Analyzing the Effect of Cargo Handling on the Respective Workload and Balancing of Scheduled Logistics Flight in Metro Manila

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***Abstract*: This study explores the impact of cargo handling on workload distribution and logistics flight scheduling in Metro Manila, focusing on processes like loading, unloading, and transit times. These factors influence flight punctuality, crew workload, and operational efficiency. A mixed-methods approach combined quantitative surveys with qualitative interviews to capture the personal experiences of cargo handlers, highlighting issues like work-life balance and mental health. Key findings include differences in physical strength and stamina between men and women, affecting task assignments in high-pressure environments. The study also reveals distinct gender-based coping strategies, with men favoring food consumption and teamwork as stress relief methods. These gender dynamics raise questions about task allocation, inclusion, and team collaboration in logistics. Data analysis used cross-tabulation, thematic analysis, and statistical tests to validate findings and examine gender's influence on teamwork and stress management. The research offers recommendations for optimizing cargo handling practices, enhancing job satisfaction, and promoting a healthy work environment. It emphasizes ethical research standards, aiming to guide industry professionals and policymakers while laying the groundwork for future global studies on cargo logistics.**

***Keywords*: Cargo Handling, Workload Balancing, Scheduled Logistics, Decision Making, Work Environment, Communication, Sex, Mental Health.**

1. Introduction

In the aviation industry, skilled professionals manage complex and delicate operations to ensure the smooth transportation of goods worldwide. Cargo handling agents play a critical but often underappreciated role in this process, handling the flow of cargo with precision and care. Their responsibility lies in balancing safety, efficiency, and the timely movement of goods in the challenging environment of air cargo operations. This study explores the psychological and environmental factors that affect the crucial skill of workload management for cargo handlers, who are essential to the smooth functioning of global trade and logistics.

Cargo handling agents are some of the most vital and effective workers in the aviation sector. Their main responsibility is ensuring the safe and secure transport of goods, which allows airports to maintain consistent cargo operations throughout the year and optimize profitability. However, these agents face significant challenges in balancing safety and efficiency, especially in high-stress environments like airports in the Philippines, which ranked as Asia's third most stressful airport in 2022. Ramp workers often face overwhelming workloads and long hours, which can lead to fatigue and increase the risk of accidents or near-misses (Jackson et al., 2021). Fatigue continues to impair the performance and alertness of cargo handlers, raising the likelihood of accidents (Morais et al., 2023). The success of cargo operations relies heavily on these workers' ability to manage their responsibilities, yet their contributions are often overlooked. To maintain the smooth operation of global trade, they must organize and carry out their duties effectively (Diefenbach, et al., 2023).

Additionally, it is crucial to examine the job satisfaction of aircraft baggage handlers and their exposure to work-related stress (Bulduk et al., 2017). Developing a workforce scheduling model that takes into account the challenges faced by domestic freight handlers could be beneficial (Dewi & Septiana, 2015). Such a model could help mitigate stress, increase productivity, and understand how factors like stress, motivation, and the work environment influence staff performance in logistics and freight forwarding organizations (Kawiana et al., 2023).

Effective communication is key in any workplace. It improves decision-making and boosts productivity in various ways (Vanheusden et al., 2022). However, stress is a common issue, especially for cargo handlers. Job characteristics, employee participation, career progression, workplace relationships, and organizational structure are all linked to stress levels among ground service agents (Amornpipat et al., 2020). Research has focused on enhancing the effectiveness of

ground handling operations, aiming to speed up processes and improve turnaround times between flights, thereby increasing the overall efficiency of airport operations (Szabo et al., 2021).

Air freight logistics are closely connected to manufacturing productivity, facilitating the global distribution of products. A recent study sought to measure the transit risks associated with air freight, which refers to the gap between scheduled and actual arrival times of shipments (Sahoo et al., 2022). The air cargo supply chain involves multiple entities, with freight forwarders consolidating cargo shipments in regional warehouses, selecting export airports, and transporting goods to designated hubs for flight processing (Bierwirth et al., 2017). Stress resistance is a critical trait for cargo handlers, allowing them to remain composed under pressure and maintain productivity throughout their workday. Along with their technical knowledge and skills, stress resistance is one of the most important qualities for cargo handlers. Work-related stress not only affects job satisfaction but also increases the likelihood of exposure to risks that can lower productivity. Airlines should adopt strategies to alleviate stressors such as role conflict and overload, recognizing that the responsibilities of cargo handlers are significant. Reducing mental fatigue and job dissatisfaction will enhance overall operational efficiency and organizational success. Airlines should prioritize experienced staff with high self-efficacy, viewing them not only as valuable resources but also as essential assets in managing operational challenges.

Cargo handlers often experience fatigue and stress due to the demands of their job, which raises concerns about aviation safety. Ground handling personnel, especially cargo handlers, often work under high pressure, with significant responsibilities and long hours contributing to fatigue. They must possess the ability to perform effectively under these conditions, especially when addressing unexpected situations or emergencies. Adhering to procedures is equally important, as it ensures the secure handling of cargo. A keen attention to detail is required when verifying documentation and the condition of cargo, including tasks such as hazardous materials handling and export/import operations. Identifying skill gaps and anticipating potential complications are also essential tasks (Vasantha, 2019).

Moreover, cargo handlers frequently collaborate with pilots and other crew members, highlighting the importance of effective communication. Managing unforeseen events, such as severe weather conditions or natural disasters, presents substantial challenges. Cargo handlers rely on crisis management protocols that include reallocating resources and adjusting operations as needed. Weather events, such as storms, floods, and the broader impacts of climate change, can significantly disrupt cargo transportation (Kim & Lee, 2019; Çevik, 2024). Comprehensive training to equip cargo handlers with the necessary skills to prioritize tasks under pressure and adapt to changing conditions is essential.

Psychological and environmental factors have a profound effect on cargo handlers' performance, particularly when it comes to managing their workloads. Recent studies have focused on identifying the factors that influence the effectiveness of cargo handlers in their roles, providing valuable insights into how their work conditions can be improved.

A. Background of the Study

Over the years, airports have continuously evolved, expanding their operations to keep up with the growing aviation industry. Airlines have also embraced new technologies to improve the quality of their services, enhance passenger experience and comfort, and streamline airline operations. However, there will be instances where airline operations may not fully meet the needs and expectations of the customers due to various problems.

The logistics sector is essential to the financial system of Metro Manila because it enables the transportation of products throughout various markets and industries. Due to the important significance of rapid and efficient transportation of merchandise, major towns have an extensive emphasis on enhancing logistics management and transport offerings. This region depends on important operations, which include accepting and processing cargo for scheduled flights. The management of consignments can be slowed, and flight schedules can delayed because of disruptions in these processes. To keep efficacy, warding off engaging in a particular Profession is important.

An airport cargo handler plays a crucial role in efficiently and securely managing cargo transportation at the airport. With essential and sustainable work, which can be challenging sometimes for them. A more stable order-picking process is achieved by reducing workload imbalances and anticipating workload surges (Alyammahi et al., 2021). It highlights and explains how balancing workloads is vital in the workplace and how workers can effectively complete their tasks or whatever they need to do because their workload is distributed equally to them. Workload balancing helps workers get their tasks done more easily and quickly and finish them ahead of time because they know what to do in their respective workloads.

