

A Structural Equation Model on the Capabilities of the Bureau of Fire Protection in Emergency Response in Relation to Job Satisfaction, Motivation, and Training

Aiza A. Edon*, Nestor C. Nabe
University of Mindanao, Davao City, Philippines

*Corresponding Author Email: edonaiza731@gmail.com

Date received: June 2, 2025
Date revised: July 8, 2025
Date accepted: July 29, 2025

Originality: 89%
Grammarly Score: 99%
Similarity: 11%

Recommended citation:

Edon, A., & Nabe, N. (2025). A Structural Equation Model on the capabilities of the Bureau of Fire Protection in emergency response in relation to job satisfaction, motivation, and training. *Journal of Interdisciplinary Perspectives*, 3(8), 900–907. <https://doi.org/10.69569/jip.2025.527>

Abstract. This study developed a structural equation model to examine the capabilities of the Bureau of Fire Protection (BFP) in emergency response, focusing on job satisfaction, motivation, and training among 400 BFP personnel in Region 12. Employing a non-experimental quantitative approach using a descriptive-correlational design, the study utilized weighted means, Pearson's *r*, linear regression, and structural equation modeling for data analysis. Results revealed that BFP personnel in the region possess a very high level of emergency response capability, covering both firefighting and emergency medical services. Similarly, very high levels of job satisfaction, motivation, and training adequacy were reported. Significant positive correlations were established between emergency response capabilities and the three factors, with motivation emerging as the strongest predictor in the best-fit model (Model 3). These findings have practical implications for organizational development, underscoring the importance of prioritizing personnel motivation as a strategic lever to enhance emergency response effectiveness. Additionally, the results support theoretical frameworks that posit motivation and job satisfaction as critical drivers of performance in high-stakes service sectors. The study contributes to a more nuanced understanding of how internal organizational factors dynamically interact to influence frontline emergency capabilities, offering a data-driven basis for training and human resource interventions in the public safety sector.

Keywords: Criminal justice; BFP personnel; Job satisfaction; Motivation; Training; Structural equation model

1.0 Introduction

The Bureau of Fire Protection (BFP) serves as the country's frontline agency in addressing fire-related emergencies and disasters. As first responders, their ability to manage crises efficiently is crucial not only for saving lives and property but also for ensuring public confidence in emergency response systems. However, the increasing frequency of disasters, both natural and artificial, has amplified the demand for a responsive and capable fire service. This scenario highlights the need to examine the internal and external factors influencing the BFP's capabilities in emergency response. Among these factors, job satisfaction, motivation, and training are frequently cited in literature as influential to organizational performance, especially in high-risk public service professions (Dagher, Boustani, & Khneyzer, 2024).

Several studies have examined job satisfaction and motivation in public sector organizations. Herzberg's Two-Factor Theory and Maslow's Hierarchy of Needs have long been established as relevant in understanding employee performance. In the context of emergency responders, a study by Jang & Kim (2025) found that intrinsic

motivation significantly contributes to job efficiency during high-pressure situations. Similarly, research conducted by Arshaad & Naz (2023) in Pakistan's fire service suggested that employee satisfaction correlates positively with faster response times and more accurate decision-making in emergencies. Meanwhile, ongoing training has been recognized as vital in building competence and confidence among fire officers, as evidenced by Singh's (2023) work, which emphasizes that training fosters both technical capability and morale.

Despite the rich literature on public service motivation, job satisfaction, and professional training, there remains a paucity of integrative models that account for their simultaneous impact on emergency response capabilities. While some studies assess these variables independently, few attempt to examine their interrelationships within a single analytical framework (Bartoloni & Ancillai, 2024). Moreover, previous research often lacks contextual specificity to the Bureau of Fire Protection in the Philippines, whose institutional structure, resource constraints, and organizational culture differ significantly from those of fire services in developed nations. This lack of localized, holistic analysis represents a critical gap in both academic and policy discussions.

