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Occupational Well-Being and Operational Challenges of Delivery Riders in Selected Cities of Batangas

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Abstract

This study examined the occupational well-being and operational challenges of delivery riders in selected cities of Batangas. It specifically assessed occupational well-being in terms of affective, psychological, and organizational well-being; identified operational challenges related to logistics and infrastructure, cost and financial concerns, and technology and data systems; and tested the relationship between operational challenges and occupational well-being. The study used a quantitative-correlational design involving 300 active delivery riders selected through convenience sampling. Data were gathered using a researcher-developed structured questionnaire rated on a four-point Likert scale. The instrument was pilot-tested, revised where necessary, and found to have acceptable to excellent internal consistency across dimensions. Weighted mean was used to summarize levels of well-being and operational challenges, while Spearman's rank-order correlation was used to determine significant relationships among the study variables. Findings showed that delivery riders generally reported positive occupational well-being, with affective and psychological well-being obtaining higher composite means than organizational well-being. Operational challenges were also present, with cost and financial concerns emerging as the most prominent dimension. Correlation results indicated significant relationships between operational challenges and affective and psychological well-being, while organizational well-being was significantly associated with logistics and technology-related challenges but not with cost and financial concerns. The findings support the need for practical interventions focused on rider support, route coordination, financial coping, and digital-system adaptability.

Keywords: delivery riders; gig economy; logistics; occupational well-being; operational challenges; technology

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1. Introduction

Delivery riders have become essential workers in the contemporary platform economy because they connect customers, merchants, and logistics providers through fast and convenient delivery services. Their work, however, is performed under conditions that are physically demanding, time-pressured, and highly exposed to traffic, weather, road hazards, and customer expectations. Studies on delivery and platform work indicate that riders may experience stress, exhaustion, safety

threats, and uncertainty as a result of demanding work arrangements and limited occupational support (Assaye et al., 2024; Martínez-Sykora et al., 2023; Wang & Churchill, 2024). In the Philippine setting, these issues are intensified by traffic congestion, inconsistent road conditions, and the informal or semi-formal character of much delivery work.

Occupational well-being is relevant in this context because delivery riders do not only perform logistical tasks; they also manage emotions, risks, and platform-based expectations while sustaining their livelihood. Affective well-being refers to the emotional experiences attached to work, including happiness, motivation, frustration, and emotional balance (Dimitrakaki, 2025; Koslouski et al., 2023). Psychological well-being concerns confidence, resilience, coping capacity, and the ability to maintain mental stability under work pressure (Lee et al., 2023; Shifana & Sathyamoorthi, 2025). Organizational well-being reflects riders' perceptions of support, communication, fairness, rules, and operational assistance within the work system. These dimensions are particularly important in platform-based delivery work, where algorithmic management, application-based monitoring, and customer ratings may shape workers' emotional and psychological states (Chen et al., 2022; Wotschack et al., 2023).

Operational challenges also constitute a major concern in delivery work. Logistics and infrastructure concerns, such as road conditions, delivery routes, traffic, and distance between delivery points, influence productivity and safety (Bachofner et al., 2022; Bansal, 2021). Cost and financial challenges, including fuel prices, vehicle maintenance, inconsistent earnings, and unplanned expenses, may affect both income stability and psychological security (Au-Yeung et al., 2023; Kwakye & Hoque, 2023). Technology and data-system issues, such as application delays, system crashes, inaccurate recording, and navigation difficulty, may disrupt daily workflow and reinforce perceived dependence on platform systems (Chen et al., 2022; Valtonen et al., 2025).

Although existing studies have examined gig work, delivery work, algorithmic management, and worker well-being, localized evidence on delivery riders in selected cities of Batangas remains limited. There is also a need to examine occupational well-being as a multidimensional construct while connecting it empirically with operational challenges. This study therefore assessed the occupational well-being of delivery riders in terms of affective, psychological, and organizational well-being; identified the operational challenges they encountered in terms of logistics and infrastructure, cost and financial concerns, and technology and data systems; and determined the relationship between operational challenges and occupational well-being. The findings were used to derive practical recommendations for improving riders' working conditions and support systems.

