

Assessing the Delivery of Local Disaster Management Services and Client Satisfaction through SERVQUAL Dimensions

John Jericho Riel Padilla

Cebu Technological University, Cebu, Philippines

DOI: <https://doi.org/10.51244/IJRSI.2025.120800372>

Received: 04 October 2025; Accepted: 10 October 2025; Published: 15 October 2025

ABSTRACT

This study examines the service delivery and client satisfaction of the City Disaster Risk Reduction and Management Office (CDRRMO) of Tacloban City using the SERVQUAL framework which encompasses the dimensions of reliability, responsiveness, assurance, empathy, and tangibles. Anchored in systems theory, resilience theory, and the legal foundation of Republic Act 10121, the study employed a descriptive-quantitative research design. Data were gathered from fifty clients and ten employees through a Likert-Scale survey and analyzed using Spearman's rank-order correlation and t-test. Findings revealed that service delivery was perceived as effective before and during disasters but less efficient after disasters, particularly in the restoration of essential services. Client satisfaction results indicated generally favorable perceptions across all SERVQUAL dimensions, with empathy and assurance emerging as the most significant contributors to satisfaction, while reliability presented opportunities for improvement. The analysis confirmed a strong and statistically significant positive relationship between service delivery and client satisfaction, underscoring that higher service quality directly enhances public confidence and stakeholder satisfaction. Based on the findings, a comprehensive enhancement plan was developed through capacity-building and training modules aligned with CDRRMO Resolution No. 004-00-24. The plan underscores policy coherence, inter-agency collaboration, and community participation, while integrating continuous monitoring and evaluation to ensure long-term sustainability. Its implementation aims to enhance institutional efficiency, foster public trust, and advance Tacloban City's vision of more resilient and adaptive disaster management framework.

Keywords: Local Disaster Management Services, Client Satisfaction, SERVQUAL Dimensions, Systems Theory, Resilience Theory, Republic Act 10121

INTRODUCTION

The Philippines is widely recognized as one of the most disaster-prone countries in the world due to its geographical location along the Pacific Ring of Fire and its exposure to extreme weather events. According to the 2025 World Disaster Risk Index, it ranks as the most vulnerable nation globally to natural hazards. On average, the country experiences 20 tropical cyclones annually, several of which are highly destructive. Typhoon Yolanda (Haiyan) in 2013 exemplified this vulnerability, causing massive loss of life and displacing millions of residents. This catastrophe exposed major weaknesses in disaster preparedness and response, particularly at the local government level (King, 2017).

In response to these challenges, the Philippine government enacted Republic Act 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010. The law sought to institutionalize disaster risk reduction across all levels of governance and improve coordination in emergency situations. However, despite these reforms, many local Disaster Risk Reduction and Management Offices (DRRMOs) continue to encounter persistent barriers. These include limited resources, lack of adequate training, weak inter-agency coordination, and poor community engagement. As a result, implementation of national policies often falls short when translated into local practice (Distor, 2025).

Furthermore, disaster management in the Philippines involves multiple stages, including prevention, response, recovery, and rehabilitation. Past structural and policy flaws have hindered the effective execution of these processes, especially in rural and vulnerable areas. Grassroots initiatives such as disaster volunteer groups were mobilized to strengthen disaster response efforts under the DRRM Act. In addition, traditional coping mechanisms, such as the communal practice of *Bayanihan*, remain vital in shaping community resilience (Abis,

2016). Yet, these indigenous practices are rarely integrated into formal disaster management frameworks, creating a gap between traditional knowledge and scientific approaches.

Community participation is therefore essential in bridging these gaps and ensuring that disaster strategies are both effective and sustainable. In Tacloban City, one of the hardest-hit areas during Typhoon Yolanda, community-based preparedness practices have proven crucial for survival and recovery. Residents rely on designated shelters, evacuation routes, and collective action to cope with recurring hazards (Palagi, 2020). Engaging communities in disaster planning fosters a sense of ownership and trust in local government efforts. Moreover, it ensures that disaster management strategies are tailored to the specific needs of affected population.

