-commerce and the rise of digital platforms such as Lazada, Shopee, and Lalamove. This growth is attributed to the ease of motorcycle-based deliveries and their capacity to enable businesses to reach and cater to a wider audience, thereby facilitating a new avenue for business expansion (Cabacungan & German, 2021).

2.2 Motorcycle Safety Regulations

The rising prevalence of motorcycles has heightened the risk of road accidents. According to the Traffic Accident Recording Analysis System (TARAS) of the Department of Public Works and Highways (DWPH), from 2007 to August 2009, motorcycles had the highest number of incidents involving fatal crashes and serious injuries (Napalang et al., 2018). More recent data from the MMDA reveals a concerning upward trend, with 26,599 motorcycle-related accidents recorded in 2022 that rose significantly by 17.3% in 2023, averaging approximately 78 crashes daily (Nepomuceno, 2024).

In response to the growing number of motorcycle users and the associated risks, the Land Transportation Office (LTO) implemented two administrative orders in 2008, enforcing helmet use, banning overloading, and mandating headlight operation on highways, with penalties ranging from ₱500 to ₱2,000. These measures were later strengthened by Republic Act 10054, which made certified helmets compulsory for riders and passengers, introducing stricter fines

(up to ₱10,000) and license suspension for violations. Non-compliant helmet retailers also face hefty penalties of ₱10,000 to ₱20,000. Further enhancing safety, Republic Act 10666 prohibits children from riding motorcycles under hazardous conditions unless they comply with mandatory safety requirements, such as wearing helmets and sitting in designated positions (Napalang et al., 2018).

However, despite existing regulations such as speed limits, helmet mandates, and passenger restrictions, weak enforcement remains a critical issue. The LTO struggles to implement these policies effectively due to inadequate resources and the vulnerability of traffic officers to corrupt practices. Consequently, while many motorcycle riders are aware of traffic laws, the lack of consistent enforcement encourages habitual non-compliance. Compounding the problem, the study notes that most riders acquire their skills informally, with only a minority undergoing formal training. This gap between awareness and adherence perpetuates road safety risks across the Philippines (Napalang et al., 2018).

2.3 Motorcycle Accident Data in Metro Manila

The Metro Manila Accident Reporting and Analysis System (MMARAS), established in 2005, focuses on compiling and maintaining a comprehensive database of road crashes, identifying where safety enhancements are needed, and monitoring the impact of interventions that have been implemented. Notably, the program has reported a record of 1,011,786 road crashes from 2013 to 2023, averaging 405 annual number of fatalities (Metropolitan Manila Development Authority [MMDA], 2024). The organization has also identified motorcycles to be particularly vulnerable on roadways, experiencing the highest fatality rates among various vehicle types, Fig. 2.3.1.

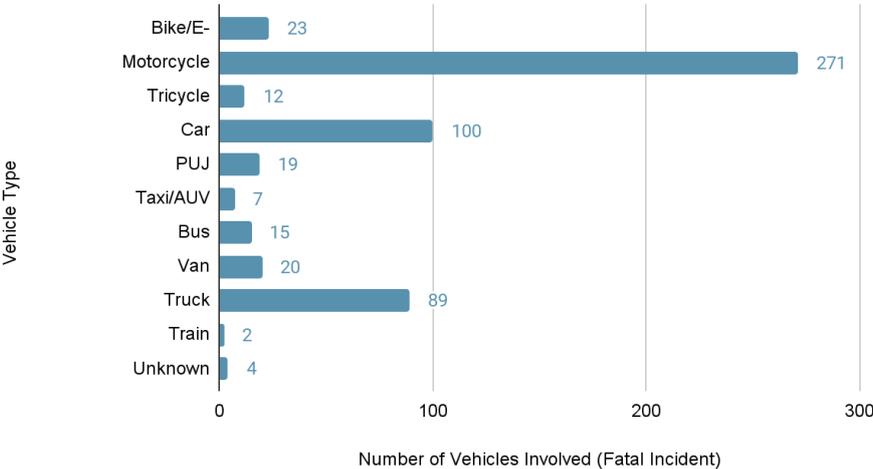


Figure 2.3.1. Classification By Vehicle Type, Fatal Cases (MMDA, 2024)

The MMARAS also noted a significant rise in the number of road crash incidents, from 71,891 in 2022 to 85,954 in 2023, in which 22.03% of those involved were motorcycles. Subsequently, 4,029 motorcycle accidents from January to April 2023 were reported by the Philippine National Police-Highway Patrol Group (PNP-HPG) as reported by MMDA (2024).