2. Review of Related Literature

2.1 Platform-Based Delivery Work and Occupational Well-Being

The expansion of platform-based delivery work has produced new forms of employment that combine flexibility, income opportunity, and occupational vulnerability. Delivery riders occupy a distinctive position in the gig economy because their work is mediated by digital applications, customer ratings, route assignments, and time-sensitive delivery expectations. While this arrangement may provide riders with livelihood opportunities, it also exposes them to unstable work demands, limited institutional protection, and psychosocial strain. In their study of migrant gig workers in China, Chen et al. (2022) found that food delivery workers, couriers, and other platform workers experienced limited well-being despite the income opportunities created by gig work. Their findings showed that occupational satisfaction, social interaction, and social security were important determinants of worker well-being.

The literature therefore suggests that rider well-being cannot be understood only in terms of income generation. Delivery work also involves subjective experiences of satisfaction, stress, control, and recognition. Mbare (2023), in a qualitative study of food delivery platform workers in Helsinki, found that platform work provided income and labor-market opportunities but also created a psychosocially burdensome work environment that affected couriers' mental well-being. This supports the need to treat occupational well-being as a multidimensional construct rather than as a single measure of job satisfaction. In the present study, this distinction is important because delivery riders may report positive feelings toward the usefulness or flexibility of their work while still experiencing stress from customer demands, platform systems, or organizational limitations.

Overall, the evidence indicates that platform delivery work may generate both positive and negative well-being outcomes. The positive side is associated with income access, autonomy, work meaningfulness, and social interaction, while the negative side is associated with insecurity, weak social protection, long working hours, customer pressure, and limited organizational support (Alturkey, 2024; Wu et al., 2022). This mixed evidence justifies the present study's use of affective, psychological, and organizational well-being as separate dimensions rather than treating rider welfare as a single generalized outcome. The growth of platform-mediated delivery work is also consistent with wider retail transformation in the Philippines, where e-commerce penetration, platform-based competition, and consumer expectations for convenience and assortment transparency have pushed firms toward omnichannel service models (Atento & Atento, 2026).

2.2 Affective and Psychological Well-Being of Delivery Riders

Affective and psychological well-being are central to understanding delivery riders' occupational experience because riders do not merely transport goods; they continuously regulate emotions, manage fatigue, negotiate road hazards, respond to customer behavior, and cope with platform-based performance expectations. Affective well-being refers to the emotional quality of work experience, including satisfaction, frustration, motivation, and emotional balance. Psychological well-being, on the other hand, concerns resilience, confidence, coping capacity, perceived competence, and the ability to remain mentally stable under pressure.

Empirical studies show that riders' mental well-being is strongly shaped by work demands and psychosocial conditions. Useche et al. (2025), in a systematic review of occupational risks and safety outcomes in last-mile delivery work, emphasized the human cost of fast deliveries, particularly in relation to work pressure, safety exposure, and occupational risk. Mbare (2023) also found that the psychosocial environment of food delivery work could become onerous and detrimental to workers' mental well-being, particularly because platform work exposed couriers to uncertain demands and limited support structures. Similarly, Wang et al. (2022) reported that gig workers had poorer mental health and life satisfaction than full-time and part-time workers, with financial precarity and loneliness helping explain these differences. These findings suggest that the mental well-being of gig workers is not determined by work participation alone but by the quality, predictability, and supportiveness of the work arrangement.

However, the literature also indicates that riders may maintain relatively positive well-being despite difficult conditions when they possess coping resources. Wu et al. (2022) found that food delivery platform workers may experience ambivalent subjective states, where stress and precarity coexist with meaningfulness, autonomy, perceived competence, and social support. Chen et al. (2022) likewise found that social interaction and social security were associated with occupational satisfaction and well-being among migrant gig workers. This suggests that psychological resilience among riders may be partly reinforced by relational support, peer interaction, and perceived control over work. In the present study, this supports the distinction between affective and psychological well-being: riders may still feel motivated and capable even when they face operational difficulties. Comparable evidence from Philippine trading companies suggests that domain-specific self-efficacy and work-environment support are more closely connected with productivity than generalized confidence, reinforcing the need to interpret riders' coping capacity within the support conditions surrounding their work (Espelita & Atento, 2026).

