ORIGINAL ARTICLE

Work, Health, and Safety Conditions of Delivery Riders in the Philippines during COVID-19 Pandemic

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ABSTRACT

Introduction. The delivery sector has experienced a remarkable expansion in recent years, owing mainly to the COVID-19 pandemic. However, numerous elements, like practices, regulations, and health and safety conditions, impact their efficiency. Similarly, the issues and complaints of delivery services, notably its on-the-ground workers/riders, have grown.

Objective. This research aims to describe delivery riders' work-related health and safety conditions in the Philippines.

Method. An online survey was conducted for delivery riders to inquire about working conditions, and health and safety issues. Eighty survey respondents were included via snowball sampling. The survey focused on seven variables: precautions at work, health risks due to work, accident involvement, bad driving practices, road conditions, potential dangers for riders, and employer regulations and support. Descriptive statistics were used to analyze the data.

Results. Most riders are low-income married men who have finished at least high school and work more than eight hours a day, six days a week. Most of them also work for food delivery businesses during the day. The findings show a general adherence to traffic and safety laws, a propensity to push oneself to work despite poor conditions, and a lack of company support for riders' health, safety, and other requirements. The regular delivery rider's everyday difficulties include dirt roads, a lack of traffic signals, the presence of wandering animals and irresponsible pedestrians, and an insistence on showing up to work despite weather or health concerns. Furthermore, responders have high esteem for and thoroughly grasp local traffic laws.

Conclusion. Although the riders are generally perceived to comply with safety standards, their employers' rules and support indicate that delivery firms are deficient in providing adequate safety and health measures for their workers. There is low importance on strategies to prevent transmission and contraction of COVID-19, such as vaccinations, testing, face masks, face shields, and sanitizers, among others.

Keywords: food delivery, delivery drivers, working conditions, safety climate, occupational safety and health

INTRODUCTION

Electronic commerce (E-commerce) trades goods, finances, and information through an electronic medium.[1] E-commerce has grown more popular in the Philippines over the years. In recent years, Filipinos have become more open to using the internet to purchase goods. Since many entrepreneurs, business owners, and job hunters also shifted their plans toward e-commerce, various delivery services became more popular and used.[2] Now, many people count on dependable and efficient delivery concerning a wide range of services such as delivering essential goods, meals, and other purchased products and transport services.

As de facto frontline workers, riders have always taken the brunt of food delivery work. From road hazards to unfair

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legal policies, many circumstances inform the daily life of a food delivery rider, along with their behavioral and social responses. Their work often entails long driving in horrendous traffic situations, like Metro Manila and Metro Cebu. Many work for long days and weeks, which is detrimental to their health. As many riders are on a part-time jobs, such as their primary source of income, the platform firms' manipulation of its workers imposes economic downsides. It threatens their mental health and life satisfaction.[3,4] Campbell (2019)[5] reports that many gig workers support themselves through this economy with low success. On top of social instability, financial insecurity leads some to commit suicide.[6]

While infrequently covered in driver safety research, this need for a pro-health workplace culture is further emphasized by the prevalence of COVID-19 among delivery riders. From July to August 2020, 15.2% of 145 riders in Quito, Ecuador, tested positive for COVID-19, significantly higher than the percentages in even the most populous cities.[7] The job's contact- and travel-heavy nature, combined with the financial instability and lack of protection riders face, puts them at higher risk of infection. It is then up to the employers to provide their employees with regular COVID tests, especially when more riders have entered the workforce.[7] On top of this, riders may view personal protective equipment (PPE) as masks with the same disdain they seem to have for helmets. In this case, it is not only the riders' health that is threatened—every person they contact may be infected, making the rider a spreader of the virus. Other measures, such as contact-free delivery, digital payments, and regular handwashing, must strictly be observed in this new normal of food delivery.[7] Contact tracing for these riders is another area that demands close attention to track the transmission of the virus when necessary.

In this light, this study addresses the following objectives: To determine the current working conditions of delivery riders; To examine the delivery riders' health and safety conditions in light of the COVID-19 epidemic.