This study examines the impact of cargo handling on the balance of schedule and workload in Metro Manila. This research aims to present a synthesis of how cargo handling impacts the operational load and flight timetables of logistics airplanes in Metro Manila. Overall, the study is an excellent attempt to understand the critical issues in the efficient delivery of logistics services to minimize downtime and improve the operational efficiency of logistics firms. The study also allowed for the development of possible recommendations for academics and policymakers to build on and enhance the industry's longevity and the competitiveness of the logistics sector in Metro Manila.

B. Theoretical Framework

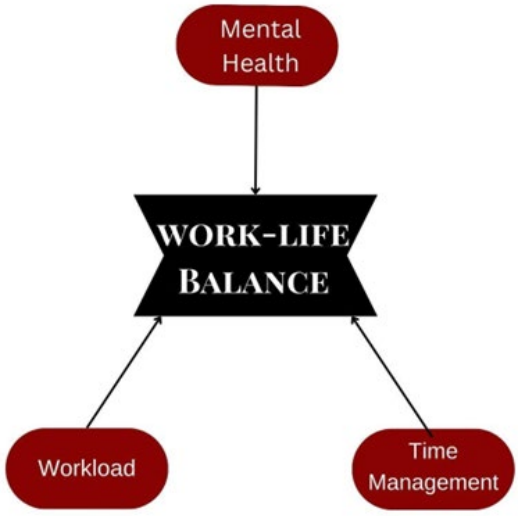

Fig. 1. Analyzing the determining factors of employees' work-life balance: a comprehensive case study

The aviation industry is known for its demanding and unpredictable schedules, making it challenging for workers to maintain a healthy work-life balance. For cargo handlers, who play a crucial role in ensuring goods are managed efficiently and on time, these challenges can significantly impact their personal lives and overall well-being. This study investigates how work strain affects cargo handlers, emphasizing the importance of balancing work and personal life to prevent burnout and reduce stress. Achieving this balance not only enhances employee satisfaction but also boosts performance and productivity.

Research by (Morais et al., 2023) highlights the critical role of fatigue management in aviation workers, showing how addressing fatigue can improve both employee well-being and operational efficiency. Similarly, Diefenbach et al., (2023) emphasize that enhancing ergonomics and processes in air freight handling can alleviate work strain and indirectly support better work-life balance. This aligns with the Job Demands-Resources Model, which underscores the need to balance job demands with sufficient resources to sustain employee well-being.

Effective management strategies are essential to maintaining smooth operations and reducing employee stress. Proper task delegation ensures workflows are manageable, whereas poor management can lead to inefficiencies, bad decisions, and elevated stress levels. Kawiana, et al., (2023) illustrated the relationship between work stress, motivation, and performance in logistics companies, underscoring the need for strategic approaches to managing workloads.

This study focuses on the work-life balance of cargo handlers in Metro Manila, a critical logistics hub where heavy workloads frequently lead to fatigue. Addressing fatigue and work-life balance not only enhances employee satisfaction but also strengthens operational reliability in this vital sector.

C. Conceptual Framework

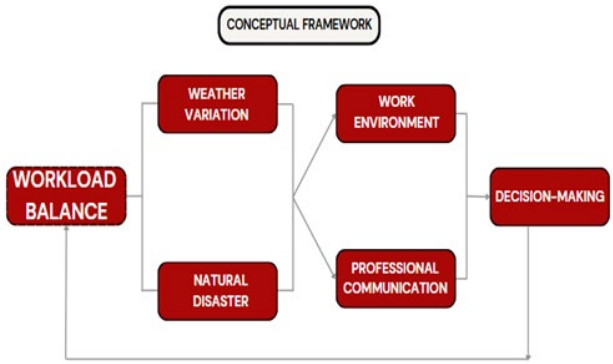

Fig. 2. A conceptual framework showing the factors that affect the workload balance of cargo handlers

The main focus of this study is the dependent variable of workload balance, specifically examining the factors that influence the workload of cargo handlers. These factors include the work environment, fluctuations in weather conditions, natural disasters, communication, and decision-making processes.

The conceptual framework emphasizes the importance of maintaining work-life balance for cargo handlers. These workers face significant challenges in achieving balance due to the demanding schedules they encounter, particularly in high-traffic areas such as Metro Manila. Within this framework, workload balance is a key concern, as effective management of workload is critical not only for the smooth operation of the industry but also for the well-being of employees.

The framework also highlights the importance of decision-making and the desire to meet the needs of the organization. Physical, social, and economic factors within the workplace are instrumental in shaping the operational conditions of companies. Effective communication and flexibility are essential, as they allow cargo handlers to adapt to changes in the work environment and ensure smooth exchanges between team members. These elements are crucial for meeting demands and maintaining an even workload. Unexpected changes and challenging weather conditions often require rapid adjustments to logistics procedures. Therefore, clear and timely communication becomes vital in preventing misunderstandings, minimizing errors, and ensuring safe deliveries, especially in unpredictable situations.

D. Statement of the Problem

This study aimed to analyze the role of cargo handlers in balancing workloads with scheduled logistics flights at airports in Metro Manila.

Specifically, this study sought to answer the following questions:

1. How does workload balancing affect cargo handlers' mental health at the Airport in Metro Manila?
2. Is there a significant relationship in the effectiveness of workload balancing in decision-making, work

environment, and communication?

3. How do cargo handlers balance workload during unexpected events such as:
   a) natural catastrophes; and
   b) weather variations?
4. How do these factors directly influence the effectiveness of workload balancing in terms of:
   a) Decision Making;
   b) Work Environment; and
   c) Communication?
5. What strategies are employed to ensure that cargo handling does not negatively impact the planned schedules of logistics flights?
6. How do sex differences impact the ability of cargo handlers to balance their workload during scheduled logistics flights?

E. Hypothesis

Null Hypothesis: There is no significant relationship in the effectiveness of workload balancing in terms of decision-making, work environment, and communication.

F. Significance of the Study

1. *Aviation Students*: Research studies teach students about aviation business, cargo handling, work conditions, and consequences for handlers, including work balance, scheduling, and stressful environments.
2. *Current and Future Cargo Handlers*: This research aids cargo handlers in understanding workload balancing and resource optimization for dealing with alternating cargo volumes, improving operational efficiency, identifying work challenges, and focusing on specific situations.
3. *Institution & Companies*: The study aims to assist aviation and logistics organizations in understanding challenges, improving customer experience, reducing risks, and leveraging emerging market opportunities in Metro Manila's dynamic logistics landscape.
4. *Future Researchers*: This Study provides a foundation for future research on cargo handling, focusing on advantages and disadvantages. It offers a detailed analysis of work balance in Metro Manila airport operations, generating new ideas and insights for more precise and comprehensive studies.

2. Methodology

A. Research Design

The study used both descriptive and correlation methods in its research approach. It described how Cargo Handlers at Metro Manila airport manage their workload on scheduled flights and examined how different factors negatively affect their mental health, decision-making, communication, and ability to work with colleagues, including gender-related issues.

