

Short Paper

Lifestyle Practices, Motorbike Rider Behavior, and Quality of Life of Food Delivery Riders in Quezon City, Philippines

Trisha Mae P. Apostol

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Francine Dominique M. Almazan

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Jyan Niña Denisse P. Angchay

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Zelene A. Asignacion

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Judiel E. Asperin

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Ma. Eloisa Isabel G. Astrera

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Janeane I. Balao

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Angela Niña R. Bando

St. Luke's College of Nursing, Trinity University of Asia, Philippines

Tristan Jourdan C. Dela Cruz

St. Luke's College of Nursing, Trinity University of Asia, Philippines

tjcdelacruz@tua.edu.ph

(corresponding author)

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Abstract

This quantitative correlational study explored the interplay between lifestyle practices, rider behavior, and quality of life among 115 food delivery riders in Quezon City, Philippines. Using structured questionnaires, the study revealed generally favorable outcomes across all domains: participants reported consistent meal intake and hydration ($M = 4.21$), strong adherence to safety behaviors such as helmet use ($M = 4.79$), and high satisfaction with aspects of their personal and work lives ($M = 4.53$). Statistically significant correlations were identified—ranging from weak (lifestyle practices and rider behavior, $p = 0.005$) to moderate (lifestyle practices and quality of life, $p < 0.001$) and strong (rider behavior and quality of life, $p < 0.001$)—highlighting how healthier habits and safer driving practices are linked to better well-being. These findings emphasize the need for multi-sectoral efforts to promote health education, road safety, and occupational support for delivery riders.

Keywords – food delivery riders, lifestyle practices, motorcycle safety, quality of life, occupational health, correlational study

INTRODUCTION

The rise of online food delivery platforms has reshaped consumer habits in the Philippines, especially in urban centers like Metro Manila. According to Mercurio (2019), 47% of Filipinos prefer GrabFood, followed by 30% who use FoodPanda. These services depend on food delivery riders who, despite their essential role, face significant health and safety risks. Motorcycle riders are among the most vulnerable on the road, with factors such as speeding, intoxication, poor infrastructure, and insufficient protective gear contributing to accident rates (World Health Organization, 2022; McKinley et al., 2022). According to the Centers for Disease Control and Prevention (CDC) (2022), lifestyle practices like smoking, alcohol use, and sleep deprivation further increase these risks.

Environmental and mechanical conditions also pose hazards. High temperatures, heavy rains, and poorly maintained motorcycles compromise rider safety (Gumasing & Magbitang, 2020). Notably, Quezon City reports among the highest motorcycle-related accidents in the country (University of the Philippines Manila, 2022). Despite road safety awareness, risky behaviors such as overtaking and ignoring protective gear remain common.

Existing policies like the National Health Insurance Act and the Occupational Safety and Health Standards Act provide some worker protections, but often overlook the specific needs of food delivery riders. In line with Sustainable Development Goal 8.8, there is a pressing need to strengthen labor protections and promote safer work conditions (United Nations, 2024).

From a public health and nursing perspective, interventions that encourage healthy lifestyle practices and safety compliance are critical. Programs addressing stress, sleep, nutrition, and proper safety habits can reduce risks and enhance well-being (Nguyen-Phuoc, 2023; Caday, 2021). This study explores the relationships among lifestyle practices, motorbike rider behavior, and quality of life among food delivery riders in Quezon City, aiming to inform future interventions and policy improvements.

LITERATURE REVIEW

Lifestyle behaviors significantly affect health outcomes, particularly among food delivery riders with unique occupational hazards. Kwangsukstith et al. (2023) found that fatigue and risky behaviors contribute to traffic accidents among motorcycle delivery workers in Thailand, a country with a high motorcycle fatality rate. Sleep deprivation, stimulant use, and stress are prominent lifestyle concerns, with caffeine reducing cognitive failures, but its impact on sleep and stress is debated (Bautista, 2022; Van der Linden et al., 2023). Hydration habits among riders vary, with some relying on energy drinks, potentially affecting their health and performance (Widajati et al., 2024; Nsiah-Asamoah & Buxton, 2021).