The evidence therefore points to a nuanced interpretation. Delivery riders may experience fulfillment and confidence from completing work successfully, but these positive states can coexist with stress, fatigue, uncertainty, and emotional exhaustion. This is consistent with the study's focus on affective and psychological well-being as separate but related outcomes of delivery work.

2.3 Organizational Well-Being, Algorithmic Management, and Platform Support

Organizational well-being in platform delivery work is shaped by riders' perceptions of fairness, communication, rules, operational support, and managerial responsiveness. Unlike traditional employment settings, platform work often substitutes direct supervision with algorithmic management, digital monitoring, customer feedback systems, and automated task allocation. This makes organizational well-being more complex because riders may not always interact with a visible

manager, yet they are still governed by platform rules, rankings, incentives, penalties, and application-based decisions. Jabagi et al. (2024) emphasized that fairness in algorithmic management remains a critical issue because platform workers are often affected by algorithmic decisions without being fully included in the design or governance of those systems.

Recent studies show that algorithmic management can influence rider well-being by increasing work demands, limiting control, and reducing access to support. Mbare et al. (2024) found that algorithmic management had direct and indirect negative psychosocial effects on food couriers in Finland. Their study showed that algorithmic systems could increase work demands, reduce couriers' control over their work, and limit workplace support. This supports the idea that organizational well-being in platform work depends not only on human management but also on how digital systems structure work decisions.

Dong et al. (2025) similarly found that burnout among food delivery riders was associated with algorithmic management factors such as ranking systems, punishment systems, work rules, monitoring mechanisms, workflow design, customer feedback, and restaurant preparation time. These findings indicate that platform rules and digital governance mechanisms may affect riders' emotional exhaustion, sense of accomplishment, and perception of fairness. For the present study, this evidence is important because organizational well-being includes perceptions of support, communication, fairness, and operational assistance.

The literature suggests that riders may accept the flexibility and income opportunities of platform work while still perceiving organizational weakness in areas such as dispute resolution, policy clarity, technical support, and fairness (Adekoya et al., 2023; Alturkey, 2024). This is particularly relevant in studies where organizational well-being appears weaker than affective or psychological well-being. Riders may be personally resilient and emotionally committed to their work, but this does not necessarily mean that the platform or delivery system is perceived as fair, supportive, or responsive. Therefore, organizational well-being must be interpreted as a system-level condition rather than merely as an individual attitude. In a related frontline service context in Batangas, agile leadership and employee engagement were positively associated among convenience-store employees, suggesting that feedback systems, decision latitude, and continuous improvement routines may also matter when interpreting riders' perceptions of organizational support (Gonzales & Magnaye, 2026).

2.4 Logistics, Infrastructure, and Road-Safety Conditions

Delivery work is operationally embedded in the physical environment. Riders' well-being and performance are affected by traffic congestion, road quality, weather exposure, route complexity, parking restrictions, and delivery time pressure. In last-mile logistics, these factors are not peripheral concerns; they are central operational conditions that determine delivery efficiency, rider safety, and work strain. Bosona (2020) found that last-mile logistics is one of the least efficient and most complex parts of the supply chain, with major challenges falling under technological, infrastructural, system-management, and cost-related categories.

Logistics and infrastructure problems become more severe for riders because they perform delivery tasks under direct exposure to roads, traffic, and weather conditions. Thorpe et al. (2024), in their study of delivery cyclists in Australian cities, showed that infrastructure and regulation shape the daily experiences of delivery workers. Man and Andor (2024) likewise examined traffic risks among migrant food delivery workers and emphasized the role of urban mobility and road safety conditions in shaping delivery work. These studies support the view that delivery riders' occupational conditions are inseparable from the urban and infrastructural environments in which they operate.

Useche et al. (2024) found that stress-related factors and fatigue predicted occupational crashes among two-wheeled food delivery riders, with fatigue mediating the relationship between job settings, psychosocial work factors, and riding safety outcomes. This suggests that logistics-related demands do not only affect delivery time; they also influence physical safety and psychological strain. Other studies on food delivery riders have similarly associated working conditions, distraction, workload, and risky riding behavior with safety outcomes (Nguyen et al., 2024; Zheng et al., 2019). Laskaris et al. (2024) further reported that delivery gig workers in New York City experienced substantial injury and assault risks, with fully dependent workers and two-wheeled riders being especially vulnerable.