It also employed a qualitative approach, phenomenology, to comprehend the personal experiences of cargo handlers in reconciling their demanding work with their social lives. The research examined the challenges encountered by both current and former Cargo Handlers, intending to enhance their effectiveness and efficiency in their respective positions within the aviation industry.

The researchers used a mixed-methods approach by combining questionnaires and surveys for the quantitative part, and one-on-one interviews for the qualitative part. The questionnaires and surveys helped gather structured data about how work is distributed among a large number of cargo handlers, providing important statistical insights. For the qualitative part, one-on-one interviews were conducted to explore the deeper, more personal experiences and viewpoints of Cargo Handlers, revealing the human side of their jobs. This combined approach gave a well-rounded understanding of the research topic, blending the numbers from surveys with the personal stories from interviews, which added to the accuracy and trustworthiness of the findings.

The research data analysis involves using cross-tabulation and thematic analysis. In some cases, results are compared with different variables to come up with various outcomes. For example, the examination of the cargo handler's personality affects their ability to make critical decisions on the job, or how factors like age and experience influence their work-life balance. Cross-tabulation allows us to see the relationships and patterns between these variables, even ones that might not be obvious at first. The researchers chose thematic analysis because it fits well with their approach to gathering data through one-on-one interviews. This method is great for getting deep insights from qualitative information collected during these interviews. It allows us to explore the views shared by the interviewees, helping us identify the themes, issues, and deeper meanings in our study.

B. Respondents

The participants in this study include both male and female aviation experts with extensive experience in the industry. The researchers intend to implement a series of questionnaires and individual interviews with the participants. There were three interviewees, all employed by Alpha Land. 29 respondents from Air Asia and one from Alpha Land will partake in the study. The researchers employed Slovin's Formula with a 5% margin of error to ascertain the requisite sample size for ensuring the study's correctness and representativeness. This method guarantees a balanced and clearly defined response group for dependable data collection.

The sample size was utilized to determine the survey's acceptable response rate. The researchers obtained 15 responses from a sample size of 30 Cargo Handlers. The response rate of the external survey ranges from 10% to 15%. Through the use of the formula for the appropriate survey response rate, the researchers determined that 50.00% is deemed an acceptable outcome for an external survey.

Table 1
Frequency distribution of respondents by gender

SEX	FREQUENCY	PERCENTAGE
MALE	14	93.33
FEMALE	1	6.67
Total	15	100.00

From the table above, it is evident that our research had more males than females in the respondent group. This discrepancy necessitates a meticulous examination of gender-specific elements that may have impacted the study's results. Males and females may possess distinct viewpoints, experiences, or preferences that influence their reactions to specific questions or events. In the context of this thesis, it is essential to recognize these disparities to prevent the conclusions from being distorted or misinterpreted due to this imbalance. By incorporating gender as a variable in the analysis, we seek to deliver a more precise and thorough explanation of the research findings.

Table 2
Frequency distribution of respondents by age

AGE	FREQUENCY	PERCENTAGE
30-35	3	20.00
35 Above	12	80.00
Total	15	100.00

As shown in the age range profile frequency table, the majority of respondents are concentrated in the 35 and above age group. This concentration highlights the need for a deeper analysis of factors that are particularly relevant to this demographic. Exploring the unique characteristics, experiences, and viewpoints of individuals in this age bracket can enhance the overall understanding of the study's dynamics. By considering the perspectives of those aged 35 and above, we can provide a richer and more contextually grounded interpretation of the study's outcomes.

Table 3
Frequency distribution of respondents by occupation

OCCUPATION	FREQUENCY	PERCENTAGE
Air Operations Manager	6	40.00
Delivery Officer/Freight Forwarders	3	20.00
Cargo Handlers	6	40.00
Total	15	100.00

The table above illustrates a notable proportion of Cargo Handlers among the respondents, offering critical insights into variables influencing airline operations. Contributions from this group, supplemented by insights from two Cargo Handlers and one Pilot who teaches cargo handling, provide a more profound comprehension of the requirements in cargo handling logistics.

These viewpoints highlight the physical difficulties encountered by Cargo Handlers, particularly in demanding environments that necessitate strength, endurance, and collaboration. Informants underscored the impact of physical disparities on job allocation and stressed the importance of collaboration, adherence to procedures, and stress management as vital coping mechanisms.

This specific information improves our comprehension of the operational intricacies that Cargo Handlers navigate daily.

The informants, comprising two Cargo Handlers and a Pilot who teaches cargo handling, offered significant insights into the physical and cooperative requirements of cargo handling in aviation logistics. Both Cargo Handlers observed that men typically exhibit superior strength and endurance, affecting their ability to handle big loads in demanding situations. A Cargo Handler underscored the significance of teamwork, collaboration, and rigorous compliance with protocols as vital measures for alleviating stress and managing workload. Another emphasized that informal social activities, such as dining together and conversing with colleagues, establish a favorable work atmosphere, with job satisfaction augmenting collaboration. The Pilot who teaches cargo handling underscored the significance of coordination and morale, highlighting their effect on overall operational efficiency.

C. Settings

This study focused on the impact of cargo handling on workers. In particular, workload and work-life balance are involved in the scheduled logistics flights of Metro Manila. The study focuses on various factors such as work environment, the process of decision-making, communications, and unexpected natural events and disasters which affect the workload balancing and cargo handlers' mental health.

The research focuses solely on cargo handlers. The survey was conducted with cargo handlers because of their busy schedules. It is limited to Metro Manila and will take place at the airport, which is a major hub for scheduled logistics flights. The changing environment at the airport makes it a suitable location to explore the challenges cargo handlers face with workload balance. The main goal is to provide insights into the important role cargo handlers play in managing stress in Metro Manila.

D. Instrumentation

The researchers utilized a survey questionnaire to collect data, meticulously revising the validity and quality of the survey questions to ensure that each Statement of the Problem (SOP) was adequately addressed. The questionnaire was subjected to a thorough validation process by multiple experienced professionals from the aviation sector. The experts were a Logistics Executive, a Ramp Supervisor, and a professor from Parañaque City. Their experience improved the clarity and relevancy of the survey, ensuring it accurately represented the study's objectives and was suitable for the aviation setting. After the preliminary validation, the researchers executed a pilot test to enhance the questionnaire's precision. Thirty fourth-year students were chosen as participants for this pilot test. This step enabled the researchers to evaluate the efficacy and consistency of the survey questions, facilitating appropriate modifications depending on the feedback and responses obtained.

This further validation phase guaranteed that the survey instrument was both robust and dependable for extensive data collection.

The researchers utilized a multifaceted interview method to collect data for the study. A well-designed survey questionnaire was developed and disseminated to fifteen respondents, comprising Air Operations Managers, Freight Forwarders, and Cargo Handlers. These participants were requested to complete the survey using Google Forms. Furthermore, three participants were chosen for detailed face-to-face and online interviews to guarantee a thorough comprehension of the topic. The interviews were documented via mobile devices, capturing each response in audio format. The gathered material was subsequently transcribed, translated, and carefully coded to discern reoccurring themes pertinent to the interview questions.