Sleep quality is a crucial factor in rider safety, with studies linking inadequate sleep to increased traffic violations (Edison et al., 2022) and circadian rhythm disruptions due to irregular work hours (Walter, 2021; Bose, 2024). In the Philippines, motorcycle-related deaths increased by 39% from 2011 to 2021 (WHO, 2023), with human error, fatigue, and risky behaviors contributing to accidents (Champahom et al., 2023; Chen, 2023).

Protective behaviors such as helmet use are inconsistent despite evidence that helmets and personal protective equipment reduce injury severity (Senaji et al., 2023). Discomfort and lack of awareness often deter use (Arreeras et al., 2022), though education and licensing can improve safety practices (Hagan et al., 2021; Zhang & Liu, 2023).

Quality of Life (QoL) is influenced by physical, psychological, and environmental factors, with poor sleep, stress, and occupational strain negatively affecting riders' well-being. Research shows that better sleep correlates with higher QoL and life satisfaction (Lee et al., 2021). Despite these challenges, factors such as resilience and financial literacy can buffer negative effects, highlighting the importance of empowering interventions (Evangelista et al., 2023; Njung'e & Abuga, 2022).

METHODOLOGY

Study Design

This study employed a quantitative correlational research design to explore the relationships among lifestyle practices, motorbike rider behavior, and quality of life among food delivery riders in Quezon City, Philippines. Correlational research, as described by Voxco (2021), examines the strength and direction of associations between variables without implying causation. This approach was appropriate for identifying natural patterns in health behaviors and safety practices within a real-world occupational setting. Utilizing statistical tools such as mean scores, p-values, and correlation coefficients, the design allowed for a systematic assessment of how lifestyle choices and rider behaviors relate to perceived well-being. Although causality cannot be inferred, the method supports generalization to similar urban populations, especially when applied to a sufficiently diverse and relevant sample. The choice of Quezon City—an area with a dense food delivery network—further strengthens the contextual applicability of findings to other metropolitan settings with comparable workforce dynamics.

Setting and Participants

The study was conducted in multiple commercial zones across Quezon City, Philippines, including large shopping malls and designated waiting areas outside fast-food establishments. These strategically selected sites offered high visibility and accessibility to potential respondents, enabling efficient data gathering and capturing a broad range of rider experiences. Quezon City, recognized for its cultural richness, modern infrastructure, and dynamic urban landscape (Umiten, 2023), served as an ideal setting due to its high density of food delivery activity.

The study targeted food delivery riders operating within Quezon City. It aimed to explore the relationships among lifestyle practices, motorbike rider behavior, and quality of life, with a particular focus on how these interrelated factors affect the overall well-being and safety of riders.

Sample Size

Participants for the study were selected using purposive and convenience sampling techniques to ensure both relevance to the research objectives and accessibility during data collection. A total of 115 food delivery riders from Quezon City, Philippines, participated in the study. The sample size was determined using the G*Power software, applying a 5% margin of error and a 95% confidence level to ensure statistical adequacy for correlational analysis.

Participant recruitment took place in high-traffic commercial areas such as large shopping malls and designated waiting lounges in front of fast-food establishments—locations where food delivery riders typically congregate while awaiting orders. These sites allowed researchers to efficiently approach and engage a diverse sample.

Purposive sampling was employed to ensure the inclusion of food delivery riders who met specific, relevant criteria, such as being registered with an online food delivery platform and using a motorcycle as their primary mode of transportation, thus aligning closely with the study's objectives (Nikolopoulou, 2023). This method allowed researchers to deliberately target individuals whose characteristics matched the variables under investigation, enhancing the internal validity of the study. Complementing this, convenience sampling was used to select participants who were readily available and on standby at commercial hubs during data collection, thereby increasing the feasibility and efficiency of recruitment (Fleetwood, 2023).

While these non-probability sampling techniques limit the ability to generalize findings to the entire population of food delivery riders, they were appropriate for an exploratory study focused on identifying relational patterns among lifestyle behaviors, riding practices, and quality of life. The combined use of purposive and convenience sampling enabled researchers to capture a diverse cross-section of active riders within Quezon City's dynamic delivery ecosystem. This targeted yet practical approach supports the contextual relevance of the findings while acknowledging the need for caution in applying results to broader or differently situated populations.