These studies support the present study's inclusion of logistics and infrastructure as a major operational challenge. Poor roads, traffic delays, unsafe routes, and route uncertainty may affect riders' affective and psychological well-being by

increasing fatigue, stress, and perceived risk. They may also affect organizational well-being when riders interpret route assignments, delivery expectations, or platform policies as insufficiently responsive to actual road conditions. Thus, logistics and infrastructure challenges should be viewed as both operational and occupational well-being concerns. Comparable evidence from a Philippine maritime manning office indicates that localized quality-management implementation and organizational practices are linked with perceived operational efficiency, supporting the view that formal systems must be adapted to day-to-day operational realities rather than imposed only as abstract procedures (Gamasan & Atento, 2026).

2.5 Financial and Technology-Related Challenges in Delivery Work

Financial precarity is one of the most persistent concerns in platform-based delivery work. Although delivery platforms may offer income opportunities, riders often absorb many operating costs themselves, including fuel, vehicle maintenance, mobile data, repairs, safety equipment, and time lost from delays or low demand. These conditions create income uncertainty, especially when earnings depend on fluctuating order volume, incentives, location, weather, customer demand, and platform rules. Tassinari and Maccarrone (2019) showed that food delivery couriers in the platform economy may develop forms of solidarity in response to insecure and fragmented working conditions, while Demir (2024) described platform-based errand work as part of a broader digital platform capitalism in which workers carry operational burdens within flexible but precarious arrangements.

Wang et al. (2022) found that gig workers' poorer mental health and life satisfaction, compared with conventional workers, were partly explained by financial precarity and loneliness. Chen et al. (2022) likewise observed that migrant gig workers experienced limited well-being despite relatively high income, suggesting that income level alone does not fully offset weak occupational security, social protection, and job-status difficulties. These findings support the view that financial concerns affect well-being not merely through low income but through instability, unpredictability, and lack of protection.

Technology-related challenges also matter because delivery riders depend on digital systems for accepting orders, navigating routes, recording completed deliveries, communicating with customers, and receiving performance feedback. Algorithmic management studies show that platform systems can create psychosocial strain when they increase work demands, reduce perceived control, or limit support (Mbare et al., 2024; Sun, 2023; Vignola et al., 2023). Tuomi et al. (2023) also described food delivery work as a form of labor shaped by algorithmic management, while Umair et al. (2023) examined technostress and its implications for worker well-being in the digital gig economy. Dong et al. (2025) further identified ranking systems, work monitoring, workflow design, customer feedback, and platform rules as factors associated with rider burnout. These findings suggest that technology is not a neutral tool in delivery work; it actively structures riders' workload, stress, and sense of fairness. Related evidence from Batangas manufacturing companies further suggests that stronger IT infrastructure capability is associated with stronger data privacy practice implementation, reinforcing the view that digital reliability, governance, and user trust are intertwined in technology-dependent work systems (Somono & Generoso, 2026).

For the present study, financial and technology-related concerns are therefore logically connected to occupational well-being. Financial instability may affect affective and psychological well-being because riders must manage anxiety about earnings, expenses, and daily income sufficiency. Technology problems may affect all three well-being dimensions because application delays, inaccurate records, navigation problems, or opaque platform rules can cause frustration, reduce confidence, and weaken perceptions of organizational support.

2.6 Synthesis of Literature

The reviewed literature shows that delivery riders' occupational well-being is shaped by the interaction of personal, organizational, operational, financial, and technological conditions. Platform delivery work provides income opportunities and flexibility, but it also exposes riders to psychosocial strain, work insecurity, algorithmic control, physical hazards, and cost burdens (Samant & Malik, 2025; Useche et al., 2025). Studies on migrant and platform gig workers show that well-being is influenced by occupational satisfaction, social interaction, social security, financial precarity, and perceived support (Azim et al., 2024; Chen et al., 2022). Qualitative evidence also indicates that the platform work environment may be psychosocially burdensome despite its income-generating role (Mbare, 2023; Pyo et al., 2023).