METHODS

This is a descriptive cross-sectional study that employs survey techniques. The questionnaire developed by the authors was pretested on seven delivery riders who were not involved in the study. The authors placed orders with various online food retailers, and the riders were asked to fill out a draft questionnaire voluntarily before accepting the deliveries. The draft was improved based on the pretest results by simplifying some items and removing others that are redundant. The Filipino language was used in the questionnaire.

Because there was no available data on the number of delivery riders in the country, snowball sampling was used in this investigation The participants from the pre-test were used as the initial samples, then from them, the next samples were contacted through referral. This was done until the sample reaches the quota. Data was collected between the second and third quarters of the pandemic in 2021. Because face-to-face interaction with respondents was too dangerous due to the health crisis, the authors decided to collect data online instead, using Google Form. This arrangement was more convenient for the respondents because they only had to complete the questionnaire when they were not working. The eligibility criteria for this study were online food delivery drivers within Luzon area and are employed under the same organization under one platform provider.

There was a total of eighty (80) respondents for the survey from delivery riders in Luzon only. The questionnaire used a 7-point Likert scale to determine whether respondents agreed or disagreed with the statements, with 1 representing "not likely at all," 2 representing "not most likely," 3 representing "not likely," 4 representing "not sure," 5 representing "likely," 6 representing "most likely," and 7 representing "extremely likely."

The categorizations in the questionnaire were based on the essential concepts identified in the authors' literature review. For each concept, aligned statements were developed to assess respondents' responses. The items in the survey included socio-demographics, and the categorizations --- precautions, risks, accident records, bad practices, external factors such as road conditions and other potential dangers, and rules imposed by their employers.

The items categorized under "precautions" attempt to evaluate the degree to which the respondents can guarantee that they will not be involved in an accident while on the job. Statements relating to "risks" were formulated to determine respondents' occupational hazards relative to physical and mental states. In the meantime, the statements filed under the category of "accident" purport to determine whether or not they experienced accidents at work. Statements that involve "bad practices" refer to irresponsible actions taken while carrying out the delegated tasks. In addition, the "road conditions" category of questions seeks to understand and depict the riders' difficulties associated with roads. In addition, the "danger statements" cluster incorporates a confluence of additional possible problems. Last, "employer statements" determines how good platform companies look out for the health and safety of their workers.

In essence, the study focused on safety precautions observed by the riders, their exposure to physical and social problems, and the availability of decent pay, benefits, and rewards systems. Data were analyzed using descriptive statistics such as the mean and standard deviation. The mean summarizes a data set with a single number representing its center, while the standard deviation measures how far each value is from the mean. The authors didn't set a central tendency cut-off score for the statements. At every step in this study, the researchers check to ensure that the data's integrity, quality, and reliability are maintained. The respondents directly send their responses through google docs where only the authors can access them, then the data are anonymized so that the responses cannot be traced back to the respondent.

Strategies to prevent errors from being introduced into the datasets and exercising caution before the data collection such as verifying the legitimacy of the delivery driver and ensuring voluntary participation was done to prevent possible contamination in the dataset. The response time was also noted to see whether there are questionable finish times to verify whether the respondent took the survey seriously.

This study is registered with the Research Grants Administration Office of the University of the Philippines Manila. Respondents and interviewees participated voluntarily in the study in both data collection methods, hence, adheres to confidentiality and ethics transactions. They were fully informed about the investigation's goals and free to withdraw their participation if desired. They were assured that the data would be handled carefully and solely for this research, and that confidentiality would be maintained following the Data Privacy Act of the Philippines.

RESULTS

On Survey

Eighty delivery riders responded to the survey. Most respondents are low-income married males who have completed at least high school and work more than 8 hours a day, six days a week. The majority of the riders work during the day for food delivery services. The majority of riders (38.8%) finished high school or higher-level education; 20.1 % are college graduates, with one rider (1.3%) having a PRC License, 18.8 percent graduated from college, 18.8 percent are currently in college, and 38.8 percent finished high school (Table 1). The numbers show how bad the country's economy is, with high unemployment and underemployment rates forcing people to take jobs that don't match their levels of education.