Against this backdrop, it becomes important to evaluate the actual performance of local DRRMOs and how communities perceive their service delivery. Tacloban City offers a compelling case study due to its unique experience in post-Yolanda recovery and resilience-building efforts (Iuchi, 2024). By assessing both service delivery and client satisfaction, researchers can identify strengths, shortcomings, and opportunities for improvement. Insights from this analysis can inform the design of a targeted training module to enhance disaster preparedness and response capacity. Ultimately, this study aims to contribute to the development of more inclusive, effective, and resilient local disaster management systems in the Philippines.

Statement of the Problem

The study aimed to evaluate the extent of implementation of services provided by the City Disaster Risk Reduction and Management Office, as well as the community's perceptions using the SERVQUAL model.

Specifically, this sought to answer the following questions.

1. What is the level of service delivery, as perceived by the respondent groups across the three main stages of disaster management?
2. What is the level of client satisfaction with the delivery service in terms of SERVQUAL dimensions?
3. Is there a significant relationship between the Level of Service Delivery and Client Satisfaction of the City Disaster Management Office of Tacloban?
4. Based on findings, what enhancement plan can be developed?

METHODOLOGY

This study employed a descriptive-quantitative research design to evaluate the satisfaction of Tacloban City residents with the public services rendered by the City Disaster Risk Reduction and Management Office (CDRRMO). The descriptive approach was utilized to examine the various dimensions of service quality-namely reliability, responsiveness, assurance, empathy, and tangibility. In addition, an exploratory component was integrated to identify variations in participants' perceptions of service quality before, during, and after disaster events. By combining descriptive and exploratory methods, the study seeks to provide a more comprehensive and nuanced understanding of residents' needs and their overall assessment of the CDRRMO's service delivery.

Measures

The Data for this study were gathered through survey questionnaires that employed two different Likert scales to capture resident's perceptions. A 3-point Likert scale was utilized to assess the service delivery performance of the City Disaster Risk Reduction and Management Office (CDRRMO), with emphasis on the three phrases of disaster management: pre-disaster, during the disaster, and post-disaster. In contrast, a 5-point Likert scale was administered to measure the level of client satisfaction, drawing from the standard CDRRMO survey instrument but enhanced to incorporate items aligned with the SERVQUAL dimensions of service quality. Because the two scales differed in measurement levels, the 3-point responses were transformed and mapped onto the 5-point scale to ensure comparability and compatibility, thereby enabling meaningful statistical analysis.

After the data from both instruments had been standardized and matched, a series of statistical analyses were carried out to explore the link between service delivery and client satisfaction among Tacloban City residents. To examine the nature of this relationship, Spearman's rank-order correlation was applied, allowing the

researcher to determine not only whether a relationship existed but also the strength and direction of the associations between two variables. Furthermore, a t-test was employed to assess whether there were statistically significant differences in the respondents' evaluations of service delivery and satisfaction across the SERVQUAL dimensions.

Procedure

A formal transmittal letter was sent to the local chief executive to secure approval for the study, after which the researcher coordinated with the City Disaster Risk Reduction and Management Office (CDRRMO) to plan the distribution and collection of questionnaires. A purposive sample of 60 participants was selected, consisting of 50 clients who had availed public services such as training, emergency response coordination, and rehabilitation projects, and 10 employees from the research and planning division of the CDRRMO. Respondents were given clear instructions to ensure accuracy and consistency in completing the survey. By gathering insights from both service users and providers, the study aimed to assess satisfaction levels, evaluate service effectiveness, and identify areas for improvement in disaster risk management strategies.

RESULTS AND DISCUSSION

Perceived Level of Service Delivery Across the Three Stages of Disaster Management

The level of service delivery as perceived by the respondents varied across the three main stages of disaster management. Before the disaster, the respondents gave an overall mean of score of 2.84 on a 3-point Likert scale, which indicates that services were effectively delivered. Among the indicators, community awareness and education received the highest rating of 2.86, suggesting that proactive measures and information dissemination were all implemented. In contrast, emergency plans, and protocols obtained the lowest score within this stage, though still categorized as effectively delivered. This result implies that preparedness initiatives were generally successful but could benefit from enhanced coordination and planning mechanisms.