With this, the director of AltMobilityPH, Ira Cruz, emphasized the importance of better road design and policies to ensure the safety of both motorists and commuters. Cruz also urged

the Department of Public Works and Highways (DPWH) to prioritize the needs of private vehicles and consider the safety and well-being of all road users, including motorcyclists and bikers (Cariaso, 2023).

3. METHODOLOGY

3.1 Data Collection

Data for the study were collected using two methods: (1) physical questionnaires distributed directly to occupational motorcycle riders in Metro Manila, and (2) an interview-type format administered through Google Forms. Occupational riders, such as those engaged in ride-hailing and delivery services, were approached in various public and work-related locations around Metro Manila.

To maintain consistency and ensure accurate data management, all completed physical questionnaires were manually encoded into the Google Forms system by the researchers. This step enabled the consolidation of all responses into one digital platform, improving data organization and minimizing recording errors. Convenience sampling was adopted due to the rider population being both large and highly mobile, making it difficult to obtain a complete sampling frame for random selection. Metro Manila was selected as the study area because it hosts one of the highest concentrations of motorcycle users in the Philippines, including both occupational and non-occupational riders, making it a practical setting for participant recruitment (Statista, 2024).

3.1.1 Sampling Frame and Inclusion Criteria

The target population consisted of occupational motorcycle riders, defined as individuals who use motorcycles primarily as part of their livelihood, such as for ride-hailing, parcel delivery, or food courier services. Participants were eligible if they were at least 18 years old, regularly used a motorcycle for work-related activities, and were active within Metro Manila at the time of data collection.

The study specifically targeted employed occupational riders in Metro Manila. Given the large and continuous rider population, the Cochran formula was used to determine the appropriate sample size:

$$n_o = \frac{Z^2 * p * (1-p)}{e^2} \quad (1)$$

where $z = 1.96$ (95% confidence level), $p = 0.5$ (estimated proportion exhibiting risk-taking behavior), and $e = 0.0705$ (margin of error), yielding a theoretical sample size of 193. Substituting these values produces a theoretical sample size of 193 respondents. A margin of error of 7.05% was considered acceptable given the exploratory nature of the study. This sample size also aligns with similar studies conducted in the Philippines and internationally, which typically involve 150 to 300 participants (Gumasing & Magbitang, 2020; Chen & Liu, 2013; Seva, 2017; Golzar, J., Noor & Tajik, 2022).

Due to the absence of a complete listing of motorcycle riders and the highly mobile nature of the target population, convenience sampling was employed. Respondents were

recruited from transport hubs, parking areas, and designated waiting zones across several Metro Manila cities. While the use of convenience sampling may limit the generalizability of the findings, it was deemed appropriate for an exploratory study aiming to observe risk-taking behavior patterns within the constraints of time, mobility, and accessibility of the target population (Golzar & Tajik, 2022).

3.1.2 Recruitment and Verification Process

Survey distribution took place across Manila, Makati, Pasay, Pasig, Taguig, and Quezon City, where a large proportion of ride-hailing and delivery riders operate. The researchers approached participants in their usual work locations, such as near food establishments, delivery hubs, and waiting areas for ride-hailing services. Respondents were verified on-site as occupational riders based on visible indicators, such as wearing company-issued uniforms and carrying delivery boxes or work-related gear. Many participants were also part of rider groups that regularly gather in designated waiting areas, which further helped confirm their occupational status and minimize the inclusion of non-occupational riders. In addition to these on-site checks, the questionnaire also required respondents to indicate the company they were employed in, providing an additional layer of verification.