The majority of respondents work full-time. Most of the riders opt to work six days a week. Specifically, 53.8 percent work six 6 days weekly, and 21.3 percent for the whole week. A significant number of riders operate for eight or more hours. Their workload is usually allotted during daytime: 61.3 percent during daytime only, 31.5 percent during both day and night, and only 6.3 percent during nighttime only. Throughout their work, riders commonly reach around 6 to 15 delivery destinations, with some going to more than 20 or more than 40 destinations. Regarding the income of riders, 37.5 percent of them earn around 5000 to 10,000 pesos (100-200 USD) per month. One respondent makes a lot more at approximately 60,000 to 70,000 pesos (1200-1600 USD) per month, depending on the number of parcels delivered (Table 2).

In the survey, riders were asked about the precautions and safety measures they follow at work. Riders mostly agree on doing the preventive measures with a mean rating of 6.07. The riders strongly agree with wearing a helmet. Knowing how to repair their vehicle during an emergency has a mean of 5.26, which means that they somewhat agree with it. Most riders disagreed or were neutral about having experienced significant physical discomfort during work regarding health and safety records. With a lower mean rating of 2.84, riders somewhat disagreed with undergoing mental stress from their work. Riders disagree to various degrees with being involved in accidents during work that may render them unable to work or close to death. However, they are neutral about having skids while driving their motorcycle during work (Table 3).

On the said road behavior, specifically bad practices and road conditions, riders agree to ride through extreme heat and typhoons and push themselves to work despite not feeling well. The highest-rated statements are about going through rocky or bumpy roads and the statement about roads without traffic enforcers, with which riders somewhat agree. Moreover, they moderately disagreed with the statement about getting apprehended by enforcers without any actual violations (Table 4).

Meanwhile, the rating means for the statements regarding employers' influence, support and authority is 4.10, which translates to neutral. The highest-rated statement is about employers giving punishments when safety rules are violated, and riders somewhat disagreed with the statement about being given vitamins from employers. The low score of the statements about COVID-19 prevention reflects the lack of urgency in curbing the spread of infection despite the increasing employment rate of riders in delivery platforms (Table 5).

There were significant differences between the part-time and full-time riders in terms of the risks factor and the accident factor. The part-time riders had higher ratings on the statements about risks and accidents than the full-time riders. No significant differences were found in the other factors (Table 6).

Table 1. Sex Distributions, Civil Status, and Educational Attainment of the Respondents

Sex	Frequency	Percent
Female	2	2.5
Male	78	97.5
Total	80	100.0
Civil Status	**Frequency**	**Percent**
Separated	5	6.3
Married	39	48.8
Single	36	45.0
Total	80	100.0
Highest Educational Attainment	**Frequency**	**Percent**
Elementary Graduate	1	1.3
High School Graduate	31	38.8
College Graduate	15	18.8
College Graduate with PRC Licensure	1	1.3
Graduate of a Vocational or Technical School	17	21.3
Currently Studying in College	15	18.8
Total	80	100.0

Table 2. Employment Status, Working Duration, Delivery Schedule and Income of Respondents

Employment Status	Frequency	Percent
Full-time	59	73.8
Part-time	21	26.3
Total	80	100.0
How many days do you work in a week?	**Frequency**	**Percent**
Two Times	2	2.5
Three Times	9	11.3
Four Times	4	5.0
Five Times	3	3.8
Six Times	43	53.8
Seven Times	17	21.3
Others	2	2.5
Total	80	100.0
How much time do you allot for work in a day?	**Frequency**	**Percent**
2 hours	1	1.3
3 hours	2	2.5
4 hours	4	5.0
5 hours	5	6.3
6 hours	4	5.0
7 hours	1	1.3
8 hours	32	40.0
More than 8 hours	29	36.3
There's no time	1	1.3
Others	1	1.3
Total	80	100.0
What's your delivery schedule?	**Frequency**	**Percent**
Day Time	49	61.3
Night Time	5	6.3
Both Day Time and Night Time	26	32.5
Total	80	100.0
Usual Number of Delivery Destinations or Services in a Day	**Frequency**	**Percent**
Less than 5 delivery destinations	9	11.25
6 -10 delivery destinations	27	33.8
11- 15 delivery destinations	21	26.3
16 -20 delivery destinations	12	15.0
21 - 25 delivery destinations	5	6.3
31 - 35 delivery destinations	1	1.3
More than 46 delivery destinations	5	6.3
Total	80	100.0
Usual Monthly Salary	**Frequency**	**Percent**
Less than 5,000 pesos per month	12	15.0
5,001 - 15,000 pesos per month	49	61.0
15,001 - 20,000 pesos per month	8	10.0
20,001 - 25,000 pesos per month	6	7.5
More than 25,001 pesos per month	2	2.5
60,000 - 70,000 pesos per month depending on the number of parcels	1	1.3
Others	2	2.5
Total	80	100.0