During the disaster, the average score decreased to 2.49, reflecting a slight decline in perceived service delivery, yet still within the effectively delivered category. The alert system and communication component earned the highest score of 2.80, demonstrating that information flow and early warning systems were functional and reliable during emergencies. Conversely, resource distribution was identified as the lowest-rated indicator, described as partially delivered, which highlights gaps in logistical efficiency and equitable access to resources. After the disaster, the overall mean dropped further to 2.15, classified as partially delivered, signifying that recovery operations were less efficient compared to the pre-and mid-disaster phases. Notably, financial aid and community support achieved the highest score of 2.90, while the restoration of essential services received the lowest score of 1.34, indicating that post-disaster recovery and service rehabilitation remain major areas for improvement.

Client Satisfaction on Service Delivery Based on SERVQUAL Dimensions

The assessment of client satisfaction in terms of service quality revealed varied perceptions across the five SERVQUAL dimensions. The responsiveness dimension obtained an average score of 4.04 for both clients and employees, indicating that respondents were satisfied with the promptness and willingness of service providers to assist. Within this dimension, the indicator "willingness to help" achieved the highest score of 4.40, categorized as highly satisfactory reflecting a strong commitment among personnel to respond promptly to client needs. The assurance dimension recorded a slightly higher average of 4.10, also tagged as satisfactory, emphasizing client's confidence in the organization's competence and reliability. The highest indicator under assurance was trustworthiness, with an average of 4.31, suggesting that stakeholders view the service providers as dependable and credible.

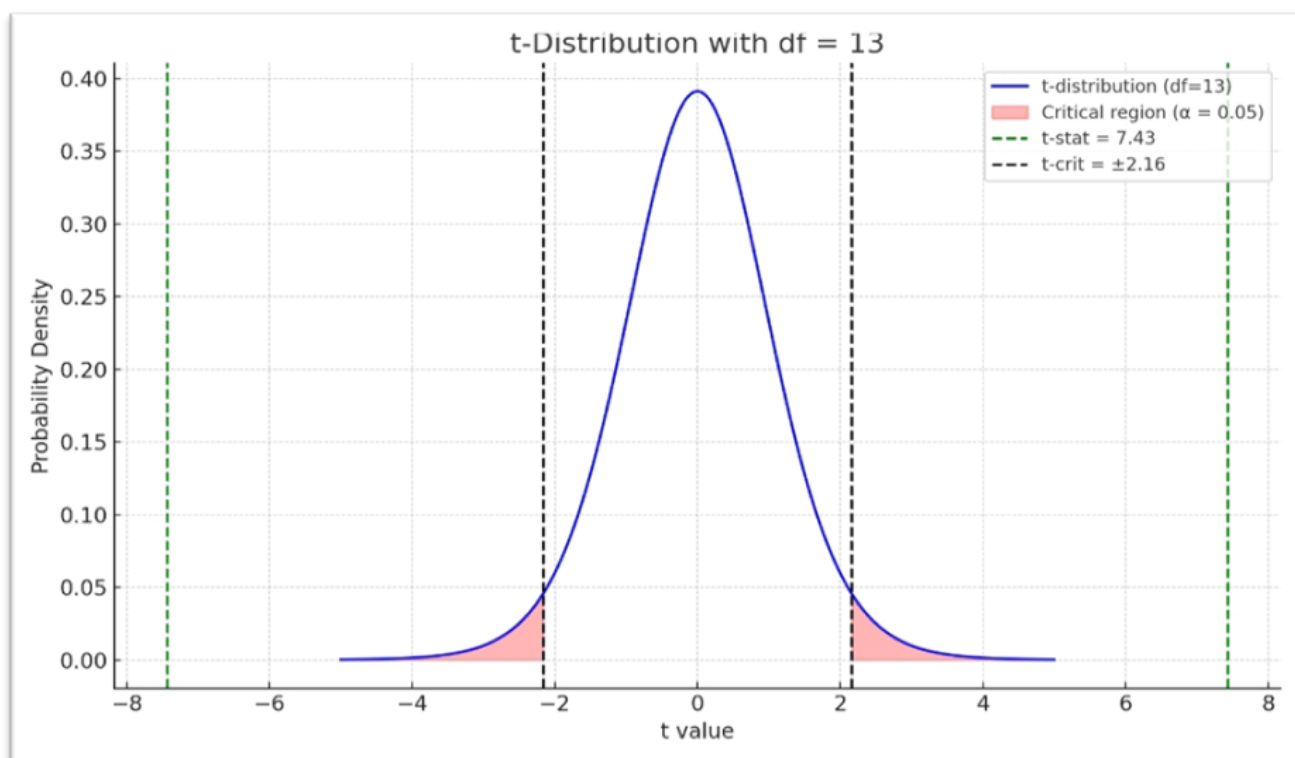
Meanwhile, the tangibility dimension registered an average of 3.99, which is five points lower than responsiveness but still falls within the satisfactory range. Its top-performing indicator was cleanliness and maintenance, underscoring the importance of maintaining organized and visually appealing facilities in promoting client satisfaction. The empathy dimension received the highest overall rating of 4.97, which is significantly higher than other dimensions, and was classified as highly satisfactory. Within empathy,