Study Location	Percentage of Respondents
City of Manila	41%
Makati	23%
Pasay	14%
Taguig City	13%
Pasig	5%
Quezon City	4%

Table 3.1.2. Distribution of Respondents by Study Location

Ethical clearance and informed consent were ensured by informing all participants of the study’s purpose, procedures, and their right to withdraw at any time. For respondents who answered through Google Forms, consent was obtained through a built-in acknowledgment section that required agreement before proceeding. For those who completed physical questionnaires, informed consent was explained verbally, with participation implying voluntary agreement. Survey data were stored securely, accessible only to the research team. Data will remain confidential for up to six months before permanent deletion, and any printed materials will be properly disposed of.

A total of 194 responses were collected and consolidated in Microsoft Excel for analysis. Variables were summarized by counting the number of respondents who demonstrated safe riding behavior in each risk category, based on their correct answers in the knowledge assessment.

3.2 Data Preparation

For this study, the first part of the survey, which was translated into the Filipino language, assessed participants’ knowledge of traffic regulations. This section included questions adapted from official traffic examinations to evaluate respondents’ understanding of road signs, right-of-way rules, and fundamental safety laws. The second part of the survey adopted selected items from the Motorcycle Rider Behavior Questionnaire (MRBQ), as utilized in the study of Lestantyo et al. (2024), to measure self-reported risky riding behaviors. This section assessed

the likelihood of respondents engaging in behaviors such as speeding, distraction, disregarding traffic rules, and riding beyond their physical limits. Each response was scored according to the nature of the question: correctness for traffic rule knowledge items and reported frequency for risky behavior items.

3.3 Statistical Analysis

In this study, traffic rule knowledge was conceptualized as a general awareness of safe versus unsafe riding practices, rather than domain-specific expertise. With this, Spearman’s correlation was used to examine the relationship between the traffic rule knowledge assessment score and each type of risky behavior. MANOVA was performed to assess the overall multivariate effect of the traffic rule knowledge assessment score on the set of risky behaviors, followed by individual ANOVAs to identify which specific behaviors were significantly associated with knowledge levels. All statistical analyses were conducted using R programming.

4. RESULTS

In the context of this study, the behavior domains were grouped as Riding Beyond Limits (RB), Speeding (SP), Distraction (DS), and Ignoring Traffic Rules (IR).

4.1 Multivariate Analysis

The MANOVA revealed a statistically significant overall effect of traffic rule knowledge on combined risky riding behaviors (Wilks’ $\Lambda = 0.9416$, $F(4, 189) = 2.93$, $p = 0.0221$). This means riders with different knowledge levels tended to show different patterns of risky behavior. While the effect size was small (knowledge explained about 5.8% of behavioral differences), the results were statistically meaningful. The p-value of 0.0221 is less than the standard 0.05, which may indicate that the effect is statistically significant.

4.2 Univariate Analysis

Univariate analysis was conducted to examine the relationship between each specific risky behavior and the traffic rule knowledge assessment score, identifying which behaviors are significantly associated with differences in knowledge levels.

Behavior	Category	Frequency	Percent
RB	Safe	119	61.34
	Unsafe	75	38.66
SP	Safe	108	55.67
	Unsafe	86	44.33
DS	Safe	153	78.87
	Unsafe	41	21.13
IR	Safe	169	87.11
	Unsafe	25	12.89

RB = Riding Beyond Limits, SP = Speeding, DS = Distraction, IR = Ignoring Traffic Rules

Table 4.2.1. Frequency Distribution of Traffic Rule Knowledge Assessment

Table 4.2.1 presents the distribution of respondents' knowledge across different categories of risky riding behaviors. While over half of the riders demonstrated good knowledge related to risk behavior (RB) and speeding (SP), a substantially larger share showed strong awareness of distraction-related risks (DS). Notably, the highest level of safety knowledge was observed in ignoring rules (IR), suggesting that respondents are generally most aware of violations associated with road regulations.

Table 4.2.2. Results of Univariate ANOVAs

Behavior	f-value	p-value
RB	4.48	0.036
SP	0.004	0.95
DS	7.30	0.008
IR	1.21	0.27

RB = Riding Beyond Limits, SP = Speeding, DS = Distraction, IR = Ignoring Traffic Rules

Table 4.2.2 shows that traffic rule knowledge assessment significantly affected RB and DS, with p-values of 0.036 and 0.008. This aligns with cognitive theories from Al Zahra and Brilianti's (2025) study, where greater knowledge leads to better risk perception and internal controls, making riders more aware of consequences and less likely to engage in thrill-seeking or inattentive behaviors. On the other hand, the p-values greater than 0.05 show that there is no significant difference in knowledge scores across SP and IR. This indicates that these behaviors are often driven by non-cognitive factors such as personality, external pressures (e.g., time urgency), or subjective norms rather than mere lack of knowledge, a common finding in studies on intentional aberrant driving behaviors (Scott-Parker & Weston, 2017).