To address this gap, the present study proposes a Structural Equation Model (SEM) to examine the interplay of job satisfaction, motivation, and training on the emergency response capabilities of BFP personnel. The SEM approach enables the simultaneous assessment of both direct and indirect relationships among multiple variables, making it well-suited for capturing the complexity of human behavior in organizational settings (Li, M., & Li, B., 2024). Through this model, the research aims to determine the extent to which these factors affect emergency response performance, and whether enhancements in one domain (e.g., training) may mediate or amplify effects in another (e.g., motivation).

This study is significant for both academic and practical reasons. It aims to contribute to the existing literature by providing an integrated, empirical framework tailored explicitly to the BFP context. Practically, it will provide policymakers, administrators, and training officers with actionable insights into how to strengthen emergency response systems by addressing internal personnel factors. By clarifying the interdependent roles of satisfaction, motivation, and training, this research aims to support the development of a more competent, responsive, and resilient Bureau of Fire Protection.

2.0 Methodology

2.1 Research Design

This study employed a descriptive-correlational research design, which is appropriate for examining relationships between variables without manipulation (Creswell, 2021). The design was selected to explore the interconnections between job satisfaction, motivation, training, and the emergency response capabilities of Bureau of Fire Protection (BFP) personnel. Descriptive research enabled a systematic and accurate portrayal of the participants' experiences and perceptions, while the correlational component allowed for the identification of statistically significant relationships and underlying patterns among the variables (Kim et al., 2017; Zakhidov, 2024). To further examine the complexity of these relationships, Structural Equation Modeling (SEM) was employed. SEM is a multivariate statistical technique used to test and estimate causal relationships between observed and latent variables based on theoretical assumptions (Mueller et al., 2018). The SEM procedure in this study followed several key stages: model specification, in which the hypothesized relationships among constructs were outlined; model identification and estimation, which involved using maximum likelihood estimation to derive parameter estimates; and model testing and evaluation, wherein model fit was assessed using standard goodness-of-fit indices such as the Chi-square test, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI). Based on these results, model modifications were conducted until the best-fitting model (Model 3) was achieved, capturing the strongest and most significant predictors of emergency response capability.

2.2 Research Participants

To ensure feasibility and reduce logistical challenges, the study focused on non-commissioned BFP personnel within Region 12 who had served for at least five years. Participants were selected from key locations, including Sultan Kudarat, South Cotabato, North Cotabato, Sarangani, and the General Santos City Fire Station. The inclusion criteria encompassed both male and female personnel, regardless of age, holding the ranks of Fire Officer 2 to Senior Fire Officer 4. These ranks represent the operational core of city and municipal fire stations and are directly engaged in frontline emergency response. Participation required informed consent and a willingness to participate in the study. Exclusion criteria included commissioned officers, personnel who were off-duty or

unavailable during data collection, and those who did not meet the required rank or years of service. Withdrawal criteria applied to responses that were not personally answered, appeared copied or duplicated, or came from participants who violated confidentiality agreements or chose to discontinue participation. Ethical considerations were strictly observed throughout the research process, including voluntary participation, confidentiality of data, and respect for the professional responsibilities of the participants.

2.3 Research Instrument

The research instrument was a self-administered survey questionnaire adapted and modified from validated tools in previous scholarly works. It comprised four main parts designed to measure the key variables of the study. The first part, adapted from El Sayed (2012), assessed emergency response capabilities, with a focus on firefighting operations and emergency medical services. The second part, based on Mishra's (2013) work, measured job satisfaction using indicators such as compensation and benefits, working conditions, interpersonal relationships, supervision, policies, and recognition. The third part, drawn from Bjorklund (2001), evaluated work motivation through affective, continuance, and normative dimensions. The final part, adapted from Yaqub and Singh (2022), assessed training practices, including training needs assessment, selection of trainees, training design, and training outcomes. All items were rated using a five-point Likert scale, with interpretations ranging from "very low" (1.00–1.79) to "very high" (4.20–5.00).