DISCUSSION

Delivery creates a lively, multi-dimensional business environment that commands serious discussion, especially during the COVID-19 pandemic. Also, the delivery rider's work is platform-based employment with distinct qualities that make it difficult to fit within the typical work arrangement prescribed by the Labor Code. Digital freelance services have spiked since 2020, with food delivery riders as frontlines.[8] New hires and applications for riders also rose by 7.5% and 37%, respectively, during quarantine in

Table 3. Rating of Precautions, Risks and Accidents at Work

Precautions Statements	Mean	Std. Deviation
I am well-versed in all policies and regulations on road and traffic safety in the Philippines.	5.66	1.534
I always follow policies and regulations on road and traffic safety.	6.20	1.257
I have a professional rider's license, and I regularly renew it.	6.14	1.854
I have undergone training on road safety.	5.89	1.706
I know how to repair my motorcycle if it breaks down or stops unexpectedly.	5.26	1.874
I always ensure that the motorcycle I use is fit for work.	6.29	1.616
I always use a helmet and other protective gear during my shift as a rider.	6.49	1.369
I always park my motorcycle in the appropriate designated areas.	6.29	1.469
I am confident in my skill level at riding a motorcycle.	6.43	1.339
	6.07	1.218
Risks Statements	**Mean**	**Std. Deviation**
My work has resulted in physical injury and discomfort.	3.36	1.884
My work has resulted in mental stress, affecting other aspects of my life.	2.84	1.702
	3.10	1.625
Accident Statements	**Mean**	**Std. Deviation**
There are times when I am unable to work due to motorcycle accident/s that I got involved in.	2.65	1.988
I have been hospitalized due to a road accident in which I got involved during my work shift.	1.84	1.418
I have suffered bruises and fractured bones caused by accidents on the road while working as a rider.	2.16	1.724
I have had a near-death experience due to a road accident that occurred while I was working.	2.15	1.773
I have experienced skids on the road while riding my motorcycle for work.	3.58	2.198
	2.48	1.451

Table 4. Rating of Bad Practices, Road Statements, and Danger Statements at Work

Bad Practices Statements	Mean	Std. Deviation
I have practiced reckless motorcycle driving in hopes of completing more deliveries and getting higher pay.	3.30	1.971
Sometimes I ride my motorcycle even though it is not in proper condition and needs repairing.	2.68	1.705
There have been times when I pushed myself to drive despite being tired and feeling unwell to earn money.	4.63	2.172
There have been times when I accepted parcels that go beyond the capacity of my motorcycle.	3.20	2.119
While navigating the road, I use my cellphone as I drive.	2.79	2.042
I often drive under extreme weather conditions such as intense heat, heavy rains, typhoons, etc.	5.21	2.004
I have driven under the influence of alcohol.	1.96	1.626
	3.39	1.341
Road Condition Statements	**Mean**	**Std. Deviation**
Some of the roads I traverse do not have appropriate signs in place.	4.30	1.709
Some roads I traverse are bustling but do not have traffic lights.	4.08	1.770
Some of the roads I traverse are unpaved or bumpy.	4.76	1.730
Some roads I traverse experience floods due to a faulty sewerage system.	4.68	1.557
Stray animals, such as dogs, cats, goats, etc., sometimes wander on the road and get in the way of my driving.	4.31	1.776
I traverse roads that experience traffic conditions so heavy that the vehicles barely move.	4.39	1.872
There are times when there are no traffic enforcers on the road.	4.76	1.781
	4.47	1.425
Dangers Statements	**Mean**	**Std. Deviation**
I traverse roads occupied by many street vendors or roadside dwellers, which endangers my driving experience.	4.49	1.793
Some fellow motorists endanger their lives by engaging in improper road practices.	4.54	1.743
I encounter drunk and reckless pedestrians on the road, which limits my movement.	4.50	1.849
Traffic enforcers have apprehended me despite not having committed any traffic violations.	3.31	2.060
I have encountered corrupt traffic enforcers.	3.84	2.173
I have given money to traffic enforcers to escape traffic violations.	3.33	2.321
	4.00	1.572