This aligns with cognitive theories, where greater knowledge leads to better risk perception and internal controls, making riders more aware of consequences and less likely to engage in thrill-seeking or inattentive behaviors. Conversely, the lack of a significant relationship with SP and IR suggests that these specific violations are often driven by non-cognitive factors like personality, external pressures (e.g., time urgency), or subjective norms rather than mere lack of knowledge, which is a common finding in studies on intentional aberrant driving behaviors.

To further support the findings from the univariate analysis, the variance associated with each risk-taking behavior was examined to assess the extent of differences across knowledge levels.

Table 4.2.3 Explained Variance (R^2)

Behavior	R^2
RB	0.023
SP	0
DS	0.037
IR	0.006

RB = Riding Beyond Limits, SP = Speeding, DS = Distraction, IR = Ignoring Traffic Rules

Table 4.2.3. provides a summary of the coefficient of determination, R^2 , which shows how much of the variability in a dependent variable (e.g. risky riding behavior) is explained by an independent variable (e.g. traffic rule knowledge assessment score). The results show that DS had the highest R^2 value at approximately 0.037. This indicates a modest but statistically significant relationship, suggesting that riders who are more knowledgeable about road safety

are less likely to be distracted while driving. Similarly, RB had an R^2 value of 0.023, showing that a small portion of this behavior is also explained by the knowledge assessment score.

In contrast, SP and IR exhibited low R^2 values, suggesting that knowledge of traffic rules and road signs has almost no explanatory power for these behaviors. This indicates that riders may still speed or ignore traffic regulations regardless of their understanding of road safety, possibly due to external pressures, habitual behaviors, or occupational demands.

5. DISCUSSION

The knowledge assessment (KA) comprised four items representing different traffic rule domains. The results of their assessment were treated as a continuous variable to capture varying levels of overall knowledge, rather than categorizing respondents into rigid groups based on a fixed cutoff score. This approach aligns with previous literature emphasizing that traffic safety knowledge exists along a spectrum and may not be uniformly distributed across all behavioral domains (Raftery, 2011).

The results revealed varying levels of safety knowledge across different risk categories, rather than a uniform understanding of traffic rules. It was revealed that knowledge was strongest in rule observance and distraction control, but comparatively weaker in managing physical limits and speed. These findings suggest that although most riders have a generally good grasp of safe riding practices, their knowledge may be uneven, with critical gaps in recognizing and managing risks related to physical overexertion and excessive speed. This uneven distribution of knowledge is supported by both multivariate and univariate analyses, which showed that traffic rule knowledge had a statistically significant overall effect on combined risky riding behaviors (Wilks' $\Lambda = 0.9416$, $p = 0.0221$), and specifically influenced Riding Beyond Limits ($p = 0.036$) and Distraction ($p = 0.008$) in the univariate tests.

The statistically significant result from the multivariate analysis ($p = 0.0221$) further reinforces the conclusion that higher levels of traffic rule knowledge are associated with more distinct and safer riding behavior patterns. This association is consistent with previous studies (Amalia & Brilianti, 2024; Irfandi & Shaputri, 2020), which found a significant relationship between safety knowledge and actual riding behavior. Riders with greater awareness of traffic rules tend to engage in more cautious and responsible practices on the road (Puspita & Salmawati, 2020; Irfandi & Shaputri, 2020). These findings also align with established theories in traffic psychology, particularly the Theory of Planned Behavior (TPB), which posits that knowledge and awareness significantly influence behavioral intentions and decisions (Xu et al., 2023). While knowledge and awareness shape intentions and can deter certain unsafe behaviors, TPB suggests that actual behavior may still deviate due to social or environmental pressures. For example, even riders with high traffic rule knowledge may engage in speeding or rule violations if they perceive it as a norm in their peer group or feel pressured by tight delivery schedules (Dwiatmoko et al., 2021). In this context, knowledge serves as a foundational factor that guides safer choices, including adherence to traffic laws and the avoidance of high-risk behaviors.