Affective and psychological well-being appear to be influenced by both internal coping resources and external working conditions. Riders may remain motivated, confident, and resilient, but this does not eliminate the negative effects of fatigue, financial instability, road risk, and customer or platform pressure (Salleh et al., 2023; Stewart et al., 2020). The broader occupational well-being literature also suggests that coping self-efficacy and affective responses to work stressors may influence how workers experience distress and well-being under difficult work conditions (Pisanti et al., 2015; Schilbach et al., 2023). In the case of delivery riders, these findings imply that personal resilience should not be mistaken for the absence of occupational strain.

The evidence further suggests that organizational well-being is particularly sensitive to platform governance. Algorithmic management may increase work demands, reduce control, limit support, and contribute to burnout when systems are perceived as punitive, opaque, or unfair (Dong et al., 2025; Mbare et al., 2024; Vignola et al., 2023). Studies on digital well-being and workplace monitoring also indicate that technological systems may affect worker autonomy, fairness, and psychological experience, especially when digital systems are used to monitor, evaluate, or direct work behavior (Burr et al., 2020; Kawakami et al., 2023).

Operational challenges are likewise multidimensional. Logistics and infrastructure concerns are connected to traffic, road quality, delivery efficiency, fatigue, and crash risk (Bosona, 2020; Thorpe et al., 2024; Zheng et al., 2019). Financial concerns are associated with income instability, cost exposure, and psychological vulnerability (Wang et al., 2022). Technology and data-system concerns affect the reliability of daily work and may influence perceptions of fairness and support (Sun, 2023; Tuomi et al., 2023; Umair et al., 2023). Taken together, the literature supports the present study's framework, which examines occupational well-being through affective, psychological, and organizational dimensions and relates these dimensions to logistics, cost, and technology-related challenges.

2.7 Gaps in the Literature

Several gaps remain in the existing literature. First, much of the available research on food delivery riders comes from international contexts, including China, Finland, Vietnam, Italy, the United Kingdom, France, the United States, Australia, Romania, and Indonesia (Borghini et al., 2021; Laskaris et al., 2024; Mbare, 2023; Permana et al., 2022; Thorpe et al., 2024; Wu et al., 2022). Although these studies provide strong conceptual and empirical foundations, their findings may not fully capture the local operating conditions of delivery riders in Philippine cities, where road quality, traffic patterns, platform practices, and informal labor arrangements may differ.

Second, many studies focus on either mental health, road safety, algorithmic management, or logistics separately. Fewer studies examine occupational well-being as a multidimensional construct that includes affective, psychological, and organizational components. This is an important gap because a rider may feel personally motivated and psychologically capable while still experiencing weak organizational support, unfair platform rules, or inadequate operational assistance. Rashid et al. (2024) noted that psychological health in non-attachmental work arrangements remains an important issue in the digitalization era, which reinforces the need to examine well-being in a more differentiated manner.

Third, financial and technology-related concerns are often discussed as general features of platform work, but their specific associations with different dimensions of well-being remain underexplored. Existing studies show that financial precarity, algorithmic control, and technostress may influence worker well-being (Sun, 2023; Umair et al., 2023; Wang et al., 2022), but fewer localized studies examine how these challenges relate separately to affective, psychological, and organizational well-being. The present study addresses this gap by examining whether logistics and infrastructure, cost and financial concerns, and technology and data systems are significantly related to occupational well-being among delivery riders in selected cities of Batangas.

Finally, while some regional and country-specific quantitative evidence exists, a comprehensive body of localized evidence remains limited. By using data from 300 active delivery riders and testing relationships among operational challenges and occupational well-being dimensions, the study contributes empirical evidence that is both context-specific and practically useful for rider support, platform improvement, and local policy discussion.

3. Methods

3.1 Research Design

The study used a quantitative-correlational research design to examine the relationship between operational challenges and occupational well-being among delivery riders in selected cities of Batangas. The design was appropriate because the study measured variables numerically and tested associations among dimensions of occupational well-being and operational challenges without manipulating any condition.

3.2 Participants and Sampling

The respondents were active delivery riders operating in selected cities of Batangas. Convenience sampling was used because the respondents were selected based on availability, accessibility, and willingness to participate during the data-gathering period. A total of 300 respondents were included in the final analysis. Screening questions were administered before participation, and only riders who were currently active, at least 18 years old, and willing to participate voluntarily were included.