E. Data Analysis

The data gathered from respondents in the research study have been examined utilizing statistical tools that fulfill various purposes for the researchers. Methods of contribution include frequency and percentage for the respondents' profile and weighted mean for surveys utilizing Summative Scales to assess respondents' levels of agreement with the provided statements regarding various perspectives of a Cargo Handler in Metro Manila. The researchers utilized Slovin's Formula to precisely determine the necessary number of respondents, concentrating on a relatively small group of Cargo Handlers in Metro Manila. The convenience sampling strategy utilizes accessible contacts familiar to the researcher in the field. In contrast, the snowball method highlights the benefits of distributing the survey via established local networks. The means of the two groups were compared utilizing rigorous statistical procedures, notably the T-test, which analyzed characteristics such as age and sex to discern probable differences between the groups. Furthermore, Analysis of Variance (ANOVA) was utilized to evaluate categorical variables, such as occupation, offering insights into group-specific attributes. This method facilitated the assessment of the importance of observed variations, informing the acceptance or rejection of the null hypothesis based on empirical evidence. The analyses strengthened the study's rigor, guaranteeing that the findings were statistically valid and pertinent to the research objectives. The researcher employed thematic analysis as the primary method for analyzing data obtained through interviews.

F. Ethical Considerations

The researchers adhered to strict ethical standards to safeguard the privacy and rights of all participants throughout the study. Confidentiality was a top priority, with participants' personal information securely maintained and managed to avert illegal access or exploitation. Informed consent was secured from each participant, confirming their comprehension of the study's goal and their voluntary participation. The researchers guaranteed transparency regarding data usage and granted participants the right to resign from the study at any moment. These indicators facilitated trust between participants and researchers, establishing a respectful and responsible study environment.

The researchers took deliberate steps to uphold academic integrity and ensure the reliability of the study. All references were accurately cited, and plagiarism detection tools were employed to confirm the originality of the research. They adhered to ethical guidelines for the use of AI technologies, applying them responsibly to promote fairness and minimize bias. Robust security measures were implemented to protect sensitive data and prevent breaches or other threats. Additionally, the research environment was carefully designed to minimize risks to both participants and researchers. A thorough evaluation of potential societal impacts was also conducted to prevent negative consequences, ensuring the study's overall trustworthiness and safety.

3. Result and Analysis

A. Impact of Workload Balancing on the Mental Health of Cargo Handlers at the Airport in Metro Manila

The results of the analysis portray mixed perceptions of employees about stress and the effects it has on their mental well-being because of the workload, meaning there is strength and room for improvement. Although the majority of respondents do not believe that the workload is stressful or adversely affects their emotional well-being at a high level as indicated using 2.47 and 2.33, respectively, there is a medium level of consensus that the organization provides adequate support related to mental health. Although a relatively high mean score of 3.33 on the statement that the organization could strengthen initiatives to help cargo handlers manage stress from workload imbalances attests to a clear requirement for better support, it is established findings are within studies that have already recommended organizational support systems as critical for reducing workload-induced stresses, especially in demand-related jobs like logistics and cargo handling.

Workload balancing has a marked impact on psychological well-being based on the data from Metro Manila cargo handlers, which has an overall composite mean of 2.76, indicating general agreement that better support is needed. Employee productivity is affected by factors such as work-related stress, motivation, and the work environment (Kawiana et al., 2023) Cargo handlers work irregular, long hours in a high-stakes environment requiring precision for safety, so stress management and mental health support are important. Programs the organization might have on stress management, workload distribution, and mental health awareness might create a more supportive, responsive work culture to help the employees cope with stress and improve employee well-being, job satisfaction, and retention while maintaining performance and safety standards.

Table 4
Impact of workload distribution on the mental health of cargo handlers at the airport in metro manila

Workload Effects	Mean	Standard Deviation	Interpretation
I often feel stressed because of my professional responsibilities.	2.47	0.92	**Disagree**
My emotional being is affected by my workload	2.33	0.98	**Disagree**
The organization offers adequate mental health support for employees managing heavy workloads	3.20	0.56	**Agree**
There is a way the company could strengthen its initiatives to assist cargo handlers in managing stress from workload imbalances.	3.33	0.72	**Agree**
The workload distribution is having an impact on my mental health over time.	2.47	1.13	**Disagree**
Composite Mean	2.76	0.86	**Agree**

Legend: 3.51 - 4.00 Strongly Agree; 2.51 - 3.50 Agree; 1.51 - 2.50 Disagree; 1.00 - 1.50 Strongly Disagree

B. Respondents Categorized by Age Profile, there is No Significant Difference in the Effectiveness of Workload Balancing Regarding Work Environment, Decision Making, and Communication

Table 5
Respondents categorized by age profile, show no significant difference in the effectiveness of workload balancing regarding work environment, decision making, and communication

Effectiveness on Workload Balancing	Group	Mean	Standard Deviation
Decision Making	30-35 y/o	3.83	0.24
	35 Above y/o	3.56	0.67
Work Environment	30-35 y/o	3.33	0.94
	35 Above y/o	3.19	0.64
Communication	30-35 y/o	3.67	0.47
	35 Above y/o	3.58	0.67

Effectiveness on Workload Balancing	F value	P value	Remarks
Decision Making	3.846	0.542	ACCEPT
Work Environment	0.892	0.702	ACCEPT
Communication	2.563	0.650	ACCEPT

Legend: = or ⬇ 0.05 REJECT; = or ⬇ 0.01 REJECT; ⬆ 0.05 ACCEPT

The data reveals a noteworthy disparity in the perceived effectiveness of workload balancing across different age groups, focusing on decision-making, work environment, and communication. Among respondents aged 30-35, there is a higher perception of effectiveness in decision-making (mean = 3.83, SD = 0.24) compared to those above 35 (mean = 3.56, SD = 0.67). Similarly, respondents in the 30-35 age group feel that the work environment (mean = 3.33, SD = 0.94) and communication (mean = 3.67, SD = 0.47) contribute more positively to workload balancing than their older counterparts, who report slightly lower scores in both areas.

The statistical tests (F and P values) confirm that these differences, while notable, are not statistically significant, with all p-values above 0.05, leading to the acceptance of the null hypothesis. This trend suggests that although younger employees may find the current systems of decision-making, work environment, and communication slightly more effective, there is no significant gap in perception across age groups. Studies such as (Kawiana, et al., 2023), which explore the impact of work environment, stress, and motivation on employee performance, highlight how age can influence these factors in logistics contexts. Similarly, (Morais, et al., 2023) emphasize the role of fatigue management, a concern that tends to vary across age groups, impacting perceptions of workload balance. To further close this gap and enhance workload balance, organizations might focus on targeted strategies for each age group. For example, ensuring age-diverse input in decision-making, tailoring communication styles, and adapting work environments to accommodate varied preferences could promote a more balanced and inclusive approach to workload management.