Malaysia, shifting the discussion to improving the protection of riders as gig workers.[8]

The Department of Labor and Employment (DOLE) in the Philippines ruled in July 2021 that riders in food delivery and courier services are governed by either the Philippine Labor Code or a contract or arrangement with the digital platform firm, according to the presence of an employer-employee relationship. The regulatory body ascertained the

Table 5. Ratings of Employer Regulations and Support

Employer Statements	Mean	Std. Deviation
My employer provides us with protective gear to prevent serious accidents at work.	4.14	2.048
My employer covers the costs of maintenance for my motorcycle.	3.88	2.178
My employer provides riders various benefits such as insurance, SSS, and Philhealth.	4.38	2.346
My employer sponsors COVID-19 vaccines and testing, including swab tests, saliva tests, and/or RT-PCR.	3.54	2.278
My employer provides supplies for preventing the spread of COVID-19, such as face masks, face shields, hand sanitizers, alcohol, etc.	3.90	2.265
My employer provides us with vitamins to strengthen our immune system.	3.36	2.240
My employer promises assistance in case of an emergency at work and immediate investigation to ensure well-being and safety.	4.35	2.147
My employer penalizes workers who violate safety regulations while working.	4.65	1.943
My employer provides support in case of an encounter with abusive customers.	4.44	2.024
My employer ceases operations when dangerous working conditions such as floods, heavy rains, storms, or mobilizations/strikes.	3.95	2.216
My employer has appropriate systems for handling employee concerns about health and safety.	4.29	2.014
My employer has an active committee that focuses on worker health and safety against dangers at work.	4.10	1.729

Table 6. Comparing Part-time vs. Full-time Riders Relative to the Seven Work-related Factors

	Part-Time	Full-Time	p-value
Precautions	6.07	6.07	0.989
Risks	3.81	2.85	0.019*
Accident	3.04	2.27	0.037*
Bad Practices	3.88	3.22	0.054
Road	4.95	4.30	0.073
Dangers	4.40	3.86	0.180
Employer	4.72	3.88	0.055

presence of an employer-employee relationship between both the delivery rider and the digital platform company by using the principle of "primacy of facts" by applying the four-fold test, the economic reality test, and the independent contractor test while taking into account work flexibility, including working time, control through technology, and a variety of other factors. The four-part test applies to the employee's selection and engagement, wage payment, dismissal authority, and control over the employee's behavior.[9] As such, these companies usually deny liability to third-party victims for damages due to auto accidents, discrimination, and other adverse outcomes from their business.[10] As self-employed contractors, the workers don't have the right to form unions and negotiate contracts. This is particularly problematic since workers have lost the opportunity to bargain for improvements in their pay, terms, and work conditions through associations. Consequently, this further lessens the workers' influence on the company's decisions that affect them.[11]

Most riders in this study finished high school or higher-level education (38.8%). For the riders who have finished high school, working on the platform might take up too much time, making it hard for them to pursue further schooling such as technical or vocational courses or a college degree. On the other hand, college graduates might feel bad about their precarious job as a rider because, despite their education, they can't find better jobs. In the Philippines, there is a lot of underemployment and unemployment, which forces many people to take jobs that aren't good for them or migrate abroad to seek for greener pastures. Timko and van Melik[12] affirm the finding of this study through interviews with a representative sample on student visas. The most significant portions, high school graduates and vocational/technical schools, likely took on the job due to its relatively loose requirements as a gig-based, virtually freelance occupation with a high recruitment rate.[13] Tied in third place are college graduates and current college students. In certain cities, such as Nijmegen and Berlin, most delivery riders are on student visas and are numerous enough to form their own communities or subcultures.[12] Migrant workers are another major group that dominates the delivery rider population in these countries, which creates a potential parallel with the Philippine rider workforce dominated by high school graduates. The lack of a college degree coupled with the ease of applying as a rider can spell convenience for immigrants whose job options are significantly limited.[12]