However, the modest effect size observed in the analysis suggests that knowledge alone may not be a strong predictor of safe riding. Even well-informed riders may still engage in risky behaviors such as speeding or disregarding rules. This indicates the influence of other critical

factors, such as individual attitudes, time pressure, perceived enforcement, and social norms, each reflecting distinct theoretical mechanisms. Attitudes align with the Theory of Planned Behavior (TPB), which posits that personal beliefs and evaluations about an action influence one's behavioral intentions, which in this study, is a rider's perception of safety and risk-taking. Perceived enforcement corresponds to Deterrence Theory, emphasizing that the likelihood of compliance increases when individuals perceive strong monitoring and the possibility of sanctions for violations. Time pressure represents an occupational constraint, wherein job demands, delivery deadlines, and the pressure to maximize income can override deliberate or cautious decision-making. Lastly, social norms highlight the social learning perspective, where behavioral patterns are shaped by peer influence, shared community standards, and the normalization of risky practices within rider networks. Together, these frameworks illustrate that risk-taking among occupational riders is not driven by a single determinant but by the interaction of personal, occupational, institutional, and social dimensions. Empirical evidence further supports this multidimensional view, showing that in occupational contexts such as delivery and ride-hailing services, tight schedules, incentive-based pay, and peer-driven norms collectively shape risk-taking behaviors (Nguyen-Phuoc et al., 2022; Cheng et al., 2021; Laphrom et al., 2024; Pawar et al., 2020).

More specifically, the findings related to distraction and riding beyond limits are consistent with existing literature. Studies have shown that individuals with higher levels of road safety knowledge are significantly less likely to engage in behaviors such as distracted driving or exceeding their physical and mental capabilities while on the road (Scott-Parker, 2017; Alonso et al., 2019). Similarly, another study highlighted that strong knowledge and awareness of traffic regulations are associated with more responsible driving, ultimately contributing to improved road safety outcomes (Üzümçüoğlu et al., 2020).

Collectively, these findings highlight the importance of safety knowledge in encouraging responsible riding practices. Although knowledge alone does not entirely dictate rider behavior, it serves as a contributing factor, equipping individuals with the understanding necessary to make safer, well-informed choices and adhere to road safety regulations.

6. CONCLUSION

The study aimed to assess riders' knowledge of common Philippine traffic regulations, determine whether a relationship exists between higher traffic rule knowledge and reduced engagement in risky riding practices, and identify which specific risk-taking behaviors are influenced by knowledge levels. The results revealed that knowledge was uneven across risk categories among occupational riders. The majority showed a strong understanding of distraction (78.87%) and ignoring rules (87.11%), but fewer did so for riding beyond limits (61.34%) and speeding (55.67%). Multivariate analysis revealed a statistically significant overall effect of traffic rule knowledge on risky riding behaviors (Wilks' $\Lambda = 0.9416$, $p = 0.0221$). Univariate results further indicated that higher knowledge significantly predicted lower likelihood of riding beyond limits ($p = 0.036$) and distraction ($p = 0.008$), but had no significant relationship with speeding or ignoring rules. These findings suggest that while knowledge of traffic rules helps reduce certain risky behaviors, it does not consistently prevent all forms of risk-taking, especially those influenced by external pressures such as time constraints, occupational demands, or habitual patterns.

The non-significant results for speeding and ignoring rules suggest that factors beyond cognitive awareness may drive these behaviors. Work pressures, tight delivery schedules, financial incentives, and inconsistent enforcement can make rule-breaking appear necessary or low-risk. Under the TPB, riders may knowingly violate rules when subjective norms or weak enforcement reduce perceived consequences. Similarly, Risk Homeostasis Theory explains how riders who feel confident, skilled, or familiar with their routes may continue speeding despite knowing the dangers (Malnaca, n.d.). These frameworks help clarify why knowledge alone is insufficient to deter intentional, occupation-driven violations.