1) A Significant Relationship in the Effectiveness of Workload Balancing is Observed in Terms of Work Environment, Decision-Making, and Communication When Respondents are Grouped by Their Sex Profile

Table 6
Respondents categorized by sex, show no significant difference in the effectiveness of workload balancing in terms of work environment, decision-making, and communication

Effectiveness on Workload Balancing	Group	Mean	Standard Deviation
Decision Making	MALE	3.64	0.62
	FEMALE	3.00	0.00
Work Environment	MALE	3.19	0.67
	FEMALE	3.00	0.00
Communication	MALE	3.64	0.63
	FEMALE	3.00	0.00

Effectiveness on Workload Balancing	T value	P value	Remarks
Decision Making	1.012	0.343	ACCEPT
Work Environment	0.283	0.786	ACCEPT
Communication	0.988	0.344	ACCEPT

Legend: = or ⬇ 0.05 REJECT; = or ⬇ 0.01 REJECT; ⬆ 0.05 ACCEPT

The findings highlight a notable difference in the perceived effectiveness of workload balancing between male and female respondents, though this difference does not reach statistical significance. However, this difference does not reach statistical significance. Males report higher mean scores across decision-making (mean = 3.64, SD = 0.62), work environment (mean = 3.19, SD = 0.67), and communication (mean = 3.64, SD = 0.63), compared to females who consistently rate each area as 3.00 (SD = 0.00). This Pattern suggests that men may feel somewhat more supported in workload management processes than women do, though the p-values across all categories ($p > 0.05$) indicate that these differences are not statistically significant.

The T-test results, with all p-values beyond 0.05, support the acceptance of the null hypothesis, suggesting no statistically significant gender difference in perceived task balancing effectiveness. Nonetheless, the lower ratings reported among female respondents may signify areas for enhancement. The study conducted by (Kawiana, et al., 2023) on the impact of work environment, stress, and motivation in logistics corroborates these findings, highlighting that stressors such as excessive workloads, stringent deadlines, and inadequate communication can diminish employee performance. Strategic interventions to optimize workload equity across genders may encompass actions such as augmenting inclusive communication channels, evaluating workload allocation methodologies, and providing resources that tackle potential gender-specific obstacles in task administration.

2) A Significant Relationship in the Effectiveness of Workload Balancing is Observed in Terms of Work Environment, Decision-Making, and Communication when Respondents are Grouped by their Occupation Profile

Table 7
Respondents categorized by gender show no significant difference in the effectiveness of workload balancing in terms of work environment, decision-making, and communication

Effectiveness on Workload Balancing	Group	Mean	Standard Deviation
Decision Making	AOM	3.72	0.25
	DO/FF	3.22	0.21
	CH	3.67	0.24
Work Environment	AOM	3.44	0.23
	DO/FF	2.67	0.18
	CH	3.17	0.21
Communication	AOM	3.78	0.25
	DO/FF	3.33	0.22
	CH	3.56	0.24

Effectiveness on Workload Balancing	F value	P value	Remarks
Decision Making	1.202	0.52	ACCEPT
Work Environment	1.907	0.32	ACCEPT
Communication	0.532	0.613	ACCEPT

Legend: = or ⬇ 0.05 REJECT; = or ⬇ 0.01 REJECT; ⬆ 0.05 ACCEPT
- AOM: Air Operations Manager
- DO/FF: Deliver Officers/Freight Forwarder
- CH: Cargo Handler

The findings on workload balancing show that different groups have varied perceptions of decision-making, work environment, and communication. The mean scores indicate agreement on decision-making effectiveness, with AOM scoring the highest at (mean = 3.72, SD = 0.25), indicating a slightly stronger sense of support in workload management through decision-making.

However, the work environment received lower scores, especially from DO/FF at (mean = 2.67, SD = 0.18), highlighting some challenges in this area.

In contrast, communication CH respondents rated it slightly higher (mean = 3.56, SD = 0.24) than others, reflecting that they may feel more positively about communication's role in balancing workloads.

The statistical analysis, with all p-values above 0.05, confirms no significant differences in perceptions among the groups, as indicated by the acceptance of the null hypothesis. However, the slight differences observed could signal specific areas for targeted improvement. Overall, the positive responses suggest a good understanding of workload balancing, but they also point out the need for improvements in the work environment. Strong communication and decision-making are seen as key strengths. Research supports these findings, showing that a positive work environment boosts job satisfaction and reduces burnout (Smith & Jones, 2022). To address these challenges, organizations should work on improving the work environment and enhance training for decision-making and communication skills to better support employees.

C. Factors Influencing the Management of the Complex Task of Workload Balancing Include Natural Catastrophes and Variations in Weather Conditions

The findings emphasize the importance of adaptability and proactive planning in managing workloads during natural disasters and weather changes, especially for cargo handlers. In the context of natural catastrophes, employees strongly agree (composite mean = 3.75, SD = 0.44) on the need to prioritize safety, adapt swiftly to changing weather, coordinate with others, and efficiently manage workloads, only exceeding scheduled time if unforeseen events arise. This indicates a unified commitment among cargo handlers to prioritize safe and effective operations, even under challenging conditions.

In dealing with weather variations, responses show agreement (composite mean = 3.49, SD = 0.66) on the importance of regular evaluation, monitoring, and coordination with teams to ensure continuity in cargo operations. For instance, Morais et al. (2023) identified that fatigue significantly reduces ramp workers' performance and alertness, increasing the risk of accidents. Additionally, Bulduk et al. (2017) highlighted how work-related stress affects job satisfaction among aircraft baggage handlers. Despite facing disruptions from weather shifts, cargo handlers emphasize the need for close communication and preemptive adjustments to manage workloads effectively.

The grand mean (3.62, SD = 0.55) reinforces an overall strong agreement on the importance of safety and adaptability, suggesting that developing further resources for real-time weather monitoring, communication, and flexibility in scheduling could help cargo handlers better manage workload demands during adverse weather or natural disasters.

Table 8
Cargo handlers effectively managed the complex task of balancing workloads, particularly when faced with unexpected challenges like weather variations or natural disasters

Workload Effects	Mean	Standard Deviation	Interpretation
Natural Catastrophes			
I must prioritize safety as a primary responsibility during cargo operations as a cargo handler	3.67	0.49	**Strongly Agree**
I must be capable of adapting to sudden changes in weather conditions and be proactive in planning alternative solutions to ensure cargo is handled safely and efficiently.	3.80	0.41	**Strongly Agree**
I must be adaptable in making adjustments and coordinating with others, as we must oversee the safe handling and transport of cargo.	3.80	0.41	**Strongly Agree**
I must manage my workload efficiently and only exceed the allotted time if unexpected events, such as weather changes or natural disasters, occur.	3.73	0.46	**Strongly Agree**
Composite Mean	3.75	0.44	**Strongly Agree**
Weather Variations			
I should consistently evaluate and adjust to shifting conditions to maintain safe and efficient cargo operations while minimizing any disruptions.	3.40	0.63	**Agree**
I should regularly monitor weather conditions, such as thunderstorms or typhoons, to anticipate disruptions in air cargo operations and ensure the safe handling and timely movement of goods.	3.40	0.63	**Agree**
I understand weather changes can significantly affect cargo scheduling and moving, often disrupting operations.	3.67	0.62	**Strongly Agree**
I coordinate with ground crew and other personnel to share weather information, discuss necessary adjustments to cargo handling, and plan responses to weather challenges.	3.47	0.74	**Agree**
Composite Mean	3.49	0.66	**Agree**
Grand Mean	3.62	0.55	**Strongly Agree**