To ensure the reliability of the instrument, a pilot test was conducted among a similar group of respondents who were not included in the final study. The internal consistency of each section was evaluated using Cronbach's alpha. The results showed high reliability coefficients: 0.91 for emergency response capability, 0.88 for job satisfaction, 0.90 for motivation, and 0.87 for training, all of which exceed the acceptable threshold of 0.70. These findings confirmed the internal consistency and reliability of the survey instrument. All procedures related to data collection and analysis adhered to ethical research standards and academic integrity.

2.4 Data Gathering Procedure

To gather the data, permission to conduct the research was obtained from the University of Mindanao Ethics Review Committee and the Dean of the University of Mindanao Professional Schools. Survey questionnaires were reproduced based on the number of identified respondents, and a formal request letter signed by both the adviser and the dean was submitted to the BFP Regional Office, Region 12. A specific schedule was prepared for the collection and retrieval of the questionnaires, which were conducted in the early months of 2025. Data collection involved the gradual administration, retrieval, collation, and tabulation of responses, followed by a screening process to eliminate potential outliers prior to analysis. Once this was completed, the responses were encoded, tabulated, and statistically analyzed.

2.5 Data Analysis

Various statistical tools were employed in this study to ensure a comprehensive and precise analysis of the research questions. To examine the relationships among the variables, the Pearson Product-Moment Correlation (Pearson r) was applied to assess whether a significant relationship exists between the exogenous variables—job satisfaction, motivation, and training—and the endogenous variable, which is the capability of BFP personnel in responding to emergencies. This correlation technique is suitable for determining the degree of relatedness between variables measured at the interval level. Furthermore, Stepwise Multiple Regression Analysis was employed to identify which among the exogenous variables significantly predicts the emergency response capability of the non-commissioned officers. Finally, Structural Equation Modeling (SEM) was conducted to explore and determine the best-fit model that explains the interrelationship among the study variables, particularly the emergency response capability of BFP Region 12 personnel.

2.6 Ethical Considerations

The researcher strictly adhered to ethical standards throughout the study's conduct, following the University of Mindanao Ethics Review Committee's protocol number 2023-019. Voluntary participation was ensured, allowing respondents to participate freely without any penalty or loss of benefits. Respondents were fully informed about the time commitment required for answering the questionnaire. They were encouraged to respond honestly, with the purpose and benefits of the study clearly explained to the participating fire stations and offices in BFP Region 12. Privacy and confidentiality were strictly observed, with careful handling and retrieval of the questionnaires to ensure that individual names and responses remained inaccessible to other non-commissioned officers or colleagues. Informed consent was obtained both from the institution and the individual respondents as a

demonstration of respect for their autonomy. The study posed no physical, psychological, or socio-economic risks to participants. On the contrary, it offered valuable benefits by providing insights into the emergency response capabilities of non-commissioned officers and the relationship between job satisfaction, motivation, and training, contributing a model that can be utilized by BFP Region 12 and the broader organization to improve operational efficiency and personnel development.

3.0 Results and Discussion

3.1 Perceived Capabilities of Responding to Emergencies

Table 1 presents the capabilities of BFP Region 12 in responding to emergencies, measured through two key indicators: firefighting operations and emergency medical services. The results yielded an overall mean rating of 4.60 with a standard deviation of .416, indicating a very high level of capability among BFP personnel. Both indicators – firefighting operations and emergency medical services – each recorded a mean of 4.60, with standard deviations of 0.434 and 0.445, respectively. These findings suggest that BFP personnel consistently demonstrate strong emergency response capabilities, including the proper use of Personal Protective Equipment (PPE), thorough fire suppression efforts, and adherence to standard protocols during emergencies, such as EMS operations and decontamination procedures. The study's results align with existing literature, including Sedlár (2020), which highlights the crucial role of training and preparedness in enhancing the effectiveness of firefighting and emergency medical response teams.