Riders agreed on preventive measures with a mean rating of 6.07 and strongly agreed with wearing a helmet. However, they were not questioned about the frequency with which they put on the helmet. The reality, however, is that traffic enforcers in the Philippines, especially in urban areas like Metro Manila, closely monitor motorcyclists with checkpoints to apprehend the violators, such as those not wearing helmets, which are subject to hefty fines. This may explain why they always wear helmets since not doing so makes them more visible to law enforcement officers, even at a distance. On the contrary, previous literature suggests helmet use is a recurring problem among motorcycle riders, specifically delivery workers. The refusal to use helmets is a recurring issue in various countries, being one of the most concerning risk behaviors among riders from Greece.[14] In Malaysia, the use of non-standard helmets, or those prone to accidents and were not approved by their standard and industrial research institute was prevalent among more experienced riders.[15] The same study suggests that standard helmets are also tied to factors such as age, education level, and crash history. Formally educated riders, which dominate the sample in this study, tend to have a lower violation rate and higher knowledge of safety precautions.[15] Because most respondents belong to lower-income groups, their ability to shape decisions at their workplace is compromised. Moreover, they are more vulnerable to anti-worker systems and sentiments at work, forcing them to comply more with strict payment schemes and attendance.[16]

Surprisingly, the riders disagree to various degrees with being involved in accidents during work that may render them unable to work or close to death. It might be because the platform company gives primary weight to applicants' motorcycle riding experience levels when making hiring decisions. This, combined with the fact that they were educated and don't drink alcohol while working, makes it probably unlikely that they will ever cause a severe accident due to recklessness.

In reality, still, the road and traffic conditions in many places of the country are dangerous and risky for vehicle users. Such could affect riders' road behavior. These conditions include poor road planning, traffic enforcement systems, Philippine driving culture, and desensitization to road hazards when traversing familiar areas.[17,18] In general, delivery rider work is characterized as a particularly grueling occupation. In the context of road behavior, the stressful nature of the job, often associated with fatigue, irregular work hours, and unpredictable road conditions, contributes to riders' inclination to commit violations.[19] Because the respondents' mental condition is overall positive, this translates to other aspects reflected in the statements.

The study also showed that riders work despite extreme heat and typhoons; this is expected given the highly fickle climate in the Philippines. Their work often entails long driving in horrendous traffic situations, like Metro Manila and Metro Cebu. Many of them work for long days and weeks, which is detrimental to their health and safety.[20] As many riders are on a part-time jobs, such as their primary source of income, the ride-hailing firm's manipulation of its workers imposes economic downsides and threatens their mental health and life satisfaction.[3,4] Campbell[5] reports that many gig workers support themselves through this economy with low success. On top of social instability, financial insecurity leads some to commit suicide.[6] Literature also shows that the riders' job is intrinsically dangerous, regardless of how well-adjusted or privileged the riders are. More importantly, there seems to be lower regard for worker safety as delivery riders

always work outdoors and have become somewhat essential workers amid the COVID-19 pandemic.[8] In addition, the policies enacted by delivery platforms tend to be threatening workers' income, as they are paid per successful transaction, cover costs of late deliveries, and are not always provided health insurance.[12,21] They disagree most with the statement about driving under the influence of alcohol, likely tied to most respondents working solely during the day. Binge drinking is more common in the evenings than during the day in the Philippines. As a result, it's possible that many of the respondents never worked while impaired by alcohol. Furthermore, platform companies' codes of conduct prohibit their riders from working while under the influence of alcohol.

The highest-rated statements on road risks are about driving through rocky or bumpy roads and about roads without traffic enforcers. The motorcycle's small size may influence rider behavior by allowing passage through narrower, lesser-used roads. These roads are often the same ones that do not have traffic lights but become busy, especially under heavy traffic. However, riders somewhat agree that fellow motorists who do not follow traffic rules would be a relevant risk factor. However, Shen et al.[22] reported that delivery riders are more inclined to violate traffic rules than ordinary motorists, even more so at intersections. Calling back to the findings on safety precautions, it is likely that the motorists who pose risks at work are not delivery riders as they are well-versed in traffic rules, observe safety practices, and have undergone training.