compassion and care stood out as the strongest indicator with a mean score of 4.54, highlighting the value of genuine concern in service delivery. Lastly, the reliability dimension obtained the lowest average score of 3.92, though still categorized as satisfactory, with post-disaster evaluation emerging as its highest indicator at 4.13, indicating that consistent and follow-through actions remain essential for sustaining trust and satisfaction.

Relationship Between Service Delivery and Client Satisfaction

The relationship between service delivery and client satisfaction in the City Disaster Management Office of Tacloban was examined using Spearman's rank-order correlation. This nonparametric method was chosen to measure the strength and direction of association between the ranked variables, providing a reliable analysis even without assuming a normal distribution of data. The ranking process allowed for the comparison of service delivery and client satisfaction levels across different disaster phrases, ensuring the variations in perception were captured accurately. After computing the differences between ranks and summing their squared values, the correlation coefficient was calculated. The resulting Spearman's rho of 0.90 indicated a very strong positive relationship, suggesting that higher levels of service delivery were closely associated with greater client satisfaction.

Figure 1. T-distribution Graph



To determine whether the observed correlation was statistically significant, the t-test was applied based on the computed Spearman's rho value. With 13 degrees of freedom and a 5% significance level ($\alpha = 0.05$), the calculated t-value of 7.43 was compared to the critical value of ± 2.160 from the t-distribution table. The computed t-value far exceeded the critical threshold, placing it within the rejection region of the curve and providing strong evidence against the null hypothesis. This finding confirmed that the correlation between service delivery and client satisfaction was not due to random variation but reflected a genuine and meaningful relationship. Therefore, it can be concluded that improvements in the efficiency, responsiveness, and quality of service delivery significantly enhance the level of client satisfaction in Tacloban's disaster management operations.

Proposed Enhancement Plan for Service Delivery Improvement

Based on the study's findings, an enhancement plan in the form of a comprehensive training module is proposed to strengthen the overall service delivery framework of Tacloban City's Disaster Management Office. This initiative is strategically aligned with Resolution No. 004-00-24 of the City Disaster Risk Reduction and

Management Office (CDRRMO), which emphasizes the importance of efficient and effective service delivery in both emergency and non-emergency contexts. The proposed training module aims to enhance the competencies of municipal personnel by equipping them with the necessary knowledge, practical skills, and operational tools to perform their duties with greater precision and responsiveness. Through structured learning sessions, simulation exercises, and performance evaluations, the program will focus on improving coordination, decision-making, and accountability within the workforce. Ultimately, this enhancement plan seeks to cultivate a more adaptive, professional, and service-oriented organizational culture capable of meeting the city's growing demands for effective disaster management and community resilience.