To determine eligibility, researchers conducted a brief verbal screening. Participants qualified if they were aged 18 to 59 years, delivered within or around Quezon City, and were not actively fulfilling orders at the time of approach. Once eligibility was confirmed and informed consent was obtained, participants completed a structured questionnaire using a tablet provided by the researchers. The survey was administered through Google Forms, offering a secure and efficient method for collecting data directly from the target population.

Research Instrument

The study employed a structured questionnaire comprising three subsections: lifestyle practices, motorbike rider behavior, and quality of life. To collect data, the researchers utilized three modified and culturally contextualized instruments: the Healthy Lifestyle Screen (HLS) developed by Tamanal (2021), the Motorbike Rider Behavior Questionnaire (MRBQ) by Oluwadiya (2018), and the WHOQOL-BREF from the World Health Organization. The HLS consisted of 8 items assessing lifestyle behaviors, the MRBQ included 10 items related to motorcycling behavior and safety practices, and the WHOQOL-BREF comprised 12 items evaluating perceived quality of life within the context of cultural norms, personal aspirations, and life situations. All items were measured using

a 5-point Likert scale, where 1 represented strong disagreement or lower quality, and 5 indicated strong agreement or higher quality of life and behavior.

To ensure the tools were linguistically and culturally appropriate for the target population of Filipino food delivery riders, both the HLS and MRBQ were translated from English to Filipino through a rigorous translation and back-translation process. Initial translation was performed by a Filipino language expert familiar with the cultural and linguistic nuances of the target population. The translated version was then back-translated into English by a separate expert in English linguistics to assess semantic and conceptual equivalence with the original instruments. Any inconsistencies were resolved through a consensus process involving both translators and content experts to ensure alignment with the original constructs while maintaining clarity in the Filipino context.

Both the Filipino and English versions underwent expert validation to confirm face and content validity. Subsequently, a pilot test was conducted with a representative group of respondents, yielding Cronbach's alpha coefficients of 0.843 for the HLS, 0.983 for the MRBQ, and 0.965 for the WHOQOL-BREF. These values indicate excellent internal consistency and reliability. The combination of expert validation, rigorous translation procedures, and pilot testing provided strong evidence of the tools' linguistic and construct validity, ensuring the questionnaires accurately and consistently captured the intended variables across language differences.

Data Collection

Before initiating data collection, the researchers obtained administrative approval from the Dean of the College of Nursing and secured ethical clearance from the university's Institutional Review Committee, ensuring adherence to ethical research standards. Data collection was then conducted in designated public areas of Quezon City—specifically high-traffic zones such as commercial malls and fast-food waiting lounges, where food delivery riders commonly assemble during work breaks.

To uphold participant autonomy, the researchers approached riders who were on standby and provided a concise but comprehensive explanation of the study's objectives, procedures, and ethical safeguards. Eligibility was confirmed based on predefined inclusion criteria, after which informed consent was sought. Each participant received a written consent form detailing the nature of their involvement, the voluntary nature of participation, the right to withdraw at any time without penalty, and assurances of confidentiality. Only those who provided signed consent were included in the study.

Participants were provided with a tablet device to complete the structured questionnaire via Google Forms. The researchers remained nearby to address questions, provide technical support, and ensure that participation was neither coerced nor disruptive to the riders' workflow. Respondents were also informed of the approximate duration of the survey to respect their time.

Data privacy and confidentiality were prioritized throughout. Responses were automatically stored in a secure Google Sheet, accessible only to the research team. The data manager anonymized the dataset by removing any identifying information before it was forwarded to a professional data analyst for statistical processing. No personally identifiable data were reported, and all findings were presented in aggregate form, ensuring participants' privacy and data protection were rigorously maintained throughout the research process.

Data Analysis

The statistical analysis of the study data began with data collection from the completed questionnaires. The researchers utilized two software applications, Jamovi and Microsoft Excel, to process the gathered data. The data were then summarized to calculate the weighted mean for the three variables: lifestyle practices, motorbike rider behavior, and quality of life. The overall mean for each variable was derived by averaging the weighted means of its respective indicators, providing insight into the most frequent responses for each variable.

For the three subsections of the questionnaire—the Healthy Lifestyle Screen, Motorbike Rider Behavior Questionnaire, and WHOQOL-BREF—the researchers computed the weighted mean for each question, as well as the overall mean for each subsection. These computed values were interpreted using a fixed scale: 4.21-5.00 as "Strongly Agree/Always," 3.41-4.20 as "Agree/Often," 2.61-3.40 as "Neither Agree Nor Disagree/Sometimes," 1.81-2.60 as "Disagree/Rarely," and 1.00-1.80 as "Strongly Disagree/Never."