Legend: 3.51 - 4.00 Strongly Agree; 2.51 - 3.50 Agree; 1.51 - 2.50 Disagree; 1.00 - 1.50 Strongly Disagree

D. Factors Affecting the Effectiveness of Workload Balancing Include the Work Environment, Decision-Making Processes, and Communication

The analysis highlights that decision-making, work environment, and communication play crucial roles in managing workloads, especially during natural disasters and weather changes. Aircraft ground handling is a crucial component of airline operations. While ground handling tasks are typically straightforward, they can become highly complex in certain circumstances, such as challenging cargo loading and unloading situations, adverse weather conditions, or equipment malfunctions and breakdowns (Sheibani, 2020). In the decision-making category, responses indicate a strong consensus (composite mean of 3.60, SD = 0.62) that timely and inclusive decision-making is essential for effective workload management. Employees feel that involving them in decisions, particularly during busy or disruptive periods, contributes to better workload balance. Similarly, in the work environment category, results show an agreement (composite mean of 3.18, SD = 0.65) that flexible work arrangements, like remote work, offer flexibility, it also brings challenges in balancing tasks effectively.

Table 9
Factors affect the effectiveness in workload balancing of cargo handlers at the airport in metro manila

Workload Effects	Mean	Standard Deviation	Interpretation
Decision Making			
The timing of decisions can significantly influence workload balance.	3.47	0.64	**Agree**
Involving employees in decision-making is important for managing workloads effectively.	3.73	0.59	**Strongly Agree**
Making timely decisions is key to maintaining balanced air cargo workloads, especially during busy periods or unforeseen disruptions.	3.60	0.63	**Strongly Agree**
Composite Mean	3.60	0.62	**Strongly Agree**
Work Environment			
Physical workspace such as office work and remote work, are influential in workload distribution.	3.33	0.62	**Agree**
My management of workloads is challenging due to my current work environment.	3.07	0.70	**Agree**
Balancing workloads are affected by flexible work environments such as remote work.	3.13	0.64	**Agree**
Composite Mean	3.18	0.65	**Agree**
Communication			
Transparency in communication is crucial when distributing workloads.	3.60	0.63	**Strongly Agree**
General feedback and communication from leadership can be impactful on workload balancing.	3.53	0.64	**Strongly Agree**
Better communication in all departments significantly balanced the workload on all departments more effectively.	3.67	0.62	**Strongly Agree**
Composite Mean	3.60	0.63	**Agree**
Grand Mean	3.46	0.63	**Agree**

Legend: 3.51 - 4.00 Strongly Agree; 2.51 - 3.50 Agree; 1.51 - 2.50 Disagree; 1.00 - 1.50 Strongly Disagree

In communication, the results (composite mean of 3.60, SD = 0.63) underscore the importance of transparent communication across all of the organization for maintaining balanced workloads. Clear, open communication from leadership fosters a better understanding and helps employees manage workloads more efficiently, especially in demanding times. With a grand mean of 3.46 (SD = 0.63), the overall trend suggests that while decision-making, work environment, and communication are positively influencing workload management, there is room for the environment. This disruption

has taken many directions, one of which is the demand imbalance which occurs due to the sudden change in the cargo capacity, as well as demand (Shaban, I. A., Chan, F. T. S., & Chung, S. H. (2021). Encouraging timely feedback, flexible workspace adaptations and inclusive decision-making could further support employees in effectively managing workloads during high-pressure situations.

E. Strategies Employed to Prevent Cargo Handling from Negatively Impacting the Planned Operations of Logistics Flights Include Various Approaches and Methods

Table 10
Strategies used to ensure that cargo handling does not disrupt the scheduled operations of logistics flights include effectively managing the complex task including various approaches and methods

Workload Effects Strategies	Mean	Standard Deviation	Interpretation
There is an optimized process for loading and unloading cargo that supports both short-haul and long-haul flights in Metro Manila.	3.27	0.59	Agree
I use a specific approach to prioritize cargo handling operations in Metro Manila to prevent disruptions to flight schedules, especially during peak demand periods.	3.33	0.72	Agree
I incorporate situational awareness from collaborative decision-making into cargo handling operations in Metro Manila.	3.33	0.62	Agree
I use situational awareness to identify and resolve potential challenges in cargo handling at Metro Manila airports before they become major issues.	3.20	0.41	Agree
I use a specific strategy to improve the predictability of cargo handling operations in Metro Manila.	3.47	0.64	Agree
Composite Mean	3.32	0.60	Agree

Legend: 3.51 - 4.00 Strongly Agree; 2.51 - 3.50 Agree; 1.51 - 2.50 Disagree; 1.00 - 1.50 Strongly Disagree

The efficacy of cargo handling activities is vital in the logistics sector, especially for guaranteeing the smooth operation of scheduled aircraft. Efficient workload balancing solutions are essential for navigating the difficulties of cargo operations, particularly in dynamic airport environments where unforeseen challenges often occur. This study examines the strategies implemented to prevent cargo handling from interfering with the scheduled operations of logistics flights, concentrating on the diverse methods and techniques applied by cargo handlers. These techniques tackle several issues, encompassing external influences like climatic fluctuations and natural calamities, along with internal operational inefficiencies. Table 3.5 demonstrates that the mean scores and standard deviations underscore the perceived efficacy of these tactics among cargo handlers, with a composite mean of 3.32 reflecting a consensus on their significance. The individual scores indicate a robust agreement on enhancing cargo loading and unloading procedures, emphasizing operations during peak demand, and utilizing situational awareness, with the lowest mean score about the identification of potential challenges, highlighting areas for improvement.

The examined literature corresponds with the results of this study, highlighting the importance of efficient task-balancing solutions. Diefenbach et al., (2023) emphasize the importance of process enhancement and ergonomics in air freight handling, illustrating that optimized procedures improve operational efficiency. Bulduk et al., (2017) investigated the effects of job satisfaction and risk variables on luggage handlers, demonstrating that efficient workload management enhances employee performance and satisfaction. Morais et al., (2023) examined fatigue management among ramp workers, highlighting the importance of situational awareness to enhance job performance. The study by Vanheusden et al., (2022) examines workload balancing measures in order-picking operations, emphasizing that successful solutions are essential for operational efficiency and employee well-being. This research collectively indicates that the measures outlined in Table 3.5 optimizing cargo handling processes, prioritizing activities, and employing situational awareness are crucial for improving operational performance and cultivating a supportive work environment for cargo handlers.