3.3 Instrumentation

Data were gathered using a researcher-developed structured questionnaire. The instrument contained items measuring occupational well-being in terms of affective, psychological, and organizational well-being, and items measuring operational challenges in terms of logistics and infrastructure, cost and financial concerns, and technology and data systems. Responses were recorded using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

Before the actual survey, the instrument was pilot-tested among delivery riders to assess clarity, comprehensibility, and reliability. Cronbach's alpha coefficients for occupational well-being ranged from 0.827 to 0.935, indicating good to excellent internal consistency. For operational challenges, logistics and infrastructure obtained an alpha of 0.783, cost and financial concerns obtained an alpha of 0.715, and technology and data systems improved to 0.793 after item revision and retesting. These coefficients indicated that the instrument had acceptable to excellent reliability for the final data collection.

3.4 Data Gathering Procedure and Ethics

Data were gathered through printed questionnaires administered in areas where delivery riders were commonly found, including warehouses, waiting areas, and food establishments. The purpose of the study was explained to qualified respondents, and voluntary participation was secured before questionnaire administration. Completed questionnaires were retrieved, checked for completeness, encoded, and prepared for statistical analysis.

Ethical considerations were observed throughout the study. Respondents were informed of the purpose and procedures of the research, and consent was secured prior to participation. Participation was voluntary, no personal or company-identifying information was recorded, and confidentiality and anonymity were maintained. The study also observed the principles of data privacy under Republic Act No. 10173, or the Data Privacy Act of 2012.

3.5 Data Analysis

Weighted mean was used to describe occupational well-being and operational challenges. Verbal interpretation followed the scale used in the study: 3.50-4.00, strongly agree; 2.50-3.49, agree; 1.50-2.49, disagree; and 1.00-1.49, strongly disagree. Spearman's rank-order correlation was used to determine the relationship between operational challenges and occupational well-being because the variables were measured using ordinal Likert-scale responses. Statistical significance was interpreted using the reported p-values.

4. Results

4.1 Occupational Well-Being of Delivery Riders

The occupational well-being of delivery riders was examined across affective, psychological, and organizational dimensions. As shown in Table 1, the overall composite mean was 3.23, which was interpreted as agree. This indicates that respondents generally reported favorable occupational well-being despite the demanding nature of delivery work. Affective

and psychological well-being both obtained composite means of 3.40, while organizational well-being obtained a lower composite mean of 2.89.

Table 1. Summary of Occupational Well-Being of the Respondents

Dimensions	Composite Mean	Verbal Interpretation	Rank
Affective Well-Being	3.40	Agree	1.5
Psychological Well-Being	3.40	Agree	1.5
Organizational Well-Being	2.89	Agree	3
Overall Composite Mean	3.23	Agree	

Scale: 3.50-4.00 = Strongly Agree; 2.50-3.49 = Agree; 1.50-2.49 = Disagree; 1.00-1.49 = Strongly Disagree.

For affective well-being, the highest-rated indicator was feeling happy and fulfilled in doing delivery work (WM = 3.47), followed by maintaining a positive and calm attitude during delivery hours (WM = 3.46). The lowest-rated item was feeling valued and appreciated by customers and management (WM = 3.31), although it remained within the agree range. This pattern suggests that riders may derive emotional satisfaction and motivation from the work itself, while recognition and appreciation remain weaker aspects of their work experience.

For psychological well-being, the strongest indicator was confidence in handling delivery-related challenges (WM = 3.52), which was interpreted as strongly agree. Trust in the ability to complete assigned deliveries on time also received a relatively high rating (WM = 3.48). The lowest-rated item was managing emotions when dealing with rude or impatient customers (WM = 3.24). These results suggest that riders possess self-efficacy and adaptive capacity, but customer-related emotional strain remains a continuing psychological demand.

For organizational well-being, respondents agreed with the indicators, although the composite mean was lower than those of affective and psychological well-being. Clear communication about delivery policies or updates obtained the highest mean (WM = 3.06), while perceptions that management decisions are fair and balanced obtained the lowest mean (WM = 2.80). This implies that organizational support, fairness, and communication remain areas requiring improvement.