Spearman's rho coefficient was utilized to assess the strength and direction of relationships between ranked variables in this study. This non-parametric measure is appropriate for ordinal data and when assumptions of normal distribution are not met. According to Schober, Boer, and Schwarte (2018), correlation coefficients are interpreted as follows: values of ≥ 0.70 indicate a very strong relationship, 0.40–0.69 a strong relationship, 0.30–0.39 a moderate relationship, 0.20–0.29 a weak relationship, and 0.01–0.19 a negligible or no relationship.

Additionally, p-values were examined to test the significance of the correlations. A p-value of < 0.05 was considered statistically significant, indicating a meaningful association between variables, while a p-value of ≥ 0.05 suggested no statistically significant relationship, thus supporting the null hypothesis (Schober et al., 2018).

RESULTS

Table 1 provides a comprehensive overview of the respondents' lifestyle practices, motorbike rider behaviors, and quality of life. The food delivery riders demonstrated highly favorable lifestyle practices, with an overall mean score of 4.21, indicating strong agreement with positive health behaviors. Notable lifestyle practices included regular meal consumption ($M = 4.70$), adequate water intake ($M = 4.64$), and adherence to a balanced diet ($M = 4.43$). In terms of motorbike rider behavior, the respondents exhibited an exceptionally high level of safety practices, with an overall mean score of 4.79, also interpreted as "Strongly Agree." High ratings were observed for consistent helmet use ($M = 4.92$), slowing down at humps ($M = 4.90$), and obedience to traffic rules ($M = 4.86$). Regarding quality of life, the respondents reported a strong sense of well-being, with an overall mean score of 4.53. They expressed high satisfaction with their ability to work ($M = 4.74$), personal relationships ($M = 4.73$), and capacity to perform daily tasks ($M = 4.70$). These findings reflect a generally positive outlook on health, safety, and overall life satisfaction among food delivery riders.

Table 1. Overall Mean and Interpretation of Lifestyle Practices, Motorbike Rider Behavior, and Quality of Life of Food Delivery Riders

Indicators	Overall Mean Score	Interpretation
Lifestyle Practices	4.21	Strongly Agree
Motorbike Rider Behavior	4.79	Strongly Agree
Quality of Life	4.53	Strongly Agree

Table 2 presents the correlations between lifestyle practices, motorbike rider behavior, and quality of life among food delivery riders. The results indicate a positive but weak correlation between lifestyle practices and motorbike rider behavior (Spearman's $\rho = 0.262$, $p = 0.005$), suggesting that riders who engage in healthier lifestyle practices tend to demonstrate slightly safer riding behaviors. Despite the weak strength of the association, the correlation is statistically significant, implying that improvements in lifestyle may still contribute to better safety habits.

Furthermore, a moderate positive correlation was observed between lifestyle practices and quality of life (Spearman's $\rho = 0.319$, $p < 0.001$), indicating that food delivery riders with more favorable lifestyle practices generally report higher levels of well-being. This moderate association highlights the potential of lifestyle interventions in enhancing the overall quality of life among riders.

Table 2. Correlation of Lifestyle Practices to Motorbike Rider Behavior and Quality of Life of Food Delivery Riders

Variable	Spearman's Rho	p-value	Decision
Motorbike Rider Behavior	0.262	0.005	<i>Weak Positive Correlation</i>
Quality Of Life	0.319	<0.001	<i>Moderate Positive Correlation</i>

Table 3 shows the correlation between motorbike rider behavior and quality of life. A strong positive correlation was found (Spearman's rho = 0.533, $p < 0.001$), signifying that food delivery riders who consistently adhere to safer riding practices tend to experience significantly better quality of life. This strong and statistically significant relationship underscores the critical role of occupational safety behaviors in supporting the well-being of this occupational group.