Table 1. *Level of capabilities of responding to emergencies*

Indicators	SD	Mean	Interpretation
Firefighting Operations	.434	4.60	Very High
Emergency Medical Services	.445	4.60	Very High
Overall	.416	4.60	Very High

3.2 Perceived Job Satisfaction

Table 2 presents the data on job satisfaction among BFP Region 12 personnel, assessed through four indicators: compensation and benefits, working conditions and work itself, interpersonal relationships and supervision, and policies and recognition. The overall mean rating of 4.40 with a standard deviation of .577 indicates a very high level of job satisfaction. Among the indicators, interpersonal relationships and supervision scored the highest, with a mean of 4.50 and a standard deviation of 0.570, followed by compensation and benefits, with a mean of 4.23 and a standard deviation of 0.779, both categorized as very high. These findings support the literature on the positive impact of job satisfaction on employee performance and morale. Thant and Chang (2021) emphasized that factors such as interpersonal relationships, working conditions, and recognition are significant contributors to job satisfaction. Quader (2024) emphasized the importance of adequate supervision and positive interactions in fostering a productive work environment. The low variability in responses suggests consistent levels of satisfaction among the personnel surveyed.

Table 2. *Level of Job Satisfaction*

Indicators	SD	Mean	Interpretation
Compensation and benefits	.779	4.23	Very High
Working conditions and work itself	.571	4.48	Very High
Interpersonal relationships and supervision	.570	4.50	Very High
Policies and recognition	.693	4.38	Very High
Overall	.577	4.40	Very High

3.3 Motivation

Table 3 illustrates the Motivation. Table 3 presents the data on motivation among BFP Region 12 personnel, measured through three indicators: affective, continuance, and normative. The findings reveal a very high overall mean rating of 4.43, with a standard deviation of 0.543, indicating strong motivation among the respondents. Affective motivation scored the highest mean of 4.48 with a standard deviation of .551, while normative motivation also showed a very high rating of 4.40 with a standard deviation of .588. These results are consistent with prior research that emphasizes the essential role of motivation in enhancing employee performance and commitment. Mohammed (2024) noted that different types of motivation— affective, continuance, and normative—significantly influence job satisfaction and engagement. The prominence of affective motivation supports Pincus (2023), who found that intrinsic motivation, driven by emotional connection and personal

fulfillment, contributes significantly to high employee engagement. The low standard deviations indicate that the high motivation levels are consistently experienced across the surveyed personnel.

Table 3. *Level of Motivation*

Indicators	SD	Mean	Interpretation
Affective	.551	4.48	Very High
Continuance	.620	4.42	Very High
Normative	.588	4.40	Very High
Overall	.543	4.43	Very High

3.4 Academic Job Satisfaction of Criminology Instructors

Table 4 presents the analysis and interpretation of training among BFP Region 12 personnel, measured through four indicators: identification of training, selection of training, design of training, and impact of training. The results reveal an overall mean rating of 4.44 with a standard deviation of .476, interpreted as very high by the respondents. Specifically, the identification of training received the highest mean of 4.93, while both the selection and design of training scored 4.37, indicating very high responses. The "Impact of Training" indicator also showed a strong mean rating of 4.51. These findings align with the existing literature, which emphasizes the importance of structured training in enhancing performance and growth. Tabatabaei (2024) identified that the success of training depends on its proper identification, selection, design, and measurable impact. Additionally, the results support the assertion of Velasco & Barlaan (2024) that the most vital component of training is its practical effect on employee performance. The low standard deviations suggest a consistent perception among BFP personnel that their training programs are highly effective.

Table 4. *Level of Academic Job Satisfaction*

Indicators	SD	Mean	Interpretation
Identification of training	4.93	.521	Very High
Selection of training	4.37	.554	Very High
Designing training	4.37	.700	Very High
Impact of training	4.51	.508	Very High
Overall	4.44	.476	Very High

3.5 Correlation Between Job Satisfaction and Capabilities in Responding to Emergencies

Table 5 illustrates the Correlation between Job Satisfaction and Capabilities in responding to emergencies.