To enhance road safety, law enforcement presence should be visibly increased in high-risk areas, as this acts as a deterrent to habitual violations and raises the perceived certainty of punishment for non-compliance. Traffic safety education must also be strengthened in rider training programs to increase cognitive awareness of risks and enhance decision-making under pressure. Furthermore, clear guidelines on rest periods and fatigue management should be established to reduce accidents caused by exhaustion. While improving rider knowledge is essential, these efforts must be supported by practical strategies that address real-world challenges and behavioral patterns. Given that knowledge was only associated with reductions in distraction and riding beyond limits, policies should emphasize targeted education and monitoring, while visible enforcement and platform-level oversight remain necessary for violations driven by work pressure and weak deterrence. Combining knowledge-based interventions with structural reforms offers a more realistic path to reducing occupational road risks in Metro Manila.

Appendix A: Risk-taking Behavior Knowledge Assessment

Risky Riding Behavior		Answer Key
<i>Riding Beyond Limits</i>		
1. You feel tired but decide to complete one more delivery before taking a break. This is a safe practice.	<ul style="list-style-type: none"> ● True ● False 	False
<i>Speeding</i>		
2. What is the recommended safe speed limit for motorcycles in urban areas unless otherwise stated?	<ul style="list-style-type: none"> ● 20 km/h ● 40 km/h ● 60 km/h ● 80 km/h 	40 km/h (RA 4136)
<i>Distraction</i>		
3. Using your mobile phone while driving is considered a distraction.	<ul style="list-style-type: none"> ● True ● False 	True
<i>Ignoring Traffic Rules</i>		
4. It is acceptable to speed up to beat a red light if you are running late for work or a delivery.	<ul style="list-style-type: none"> ● True ● False 	False

Appendix B: Sample Questionnaire

I. Risk-taking Behaviors (Adopted from MRBQ)						
	<i>1 - Never</i>	<i>2 - Hardly Ever</i>	<i>3 - Occasionally</i>	<i>4 - Quite Often</i>	<i>5 - Frequently</i>	<i>6 - Nearly All the Time</i>
<i>Riding Beyond Limits</i>	1	2	3	4	5	6
I ride so fast into a corner that I feel like I might lose control.						
I find it difficult to control the bike when riding at speed (e.g., steering wobble).						

I needed to brake or back-off when going round a bend.						
I skid on a wet road or manhole cover, road marking, etc.						
I ride when I suspect that I might be over the legal limit for alcohol.						
<i>1 - Never 2 - Hardly Ever 3 - Occasionally 4 - Quite Often 5 - Frequently 6 - Nearly All the Time</i>						
<i>Speeding</i>	1	2	3	4	5	6
I exceed the speed limit of 60 kph on minor highways (e.g. C-5 Road, Magsaysay Boulevard).						
I exceed the speed limit of 40 kph on primary roads (e.g. Quezon Avenue, Roxas Boulevard).						
I exceed the speed limit of 40 kph on streets and boulevards with light traffic (e.g. Roxas Boulevard Extension (Pasay), Makati Ayala Avenue).						
I exceed the speed limit of 30 kph in school zones (e.g. Taft Avenue, Katipunan Avenue).						
I exceed the speed limit of 20 kph in crowded streets (e.g. Divisoria, Banawe Street).						
I disregard the speed limit late at night or in the early hours of the morning.						
I get involved in racing						

other riders or drivers.						
<i>1 - Never 2 - Hardly Ever 3 - Occasionally 4 - Quite Often</i> <i>5 - Frequently 6 - Nearly All the Time</i>						
<i>Distraction</i>	1	2	3	4	5	6
I do not notice a pedestrian waiting at a crossing where the lights have just turned red.						
I fail to notice that pedestrians are crossing when turning into a side street from a main road.						
Queuing to turn left on a main road, I pay such close attention to the main traffic that I nearly hit the vehicle in front.						
I attempt to overtake someone who you have not noticed to be signaling a right turn.						
I ride between two lanes of fast-moving traffic.						
<i>1 - Never 2 - Hardly Ever 3 - Occasionally 4 - Quite Often</i> <i>5 - Frequently 6 - Nearly All the Time</i>						
<i>Ignoring Traffic Rules</i>	1	2	3	4	5	6
I miss 'Give Way' or 'Stop' signs and almost crash with another vehicle.						
I ride so close to the vehicle in front that it would be difficult to stop in an emergency.						

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