Table 3. Correlation of Motorbike Rider Behavior to the Quality of Life of Food Delivery Riders

Variable	Spearman's Rho	p-value	Decision
Quality of Life	0.533	<0.001	<i>Strong Positive Correlation</i>

DISCUSSION

The interpretation of the study highlights the critical role that healthy lifestyle practices and safe motorbike rider behaviors play in enhancing the overall quality of life among food delivery riders. The riders' commitment to balanced nutrition and hydration reflects a growing awareness of the need to maintain physical well-being, especially in a physically demanding and high-risk occupation. As Glanz et al. (2015) emphasize, consistent dietary habits and sufficient fluid intake are fundamental to sustaining energy levels, cognitive function, and long-term health, essential factors for individuals exposed to prolonged work hours and environmental stressors.

The findings also underscore a strong culture of safety among the respondents, which is crucial given that motorcyclists face disproportionate risks of road traffic injuries. The World Health Organization (2018) identifies the use of helmets and adherence to traffic rules as primary strategies to reduce fatalities and serious injuries among motorcycle riders. These behaviors not only mitigate accident risk but also contribute to reduced stress and increased confidence on the road.

Furthermore, the study reveals a significant link between healthier behaviors and improved quality of life, echoing the findings of McEwen et al. (2015), who noted that positive health habits are associated with better physical and mental health outcomes. The strong association between safe rider behavior and life satisfaction also supports DeJoy et al. (2018), who found that workplace safety behaviors are directly related to psychological well-being and reduced occupational stress.

Overall, the interpretation of the data affirms that health promotion strategies targeting nutrition, rest, and road safety can lead to substantial improvements in the quality of life for food delivery riders. These insights are critical for guiding future nursing interventions and public health programs aimed at protecting and empowering workers in the gig economy.

LIMITATIONS

While this study offers important insights into the relationships between lifestyle practices, motorbike rider behavior, and quality of life among food delivery riders in Quezon City, several methodological limitations may introduce potential biases that should be addressed in future research.

The study's focus on a single urban location limits generalizability, as regional differences in infrastructure, socio-economic conditions, and work environments may influence outcomes. To minimize geographic bias, future studies should include diverse settings to provide a more comprehensive understanding.

The use of purposive and convenience sampling may lead to selection bias, as participants were chosen based on availability and willingness to respond. This approach may not fully represent the broader food delivery rider population, especially those in hard-to-reach areas or working non-peak hours. Randomized sampling techniques could enhance representativeness.

Self-reported data collected via structured questionnaires also introduces the risk of response bias, including social desirability and recall inaccuracies. Integrating objective measures such as wearable activity monitors or validated observational tools could help reduce this bias.

Lastly, the limited scope of lifestyle variables excluded important factors like alcohol use, physical activity, and financial strain. Expanding variable inclusion and incorporating comparison groups can strengthen the validity and applicability of future findings.

CONCLUSIONS AND RECOMMENDATIONS

This study offers important insights into the complex interplay between lifestyle practices, motorbike rider behavior, and quality of life among food delivery riders in Quezon City. The findings indicate that while food delivery riders generally value good nutrition, hydration, and safety practices, some continue to engage in less healthy behaviors such as irregular sleep, smoking, and stimulant use. These inconsistencies suggest that although riders are aware of health-promoting behaviors, their application in daily routines is influenced by the demands of gig work and occupational pressures.

The results also highlight significant associations: nutrition and rest were positively correlated with both rider behavior and quality of life, whereas factors such as water consumption and smoking showed no meaningful impact. Furthermore, safer motorbike practices—such as adherence to traffic rules and use of protective gear—were strongly associated with better quality of life. Despite financial constraints and safety risks, riders generally reported satisfaction with their ability to work, maintain relationships, and meet daily responsibilities. However, their expressed concerns about financial stability and occupational hazards underscore the need for supportive interventions.

Based on these findings, the researchers recommend several strategies to improve the health, safety, and well-being of food delivery riders. First, establishing online social media groups can foster community support, encourage information sharing, and enhance riders' mental and social well-being. Education initiatives should emphasize the importance of hydration, urging riders to bring water tumblers during shifts to avoid fatigue and enhance concentration.

Furthermore, riders should be cautioned against over-reliance on stimulants such as coffee and energy drinks, which may impair focus due to dehydration or crashes in energy. A shift toward balanced meals and regular water intake is encouraged for sustained performance. Consistent use of safety equipment—including helmets and protective clothing—should be promoted as a standard practice, with companies playing a role in supplying and maintaining gear. Likewise, strict adherence to traffic laws must be reinforced through regular road safety training to prevent accidents and reinforce responsible rider behavior.