4.2 Operational Challenges Encountered by Delivery Riders

Operational challenges were assessed in terms of logistics and infrastructure, cost and financial concerns, and technology and data systems. Table 2 shows that the overall composite mean was 2.94, interpreted as agree. Cost and financial concerns obtained the highest composite mean (3.05), while logistics and infrastructure and technology and data systems both obtained composite means of 2.88.

Table 2. Summary of Operational Challenges Encountered by Respondents

Dimensions	Composite Mean	Verbal Interpretation	Rank
Logistics and Infrastructure	2.88	Agree	2.5
Cost and Financial	3.05	Agree	1
Technology and Data Systems	2.88	Agree	2.5
Overall Composite Mean	2.94	Agree	

Scale: 3.50-4.00 = Strongly Agree; 2.50-3.49 = Agree; 1.50-2.49 = Disagree; 1.00-1.49 = Strongly Disagree.

Under logistics and infrastructure, poor road conditions obtained the highest weighted mean (WM = 3.11), followed by traffic-related delivery delays (WM = 3.07). The lowest item was the perception that roads in the delivery area were unsafe to drive on (WM = 2.67). These findings show that riders experience infrastructure-related constraints, particularly road quality and traffic, as regular operational barriers.

Under cost and financial concerns, inconsistent earnings due to changing daily delivery requests obtained the highest mean (WM = 3.32). Expenses for vehicle maintenance and unexpected costs such as flat tires or repairs both obtained means of 3.11. The lowest-rated item was the income from deliveries being insufficient to cover daily expenses (WM = 2.82), although it still fell within the agree range. These findings indicate that financial instability is the most prominent operational concern among respondents.

Under technology and data systems, the slow or delayed response of the delivery application obtained the highest mean (WM = 3.01), followed by delivery-application problems causing delays (WM = 3.00). The lowest item was the delivery system failing to correctly record completed deliveries (WM = 2.71). The results suggest that riders experience technology-related friction, particularly application responsiveness and operational disruption, although they may have adapted to less frequent system-recording issues.

4.3 Relationship Between Operational Challenges and Occupational Well-Being

Spearman’s rho was used to determine the relationship between operational challenges and occupational well-being. As shown in Table 3, logistics and infrastructure, cost and financial concerns, and technology and data systems were all significantly related to affective well-being and psychological well-being. For organizational well-being, logistics and infrastructure and technology and data systems were significant, while cost and financial concerns were not significant.

Table 3. Relationship Between Operational Challenges and Occupational Well-Being

Occupational Well-Being Dimension / Operational Challenge	rho-value	p-value	Interpretation
Affective Well-Being: Logistics and Infrastructure	0.358	< 0.001	Significant
Affective Well-Being: Cost and Financial	0.319	< 0.001	Significant
Affective Well-Being: Technology and Data Systems	0.316	< 0.001	Significant
Psychological Well-Being: Logistics and Infrastructure	0.377	< 0.001	Significant
Psychological Well-Being: Cost and Financial	0.332	< 0.001	Significant
Psychological Well-Being: Technology and Data Systems	0.337	< 0.001	Significant
Organizational Well-Being: Logistics and Infrastructure	0.170	< 0.003	Significant
Organizational Well-Being: Cost and Financial	0.020	0.733	Not Significant
Organizational Well-Being: Technology and Data Systems	0.191	< 0.001	Significant

Correlation is significant at the 0.01 level, as reported in the original statistical output.

The relationship between operational challenges and affective well-being indicates that daily difficulties in routes, costs, and digital systems are associated with the emotional experiences of riders. For psychological well-being, the results similarly show that operational demands are associated with riders’ coping, confidence, focus, and emotional regulation. The non-significant relationship between cost and financial concerns and organizational well-being suggests that riders may perceive financial pressures as a structural feature of gig work rather than as a direct measure of organizational support or management quality.

4.4 Discussion

The findings show that delivery riders in selected cities of Batangas generally maintain positive occupational well-being even while encountering persistent operational challenges. The relatively high affective and psychological well-being scores suggest that respondents continue to find fulfillment, motivation, and confidence in their work. This is consistent with studies indicating that platform workers may experience both positive and negative subjective states, depending on how they interpret work demands, autonomy, income opportunities, and daily interactions (Jamaluddin et al., 2022; Lee et al., 2023; Wu et al., 2022).