1) The Significance Levels of Various Comparisons Between Groups Related to Mental Health, Unexpected Events, Workload Balancing, and Strategies

Table 11
Significance levels of group comparisons related to mental health, workload balancing, unexpected events, and strategies

Groups Compared	Significance
Mental Health & Workload Balancing	0.012*
Unexpected Events & Workload Balancing	0.006**
Unexpected Events & Strategies	0.018*
Workload Balancing & Strategies	0.004**

Legend: * with significant difference: ** with very significant differences

This analysis examines the correlation among mental health, unexpected events, strategies, and Workload Balancing within the logistics and aviation cargo handling industries. Notable correlations were observed, especially the robust associations between mental health and task management ($p = 0.012$) and unforeseen circumstances ($p = 0.006$). The findings indicate that good management practices are crucial for alleviating pressures associated with professional duties. The literature corroborates this, especially in (Diefenbach, et al., 2023), which underscores the importance of optimizing processes to improve ergonomics and employee satisfaction in air freight handling.

The comparison between unexpected events and workload balancing reveals a very significant difference ($p = 0.006$), suggesting that sudden disruptions heavily impact how workload is managed. Similarly, the link between unexpected events and strategies is significant at ($p = 0.018$), pointing to the importance of having effective strategies to handle unforeseen

circumstances. Finally, the relationship between workload balancing and strategies is highly significant ($p = 0.004$), underscoring the critical role of strategic planning in ensuring a balanced workload. Overall, the analysis emphasizes the interconnected nature of these factors and the importance of strategies and workload management in mitigating the impact of unexpected events and maintaining mental health.

F. Sex Differences can Influence Cargo Handlers' Ability to Effectively Balance their Workload During Scheduled Logistics Flights

Table 12
Sex differences: their effect on logistics task performance and workplace relationships

Master Theme	Superordinate Theme
Differences in physical strength or stamina between men and women can impact cargo handlers' performance in high-pressure logistics tasks	Physicality
The differences in coping strategies between men and women play a significant role in managing stress and workload during scheduled logistics flights.	Physical and Emotional Nourishment
Sex differences can influence teamwork and collaboration when balancing the workload for scheduled flights.	Healthy Work Environment

Master Theme: Differences in physical strength or stamina between men and women can impact cargo handlers' performance in high-pressure logistics tasks

Superordinate Theme: Physicality

Informant 1: "So, I think the most basic answer here is that, generally, men are more on the physical side…"

Informant 2: "Men are stronger, more agile, and faster than women."

Informant 3: "Men can carry more heavy cargo than women."

In high-pressure logistics environments, differences in physical strength and stamina between men and women can significantly impact team dynamics and performance. The demands of cargo handling, particularly in fast-paced and physically intense situations, require a level of strength and endurance that can affect how tasks are assigned and executed (Amornpipat, 2020). This dynamic is reflected in the experiences and perceptions of those involved in logistics, where physical capability often becomes a focal point when discussing task efficiency and workload distribution. Interviewees in this study highlighted a consistent view that men are generally seen as having an advantage in terms of physical strength, agility, and speed, influencing how they are perceived and utilized within these roles.

The notion that men are typically stronger and more suited to physically demanding tasks, such as lifting heavy cargo, surfaced repeatedly among the interviewees. For instance, one participant mentioned that men are "more on the physical side," while another stated that men are "stronger, more agile, and faster." These comments underline a commonly held belief that physical attributes are a primary factor in determining the suitability for specific roles in logistics, especially under high-pressure conditions (Diefenbach et al., 2023). Such perceptions are not only rooted in biological differences but also reflect a traditional view of gender roles in the workplace.

This tendency to view men as more physically capable can lead to a division of labor where heavier and more strenuous tasks are assigned predominantly to men (Bulduk et al., 2017). While this may optimize short-term efficiency, it raises questions about the long-term implications for team dynamics, the inclusion of women in physically demanding roles, and potential biases that might limit opportunities for female cargo handlers. It also prompts further examination of how training, technology, and support mechanisms might mitigate these differences, allowing for a more balanced and equitable distribution of tasks. Ultimately, the emphasis on physicality as a determinant in logistics performance highlights the need to critically evaluate and, where possible, adapt work practices to leverage the strengths of all team members, regardless of gender.

Master Theme: The differences in coping strategies between men and women play a significant role in managing stress and workload during scheduled logistics flights.

Superordinate Theme: Physical and Emotional Nourishment

Informant 1: "... I think we could agree that one of the best coping strategies is eating,…"

Informant 2: "Always do the team work."

Informant 3: "In my experience, men cope with their stress by eating free meals and enjoy talking to their co-workers."

In the context of managing stress and workload during scheduled logistics flights, coping strategies can differ significantly between men and women. These differences often influence how individuals handle high-pressure environments, particularly in the aviation industry, where balancing physical and emotional demands is crucial (Bulduk, et al,. 2017). A common theme emerging from interviews highlights how strategies such as food consumption and social interaction play a central role in stress management. The focus on physical and emotional nourishment serves as a key aspect of how personnel maintain their well-being during demanding tasks, underscoring the importance of effective stress relief in maintaining operational efficiency.

The interviews reveal a noticeable pattern in coping mechanisms, with many men reportedly turning to physical nourishment primarily eating as a way to alleviate stress. This behavior is evident in Interviewee 1's emphasis on food as a comforting strategy and Interviewee 3's observation that men often cope by consuming meals and socializing with colleagues. This reliance on food suggests that physical sustenance serves as an accessible and immediate form of relief, helping individuals manage the physical demands of their workload while fostering camaraderie among team members (Amornpipat, 2020). It highlights the dual role of eating as both a stress reliever and a social activity, which can improve morale and teamwork.

On the other hand, Interviewee 2's response emphasizes the importance of teamwork, suggesting that collaboration plays a vital role in coping with stress for both genders. This approach aligns with the notion of emotional nourishment, where interpersonal support becomes a key strategy for stress management. Teamwork enables individuals to share the workload, fostering a sense of unity and mutual reliance. This dual focus on physical and emotional nourishment underscores the complex ways in which coping strategies intersect with gender differences. While men may favor tangible coping mechanisms like eating, teamwork offers a more collective form of stress relief, highlighting the diverse yet complementary strategies used to maintain equilibrium in high-stress environments.

Master Theme 3: Sex differences can influence teamwork and collaboration when balancing the workload for scheduled flights.

Superordinate Theme: Healthy Work Environment

Informant 1: "... doesn't really, or it does affect teamwork and collaboration,…"

Informant 2: "Always do the team work."

Informant 3: "By enjoying their job."

Sex differences can play a role in shaping the dynamics of teamwork and collaboration in the aviation industry, particularly when it comes to balancing the workload for scheduled flights. The importance of fostering a healthy work environment is crucial, as a harmonious atmosphere can directly impact how effectively teams manage their tasks. In interviews with aviation professionals, varying perspectives highlight the nuances of how gender can influence the workplace. While some argue that sex differences have a minimal impact, others emphasize the role of cooperation and job satisfaction in achieving successful teamwork.