Finally, future research should examine additional factors that influence rider safety, including environmental conditions like road infrastructure and weather patterns. Exploring these aspects could guide policy-making, inform urban planning, and develop tailored safety protocols, ultimately supporting a safer, healthier working environment for food delivery riders.

IMPLICATIONS

This study offers valuable insights for the nursing profession, particularly in occupational health, community health nursing, and health promotion. With food delivery riders forming a growing workforce, nurses are well-positioned to address their unique health risks. The observed links between lifestyle practices, rider behavior, and quality of life suggest the need for targeted nursing interventions.

Occupational health nurses can develop education and prevention programs focusing on safe riding, proper nutrition, sleep hygiene, and smoking cessation. Community health nurses can partner with local governments and delivery platforms to expand access to screenings, mental health support, and wellness services.

In health promotion, nurses can lead group sessions, health literacy campaigns, and telehealth consultations to encourage sustainable behavior change. Addressing issues such as stimulant use, fatigue, and poor diets can significantly improve riders' well-being and road safety.

Nurses also play a vital role in advocating for policies that protect gig workers. The strong association between safe behaviors and quality of life supports the push for regulations on safety equipment, healthcare access, and fair labor practices.

Finally, these findings call for nursing education and research to include the health needs of informal workers, ensuring future nurses are equipped to respond to evolving occupational health challenges.

FUNDING

The study did not receive funding from any institution.

DECLARATIONS

Conflict of Interest

All authors declared that they have no conflicts of interest.

Informed Consent

All participants were appropriately informed and voluntarily agreed to the terms with full consent before taking part in the conduct of the experiment.

Ethics Approval

The university Institutional Board Review approved this study in May 2024 after it conformed to the local and internationally accepted ethical guidelines.

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Author's Biography

Dr. Tristan Jourdan C. Dela Cruz is the Program Chair and Associate Professor at St. Luke's College of Nursing, Trinity University of Asia. With extensive experience in nursing research and palliative care, Dr. Dela Cruz provided invaluable mentorship and guidance, ensuring the study's rigor and ethical integrity.

Trisha Mae P. Apostol is a fourth-year nursing student at St. Luke's College of Nursing, Trinity University of Asia. As the Lead Investigator of the study, she focuses on public health, occupational safety, and the well-being of marginalized workers. Trisha leads the research team, ensuring accuracy, reliability, and ethical standards throughout the study, to contribute to nursing knowledge on food delivery riders' health and safety.

Francine Dominique M. Almazan is a fourth-year nursing student with a strong interest in environmental and occupational health. As a Sub-Investigator, Francine contributes to data analysis and interpretation, driven by her passion for understanding how these factors impact health. She is committed to making a meaningful impact in healthcare through research.

Jyan Niña Denisse P. Angchay is a fourth-year nursing student skilled in management, logistics, and external relations. As a Sub-Investigator, Jyan ensures smooth team operations and focuses on understanding community needs, aiming to address the root causes of health issues and provide effective healthcare solutions.

Zelene A. Asignacion is a fourth-year nursing student known for her collaborative spirit and dedication to research. As a Sub-Investigator, Zelene actively contributes to the study with valuable insights and follows procedures meticulously, demonstrating her commitment to producing high-quality research.

Judiel E. Asperin is a fourth-year nursing student involved in fieldwork organization, participant communication, and ethical data collection. As a Sub-Investigator, Judiel is passionate about preventive care and occupational health, aiming to improve work safety and quality of life for underserved populations.

Ma. Eloisa Isabel G. Astrera is a fourth-year nursing student and Data Master for the study. Ma. Eloisa excels in data organization and management, with strong clinical skills and attention to detail. Her involvement in the research reflects her commitment to producing quality work and improving patient care and health outcomes.

Janeane I. Balao is a dedicated fourth-year nursing student with a strong appreciation for teamwork, developed through her background as a former athlete. As a Sub-Investigator, Janeane's personal experience with labor-intensive work fuels her interest in how environmental and occupational factors affect workers' health.

Niña Angela R. Bando is a fourth-year nursing student focused on research consistency and clarity. As a Sub-Investigator, Niña's involvement in the study deepened her curiosity about environmental and occupational health and strengthened her academic writing skills.