In other studies, riders are at risk of road-related crashes. Conditions that set delivery riders from other motorcyclists, such as fatigue, long working hours, meticulous route planning, customer interaction, and the ever-present time pressure, all contribute to the risk of crash involvement and engagement in risky behavior.[19] Greece's most concerning risk behaviors are non-use of helmets.[14] The latter was previously associated with informal workers' low socioeconomic and educational status. Still, recent data suggests that the demands of being a food delivery rider can lower one's regard for safety measures.[14] In fact, even experienced riders consider certain risk behaviors inseparable from the job, such as driving the wrong way on one-way roads, unsafe lane splitting, driving in pedestrian zones, and driving with one hand.[14]

In contrast with findings from other studies and other countries, the respondents highly prioritize using safety gear, specifically helmets, and know-how, to repair their vehicles in an emergency. Formal education possibly influences the riders' knowledge and prioritization of safety. Certain statements, such as their self-sufficiency in handling motorcycle breakdowns, can also be tied to another prominent finding in the realm of employer support. There is still a notable gap in companies' initiatives to provide benefits and other forms of protection for their employees. Despite this, the respondents demonstrate an overall positive mental condition, generally unfazed by the everyday stresses of their job. With most riders being day shift workers, they do not drive under the influence of alcohol, affirming their sense of responsibility and mental wellness about their job. They do not engage in risky road behavior out of the urgency to earn more, though they push themselves to work even under adverse health conditions. They also experience occasional slips on the road, which can be attributed mainly to external factors involving the local traffic conditions. On top of these, riders often deal with bumpy roads, a lack of traffic lights on busy streets, and extreme weather conditions.

Moreover, the risky behavior of fellow motorists who do not follow traffic rules is another source of danger that riders notably encounter. Other dangers include wandering pedestrians, animals, vendors, and roadside dwellers, again features of the work environment itself not intrinsic to the job or employer. However, improvements can still be made in vehicle insurance and sponsorship of COVID-19 vaccinations and other preventive measures, given the continuous growth of the delivery industry during the pandemic.

Due to the snowball sampling methodology employed in the study, it cannot be said with certainty that these results can be generalized to the whole online delivery service industry. Also, the health factors in the study are subjective assessments without actual measurement, which could be influenced by biases held by the respondent. Regardless, this is still a good starting point for research in the ever growing delivery service industry.

CONCLUSION

The results reveal general compliance with traffic and safety regulations, an inclination to push oneself to work despite adverse conditions, and insufficient employer support for riders' health, safety, and other needs.

The government should guarantee that the delivery service business becomes more viable since it creates jobs for Filipinos. However, it should also investigate the working circumstances of delivery drivers, including their health and safety, particularly in this era of the COVID-19 epidemic.

Platform businesses are more than just middlemen; they also manage and control the labor arrangements in the platform economy. They view their riders as independent contractors and not as employees, thus denying them social security benefits. Sadly, the Philippine laws and regulations are unprepared for this mechanism due to the ambiguity of platforms' roles toward their workers. It is critical and urgent for the government to intervene and develop a definite policy on the job classification of platform riders.

While adhering to fundamental occupational and health standards, the government is obligated to protect its employees from risks specific to their jobs. Because they lack legal protections, some workers on platforms are forced to supply their social security from their pockets. It may be necessary to require all riders who travel between platforms to maintain portable accident and health insurance.

These delivery riders are frontliners who execute critical duties in the logistics value chain. The business operators

should also provide adequate remuneration, social security, and health and safety safeguards to their riders to ensure their well-being. The latter is essential in light of the ongoing coronavirus infection. Small and micro-operators of this type of business should look for privately managed micro and inexpensive insurance that can act as a safety net for their riders' health and safety. They should form a permanent workplace committee to regularly check the riders' education, health, and safety.

It is noteworthy to investigate the best work, health, and safety practices established and maintained by local and international company operators for their riders. It is also worth researching how different nations categorize app couriers based on employment status and the compelling grounds for categorization. Another area of inquiry worth investigating is the type of support provided by labor unions and civil society to help improve the welfare of the delivery riders. Another research worth looking into is the type of support governments worldwide are offering to this growing business sector to be long-term viable.

Statement of Authorship

VCB contributed in the conceptualization of work, acquisition and analysis of data, drafting and revising, and final approval of the version to be published; SFL and JLL contributed in further analysis of data, drafting and revising, and final approval of the version to be published.

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