At the same time, the lower rating for organizational well-being suggests that individual resilience should not be interpreted as evidence that organizational conditions are already sufficient. Riders reported weaker perceptions regarding fairness, appreciation, and management support. This finding is consistent with the broader literature on platform work, where workers may adapt to demanding systems but still experience limited voice, limited recognition, and uneven support structures (Au-Yeung et al., 2023; Chen et al., 2022; Wotschack et al., 2023). For delivery riders, organizational well-being appears to depend less on personal motivation and more on whether communication, fairness, operational support, and digital systems are perceived as responsive and reliable.

The prominence of cost and financial concerns is also important. Inconsistent earnings, fuel costs, maintenance expenses, and unexpected repairs directly affect riders' take-home income. These findings align with studies describing income instability and cost exposure as central vulnerabilities of platform-based delivery work (Kwakye & Hoque, 2023; Laskaris et al., 2024). Financial pressure may influence emotional and psychological well-being because riders must continually balance work volume, expenses, and personal needs. However, the non-significant relationship between cost and financial concerns and organizational well-being suggests that riders may not always attribute financial burdens to organizational support structures. Instead, they may treat such burdens as inherent to gig work arrangements.

The significant relationships involving logistics, infrastructure, and technology further demonstrate that delivery work is shaped by external and system-based conditions. Poor roads, traffic, route changes, app delays, and system disruptions can intensify emotional strain, reduce perceived control, and affect the ability to complete deliveries efficiently. These findings support prior work showing that algorithmic management and digital work systems can improve coordination but can also generate stress when systems are opaque, slow, or unreliable (Chen et al., 2022; Valtonen et al., 2025). In this context, rider well-being cannot be separated from the quality of the logistical and technological environment in which delivery work is performed.

The study has practical implications for rider support and platform management. Peer-based rider support circles, route-information sharing, mentoring for new riders, and technology-use support may help improve emotional coping and operational efficiency. At the organizational level, stronger feedback mechanisms, clearer policy communication, transparent incentive systems, and accessible technical support may improve riders' perception of fairness and support. At the policy level, road safety, rider protection, and clearer recognition of delivery work as essential labor remain relevant concerns.

Several limitations should be considered. The use of convenience sampling limits the generalizability of the findings beyond the respondents included in the study. The data were self-reported, which may be affected by response tendencies or personal interpretation of work conditions. The correlational design also prevents causal inference. Future studies may use probability sampling, larger geographic coverage, longitudinal designs, or mixed-method approaches to better understand how operational conditions shape the well-being of delivery riders over time.

5. Conclusion and Recommendations

The study concludes that delivery riders in selected cities of Batangas generally demonstrate positive occupational well-being, particularly in affective and psychological dimensions. However, organizational well-being received the lowest rating among the three dimensions, indicating that fairness, communication, support, and recognition remain areas for improvement. The study also found that operational challenges are present in delivery work, with cost and financial concerns emerging as the most prominent challenge, followed by logistics and infrastructure and technology and data systems.

The correlation results show that operational challenges are significantly associated with affective and psychological well-being. Logistics and infrastructure and technology and data systems are also significantly associated with organizational well-being, while cost and financial concerns are not significantly related to organizational well-being. These findings indicate that operational barriers influence riders' emotional and psychological states, while organizational well-being is more closely linked to system reliability, communication, and operational support.

Based on the findings, delivery riders may benefit from strengthened financial-management practices, including budgeting, saving, and planning for fuel, maintenance, and emergency costs. Stress-management strategies, time management, and work-life balance practices may also help protect emotional and psychological well-being. Riders may further improve efficiency by increasing familiarity with delivery applications, GPS navigation, and troubleshooting techniques. Peer collaboration through sharing route information, safe delivery areas, and practical operational tips is also recommended.

For delivery platforms and related organizations, stronger communication systems, fairer incentive structures, accessible technical support, and mechanisms for rider feedback are recommended. Future researchers may examine delivery riders in other locations, include additional variables such as job insecurity, platform fairness, safety climate, and

income sufficiency, or use qualitative interviews to capture the lived experiences behind the quantitative patterns identified in this study.

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