Informant 1 noted ambiguity in the impact of sex differences, suggesting that while gender might not significantly disrupt teamwork, it does have some influence under certain conditions. This reflects the idea that while physical or interpersonal differences exist, they don't necessarily hinder effective collaboration. Informant 2's focus on consistent teamwork highlights the industry's emphasis on unity, suggesting that mutual support is valued above individual differences. This aligns with the principle of maintaining a healthy work environment, where diverse skills and strengths are utilized to achieve shared goals (Kawiana, et al,. 2023). Informant 3's comment about enjoying their job underscores the importance of morale and job satisfaction in fostering a positive work culture. A healthy work environment encourages employees to appreciate their roles, minimizing the impact of potential gender-based challenges. By prioritizing collaboration, aviation teams can navigate any subtle differences, promoting an inclusive and efficient workplace where all team members feel valued (Amornpipat, 2020). The emphasis on teamwork and a positive work atmosphere indicates that the industry recognizes the need for balance and understanding, allowing diverse individuals to contribute equally to flight operations.

4. Discussion

A. Conclusions

Based on the results and analysis, the following were concluded:

1. The study shows that the analysis in Metro Manila cargo handlers generally do not perceive their workload as highly stressful or detrimental to their emotional well-being. There is a clear need for improved organizational support in managing work-related stress and mental health. The data highlights in the result and analysis employees acknowledge the importance of better workload balancing and stress management initiatives to enhance their psychological well-being and overall job satisfaction. Given the demanding nature of the job, with long and irregular hours in a high-pressure environment, fostering a supportive work environment with programs focused on stress reduction, mental health awareness, and workload distribution is crucial for improving employees wellbeing, productivity, and retention, while also ensuring safety and performance standards are met.
2. The study highlights the impact of decision-making, work environment, and lastly, communication in workload management in aircraft ground handling, especially in the disruptions caused by natural disasters or weather disruptions. On the other hand, during cargo issues, failure in equipment, and imbalance demand, ground handling becomes complex. The findings indicate that timely decision-making (mean = 3.60), flexible work arrangements (mean = 3.18), and transparent communication (mean = 3.60) positively influence workload balance (grand mean = 3.46). The study emphasizes the positive impact of these factors; however, it identifies the areas where they should be improved or enhanced when it comes to workload balance while in high-pressure situations.
3. The results indicate that cargo handlers excel in

managing workloads with unexpected challenges such as natural disasters and weather variations by prioritizing safe measures and adopting adaptive measures. It focuses on teamwork, proactive plans, and effective communication that enables smooth cargo operations despite disruption. Natural disasters need safety precedence and quick adjustment, as shown by a composite mean of 3.75, embodying the concerted effort to handle the task safely and effectively. Like weather changes, which need monitoring and consultation, a composite mean of 3.49 depicts agreement towards these practices. Even though cargo handlers feel fatigued and work under pressure, they always point out precautionary adjustments and mutual working to help in dealing with problems. The grand mean of 3.62 supports a strong consensus to call for increased security safety and adaptability; this means the attributes are essential in keeping operational resilience levels up and running.

4. The study concludes that decision-making, work environment, and communication collectively play a crucial role in the effectiveness of workload balancing in cargo handling operations. Timely and inclusive decision-making empowers employees to address high-pressure situations effectively, while a supportive work environment characterized by flexible arrangements, ergonomic tools, and stress management initiatives mitigates fatigue and enhances overall performance. Transparent and efficient communication ensures seamless collaboration, enabling teams to manage workloads efficiently even during disruptions. Together, these factors create a cohesive system that promotes operational efficiency, employee well-being, and organizational resilience.
5. It highlights the importance of effective cargo handling strategies in ensuring smooth logistics flight operations. Key strategies, such as workload balancing, situational awareness, and process optimization, are crucial in minimizing disruptions from both internal and external factors. The findings indicate that cargo handlers recognize the value of improving loading/unloading procedures and managing peak times. The literature supports these conclusions, emphasizing the need for ergonomics, fatigue management, and risk mitigation to enhance operational efficiency and employee well-being.
6. The results indicate that while sex differences may subtly influence teamwork and coping mechanisms, these factors do not significantly hinder the ability to balance workloads during scheduled logistics flights. Both male and female respondents highlight the importance of mutual respect, collaboration, and enjoying one's work in fostering a harmonious team dynamic. Establishing a culture of inclusivity and providing equal opportunities for professional development can ensure that all employees contribute effectively to operations, regardless of gender, creating a resilient and supportive workplace environment.

B. Recommendations

Based on the discussed conclusions, the recommendations are as follows:

1. The institution and companies that have cargo handling in Metro Manila should prioritize the implementation of comprehensive stress management and mental health support programs. These initiatives should include regular mental health awareness workshops, access to counseling services, and training for managers to recognize and address stress-related concerns among employees. Also, they should consider implementing strategies for better workload balancing, such as more flexible scheduling, task rotation, and a review of staffing levels during peak and lean seasons. This would help reduce the pressure on individual workers, ensuring that no one is overwhelmed by the demands of their role. Focusing on employee health would not only improve job satisfaction but also enhance overall productivity and safety standards.
2. Current and Future Cargo handlers should enhance communication skills in high-pressure situations to improve collaboration and clarity. Implement timely feedback systems, flexible workspaces, and remote work policies to meet operational demands. Additionally, provide specialized training for high-pressure workload management.
3. To improve their adaptability, a strategy may have to be implemented that enhances the response resilience to adverse events of the cargo operation. Aviation students and future researchers could play a key role in researching and analyzing how real-time monitoring tools for weather can enhance the ability to predict and respond effectively to adverse situations. Investment in such tools is essential for the efficient management of these events. Training programs focused on adaptability, proactive problem-solving, and stress management should be regularly presented to enhance their skills in managing workloads. Strengthening communication systems between team members and appropriate staff will ensure the swift and correct transmission of critical information promptly. Implementing flexible systems for scheduling during crises is advocated to redistribute workloads and prevent fatigue, hence maintaining operational efficiency. In addition, the reassessment and strengthening of safety protocols according to best practices will better prepare cargo handlers to handle unforeseen challenges. This will enable them to

efficiently perform their functions, ensuring smoothness, continuity, and safety in operations, even during strikes caused by natural disasters or extreme weather conditions.

4. Companies should implement an integrated approach to improve workload balancing by addressing decision-making, work environment, and communication simultaneously. This includes deploying decision-support tools for real-time data analysis, investing in ergonomic equipment to enhance the physical environment, and standardizing transparent communication protocols for consistency. Additionally, training programs on adaptive decision-making, stress management, and collaborative communication should be conducted to ensure employees are equipped to handle high-pressure scenarios effectively, fostering a productive and resilient workforce.
5. Institutions and companies should focus on training programs to improve situational awareness and stress management, optimize processes with automation and tracking tools, and invest in ergonomic solutions and fatigue management. Strengthening risk management and using data analytics to predict demand and bottlenecks can improve resource allocation. Having better communication among all stakeholders will help ensure effective responses to operational challenges, leading to more efficient and reliable logistics operations.
6. Companies should establish a culture of inclusivity by providing equal opportunities for professional growth and recognizing the contributions of all employees, regardless of gender. Implementing mentorship programs, offering gender-sensitivity training, and creating channels for employee feedback will empower individuals to excel in their roles. Additionally, organizations should highlight the importance of enjoying one's work by recognizing achievements, celebrating milestones, and promoting a positive workplace culture to enhance job satisfaction and employee retention.

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