Table 5. *Correlation between Job Satisfaction and Capabilities in responding to emergencies*

Job Satisfaction	Capabilities in Responding to Emergencies			
	Firefighting Operations	Emergency	Medical Services	Overall
Compensation and benefits	.551 (0.000)		.491 (0.000)	.550 (0.000)
Working conditions and work itself	.627 (0.000)		.601 (0.000)	.648 (0.000)
Interpersonal relationships and supervision	.624 (0.000)		.641 (0.000)	.668 (0.000)
Policies and recognition	.616 (0.000)		.595 (0.000)	.640 (0.000)
Overall	.680 (0.000)		.651 (0.000)	.703 (0.000)

The findings presented in Table 5 reveal a significant positive correlation between job satisfaction and the capabilities of BFP Region 12 personnel in responding to emergencies, with an overall r-value of 0.703 and a p-value of less than 0.05, thereby rejecting the null hypothesis. Each indicator of job satisfaction—compensation and benefits ($r = 0.550$), working conditions and work itself ($r = 0.648$), interpersonal relationships and supervision ($r = 0.668$), and policies and recognition ($r = 0.640$)—also demonstrated statistically significant correlations with emergency response capabilities. These results support the existing literature, such as the study by Andreas (2022), which emphasizes that job satisfaction has a significant influence on employee motivation and performance. The strong correlation suggests that more satisfied BFP personnel tend to perform better in emergencies, highlighting the critical role of workplace satisfaction in enhancing operational effectiveness.

3.6 Correlation Between Motivation and Capabilities in Responding to Emergencies

Table 6 illustrates the Correlation between Motivation and Capabilities in responding to emergencies.

Table 6. *Correlation between Motivation and Capabilities in responding to emergencies*

Motivation	Capabilities in Responding to Emergencies			
	Firefighting Operations	Emergency	Medical Services	Overall
Affective	.643 (0.000)		.595 (0.000)	.654 (0.000)
Continuance	.535 (0.000)		.399 (0.000)	.492 (0.000)
Normative	.579 (0.000)		.527 (0.000)	.584 (0.000)
Overall	.630 (0.000)		.543 (0.000)	.619 (0.000)

Table 6 presents the findings on the correlation between motivation and capabilities in responding to emergencies. The tests yielded an overall r-value of 0.619, with a p-value of less than 0.05, indicating statistical significance. As a result, the null hypothesis of no significant relationship is rejected. Furthermore, when the indicator of affective motivation was correlated with capabilities in responding to emergencies, it obtained an overall r-value of .654 with $p < 0.05$; while the indicator of continuance was correlated with capabilities in responding to emergencies, the overall r-value was .492 with $p < 0.05$, which is significant. Lastly, the indicator normative in motivation correlated with capabilities in responding to emergencies, with an r-value of 0.584 and $p < 0.05$, indicating significance.

3.6 Correlation Between Training and Capabilities in Responding to Emergencies

Table 7 illustrates the Correlation between Training and Capabilities in responding to emergencies

Table 7. *Correlation between Training and Capabilities in responding to emergencies*

Training	Capabilities in Responding to Emergencies			
	Firefighting Operations	Emergency	Medical Services	Overall
Identification of training	.552 (0.000)		.553 (0.000)	.583 (0.000)
Selection of training	.604 (0.000)		.605 (0.000)	.638 (0.000)
Designing training	.556 (0.000)		.486 (0.000)	.550 (0.000)
Impact of training	.661 (0.000)		.660 (0.000)	.697 (0.000)
Overall	.665 (0.000)		.670 (0.000)	.705 (0.000)

Table 7 reveals a strong and statistically significant positive correlation between training and emergency response capabilities among personnel from BFP Region 12. The overall correlation between training and emergency response capability is highest at $r = .705$ ($p = 0.000$), indicating that as the quality and relevance of training improve, so does the ability of personnel to respond effectively to emergencies. Among the training components, the impact of training shows the strongest association with both firefighting operations ($r = 0.661$) and emergency medical services ($r = 0.660$), highlighting the importance of training that translates directly into real-world applications. Similarly, the selection of training and identification of training needs are also strongly correlated with overall emergency response capability ($r = .638$ and $r = .583$, respectively), underscoring the value of tailoring training programs to actual operational demands. These results suggest that investing in well-designed, strategically implemented, and impactful training significantly enhances the readiness and effectiveness of BFP personnel in managing emergencies.

3.8 Summary of Goodness of Fit Measures of the Three Generated Models

Table 8 presents a summary of the goodness-of-fit measures for the three generated models. Table 8 presents the summary of the goodness-of-fit measures across three generated models, aiming to determine the best-fit structural equation model. Model 1 and Model 2 did not meet the acceptable thresholds for most indices. For example, Model 1 had a CMIN/DF of 20.060, and Model 2 slightly improved to 7.854—still above the acceptable range of less than 2. Likewise, the GFI values for both models (.472 and .839, respectively) and the CFI (.781 and .925) failed to meet the ideal benchmark of >0.95 . Other indices, such as NFI, TLI, and RMSEA, also fell short, with RMSEA values of 0.219 and 0.313, well above the acceptable maximum of 0.05. Although Model 2 showed slight improvements from Model 1, both remained unfit based on standard structural model evaluation criteria.

Table 8. *Summary of Goodness of Fit Measures of the Three Generated Models*

Model	P-value (>0.05)	CMIN/DF (0<value<2)	GFI (>0.95)	CFI (>0.95)	NFI (>0.95)	TLI (>0.95)	RMSEA (<0.05)	P-CLOSE (>0.05)
1	.000	20.060	.472	.781	.772	.724	.219	.000
2	.000	7.854	.839	.925	.915	.901	.313	.000
3	.000	1.729	.991	.998	.995	.991	.042	0.605

Legend: CMNI/DF – Chi Square/Degrees of Freedom

GFI – Goodness of Fit Index

RMSEA – Root Mean Square of Error Approximation

NFI- Normed Fit Index

TLI – Tucker-Lewis Index

CFI – Comparative Fit Index

In contrast, Model 3 demonstrated substantial improvement across all indices, indicating an excellent fit. The CMIN/DF dropped to 1.729, within the recommended range of 1–2. The fit indices improved significantly: GFI (.991), CFI (.998), NFI (.995), and TLI (.991) all surpassed the benchmark of 0.95. Additionally, RMSEA decreased to .042, with a P-close value of .605, satisfying the condition of P-close > 0.05. These improvements affirm that Model 3 meets the ideal statistical thresholds for model fit. This aligns with findings by West et al. (2023) and Kline, who emphasized the importance of these specific indices for validating a structural model. Hence, Model 3 is the most appropriate in capturing the relationships among job satisfaction, motivation, and training in predicting BFP Region 12’s emergency response capability.

4.0 Conclusion

Based on the statistical analyses conducted among the Bureau of Fire Protection (BFP) personnel in Region 12, several critical conclusions and practical implications emerged. Firstly, the study confirmed that BFP personnel exhibit a very high level of emergency response capability, including both firefighting operations and emergency medical services. This finding emphasizes the importance of sustaining and institutionalizing specialized training programs that focus not only on core emergency response skills but also on advanced domains such as hazardous materials handling, complex urban search and rescue, and the management of emerging medical crises. For practice, this suggests that BFP leadership should prioritize continuous professional development and scenario-based training simulations to maintain operational readiness and adaptability to new and evolving threats.

Secondly, the personnel also reported very high levels of job satisfaction, motivation, and perceived adequacy of training, all of which demonstrated statistically significant positive correlations with emergency response capability. This reinforces existing theories of organizational behavior that link human resource development and workplace morale with job performance. From a practical perspective, this suggests that the BFP should institutionalize regular training needs assessments that incorporate direct feedback from personnel. Doing so ensures that training remains relevant, evidence-based, and aligned with contemporary challenges, including climate change-related disasters, complex technical rescues, and large-scale public health emergencies.

The use of Structural Equation Modeling (SEM) led to the identification of Model 3 as the best-fit model, where motivation emerged as the strongest positive predictor of emergency response capability, followed by training and job satisfaction. The implications for practice are clear: motivation-enhancing strategies, such as recognition systems, performance incentives, career development paths, and inclusive decision-making processes, should be integrated into organizational policies. Training must be treated not only as a technical requirement but as an ongoing strategy tied to professional motivation and satisfaction. While job satisfaction plays a relatively weaker role, its continued attention remains essential in fostering long-term commitment and reducing turnover.

In terms of research implications, this study contributes to the growing body of literature on emergency response performance models, particularly within the Philippine public safety context. The findings validate theoretical frameworks that underscore the interconnectedness of personal, organizational, and technical factors in shaping emergency readiness. Future studies should consider employing mixed-methods research designs, incorporating qualitative data such as in-depth interviews or focus group discussions with BFP personnel and community stakeholders. These qualitative insights can provide a deeper understanding of the motivational and organizational dynamics behind the quantitative relationships found.

Moreover, future research could explore longitudinal studies to examine how changes in job satisfaction, motivation, and training over time impact emergency response outcomes. Comparative studies across regions or involving other uniformed services, such as the Philippine National Police or emergency medical teams, could

also yield broader generalizations and best practices. Finally, given the dynamic nature of disasters and public safety threats, future work may investigate the integration of technology-based training tools, AI-assisted simulations, and community-based emergency preparedness programs to further strengthen institutional capabilities.

5.0 Contributions of Authors

Both authors contributed equally to this study. Their responsibilities encompassed writing, editing, data analysis, and questionnaire preparation. Both authors played a key role in refining the study framework. Author 1 initially drafted the manuscript, while Author 2 focused on revisions and editing. Together, they collaboratively finalized and approved the manuscript for publication.

6.0 Funding

This research was conducted without financial support from any funding agency or sponsor.

7.0 Conflict of Interests

The authors declare no conflicts of interest, financial or non-financial, that could have influenced the conduct or outcomes of this research.

8.0 Acknowledgment

Earning this doctorate would not have been possible without the unwavering support of many, to my husband, PCpl. Albanie I. Ulong, and our children, Axl Mc Jabe and Jholaiza – thank you for your love, patience, and sacrifices. To my adviser, Dr. Nestor C. Nabe, your mentorship and guidance were instrumental in this journey. Special thanks to my best friend, Charmaine Mae Gelacio, and officemates, SFO3 Jenny Kristine B. Lusaya and FO2 Florabelle J. Mandadero, for their constant encouragement. This achievement is as much yours as it is mine. Thank you all.

9.0 References

- Andreas, D. (2022). Employee performance: The effect of motivation and job satisfaction. *PRODUKTIF: Jurnal Kepegawaian dan Organisasi*, 1(1), 28-35. <https://doi.org/10.37481/jko.v1i1.10>
- Arshaad, M., & Naz, I. (2023). Role of emotional intelligence and work performance in situational anxiety of rescue 1122 employees/workers. *Pakistan Social Sciences Review*, 7(3), 1139-1150. [https://doi.org/10.35484/pssr.2023\(7-III\)93](https://doi.org/10.35484/pssr.2023(7-III)93)
- Bartoloni, S., & Ancillai, C. (2024). Twenty years of social media marketing: A systematic review, integrative framework, and future research agenda. *International Journal of Management Reviews*, 26(3), 435-457. <https://doi.org/10.1111/ijmr.12360>
- Creswell, J. W. (2021). A concise introduction to mixed methods research. SAGE Publications. Retrieved from <https://tinyurl.com/yckf7jau>
- Dagher, J., Boustani, N. M., & Khneyzer, C. (2024). Unlocking HRM challenges: Exploring motivation and job satisfaction within military service (LAF). *Administrative Sciences*, 14(4), 63. <https://doi.org/10.3390/admsci14040063>
- El Sayed, M. J. (2012). Measuring quality in emergency medical services: A review of clinical performance indicators. *Emergency Medicine International*, 2012(1), 161630. <https://doi.org/10.1155/2012/161630>
- Jang, E., & Kim, Y. C. (2025). Autonomy constrained: The dynamic interplay among job autonomy, work engagement, and innovative behavior under performance pressure. *Administrative Sciences*, 15(3), 97. <https://doi.org/10.3390/admsci15030097>
- Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of qualitative descriptive studies: A systematic review. *Research in Nursing & Health*, 40(1), 23-42. <https://doi.org/10.1002/nur.21768>
- Li, M., & Li, B. (2024). Unravelling the dynamics of technology integration in mathematics education: A structural equation modelling analysis of TPACK components. *Education and Information Technologies*, 1-29. <https://doi.org/10.1007/s10639-024-12805-w>
- Mishra, P. K. (2013). Job satisfaction. *IOSR journal of humanities and social science*, 14(5), 45-54. <https://doi.org/10.9790/1959-1454554>
- Mohammed, A. I. (2024). The role of motivation and job satisfaction in enhancing employee performance: Systematic. <https://doi.org/10.30872/psikostudia.v13i1.13847>
- Moreno, F. (2023). Examining unique administrative cultures of six municipal governments in the Philippines' Zamboanga Peninsula Region. <https://10.2139/ssrn.4566272>
- Mueller, M., Hancock, P. J., Cunningham, E. K., Watt, R. J., Carragher, D., & Bobak, A. K. (2024). Automated face recognition assists with low-prevalence face identity mismatches but can bias users. *British Journal of Psychology*. <https://doi.org/10.1111/bjop.12745>
- Pincus, J. D. (2023). Employee engagement as human motivation: Implications for theory, methods, and practice. *Integrative Psychological and Behavioral Science*, 57(4), 1223-1255. <https://doi.org/10.1007/s12124-022-09737-w>
- Quader, M. (2024). Exploring human resource management practices and employee satisfaction in Bangladesh's private banking sector. *Journal of Policy Options*, 7(1), 36-45. <https://doi.org/10.4236/ojbm.2024.123091>
- Sedlár, M. (2020). Cognitive skills of emergency medical services crew members: A literature review. *BMC Emergency medicine*, 20, 1-16. <https://doi.org/10.1186/s12873-020-00330-1>
- Singh, A. (2023). Impact of training and development as a vital instrument for boosting morale and productivity among young employees. *International Journal of Management, Public Policy and Research*, 2(4), 11-17. <https://doi.org/10.55829/ijmpr.v2i4.182>
- Tabatabaei, S. (2024). A new model for evaluating the impact of organizational culture variables on the success of knowledge management in organizations using the TOPSIS multi-criteria algorithm: Case study. *Computers in Human Behavior Reports*, 14, 100417. <https://doi.org/10.1016/j.chbr.2024.100417>
- Thant, Z. M., & Chang, Y. (2021). Determinants of public employee job satisfaction in Myanmar: Focus on Herzberg's two factor theory. *Public Organization Review*, 21(1), 157-175. <https://doi.org/10.1007/s11115-020-00481-6>
- Velasco, M., & Barlaan, J. C. (2024). Psychological well-being and workplace performance of female firefighters. Available at SSRN 5060748. <http://dx.doi.org/10.2139/ssrn.5060748>
- Yaqub, Y., & Singh, A. K. (2022). Impact of training design on trainees' motivation: An empirical study. *Industrial and Commercial Training*, 54(2), 220-230. <https://doi.org/10.1108%2Fict-05-2021-0038>
- Zakhidov, G. (2024). Ishlab chiqarish faoliyatini raqamlashtirishning tashkiliy iqtisodiy mexanizmlarini takomillashtirish. *Yosh Tadqiqotchi Jurnal*, 3(4), 25-42. <https://doi.org/10.54613/ku.v10i0.895>