The development and implementation of this training module are anticipated to enhance the efficiency and overall quality of service delivery within the City Disaster Management Office. Beyond workforce development, the program aims to ensure that the services rendered by local government personnel align with the expectations and satisfaction levels of Tacloban City's residents. By integrating contextual learning modules, real-life case studies, and updated procedural guidelines, the training will bridge the gap between policy and practice, enabling personnel to respond proactively to community needs. This holistic approach is anticipated to foster greater public trust, transparency, and satisfaction, reinforcing the city's commitment to good governance and responsive leadership. In the long term, the initiative will position Tacloban City as a model of excellence in disaster preparedness and management, ensuring sustained service delivery that is both citizen-centered and resilient in the face of future challenges.

CONCLUSION

The study concludes that while Tacloban City's disaster management services demonstrate strong preparedness and response capabilities, significant improvements are needed in post-disaster recovery and service restoration. Client satisfaction remain high across most SERVQUAL dimensions, reflecting effective delivery of disaster management services. However, the noted weakness in reliability underscores the need for greater consistency and accountability, particularly after disaster events. The strong positive correlation between service delivery and client satisfaction confirms that efficient operations directly enhance public trust and satisfaction. These findings emphasize the importance of sustaining high-quality service delivery through continuous improvement and evaluation. To address the identified gaps, the development of a comprehensive enhancement plan and training module is vital. Overall, strengthening personnel competencies and institutional processes will ensure more resilient, responsive, and client-centered disaster management in Tacloban City.

RECOMMENDATIONS

Policy and Strategic Alignment

It is recommended that the training module be fully aligned with Resolution No. 004-00-24 to ensure consistency with the city's long-term disaster management goals. This alignment will strengthen policy implementation and guarantee that all activities adhere to national standards and local priorities.

Capacity Building and Skill development

The training module should prioritize equipping stakeholders with essential competencies in risk assessment, emergency response, resource management, and community engagement. Continuous learning sessions and practical drills will enhance the participants' preparedness and effectiveness during actual disaster situations.

Community involvement and Awareness

Active community participation should be integrated into the training to foster shared responsibility and strengthen grassroots resilience. Educating residents on disaster preparedness and response will empower them to act swiftly and cooperatively in times of crisis.

Monitoring, Evaluation, and Sustainability

A systematic monitoring and evaluation framework should be established to assess the effectiveness of the

training module and ensure continuous improvement. Sustaining the program through regular updates, feedback mechanisms, and stakeholder collaboration will maintain the city's readiness against evolving disaster risks.

REFERENCES

1. Abdul, J. (2010). Sustainable development in Malaysia: a case study on household waste management. *Journal of Sustainable Development*, 3. (3): 91-102
2. Abis, K. (2016). In the spirit of Bayanihan: Disaster Recovery from Typhoon Yolanda in Eastern Visayas. [Yorkspace.library.yorku.ca](https://yorkspace.library.yorku.ca)
3. Akther et al., (2009). Evaluation of Municipal services in selected wards of Dhaka city corporation: citizen's perspective. *Theoretical and Empirical Researches in Urban Management*.
4. Al Kurdi, O. F. (2021). A critical comparative review of emergency and disaster management in the Arab world. *Journal of Business and Socio-economic Development*.
5. Alam, M. S., & Mondal, M. (2019). Assessment of sanitation service quality in urban slums of Khulna city based on SERVQUAL and AHP model: A case study of railway slum, Khulna, Bangladesh. *Journal of Urban Management*.
6. Alexander, P. (2010). Rebellion of the poor: South Africa's service delivery protest-a preliminary analysis. *Review of African Political Economy*, 37(123):25-40
7. Atkinson, D. (2009). Post-apartheid Local Government Reform: A small town perspective. Pretoria: Centre for Development and Enterprise.
8. Auzair, S. M. & Langfield-Smith, K. (2005). The effect of service process type, business strategy and life cycle stage on bureaucratic MCS in service organizations. *Management Accounting Research*, 16(4):399-421.
9. Azad et al., (2019). Community-based disaster management and its salient features: A policy approach to people-centered risk reduction in Bangladesh. *Asia-Pacific Journal of Rural development*.
10. Barney, J. B. (2012). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1):99-120.
11. Bhatt, G. D. & Grover, V. (2013). Types of Information Technology Capabilities and Their Role in Competitive Advantage: An Empirical Study. *Journal of Management Information Systems*, 22(2):253-277.
12. Blair, M. M. (2005). Ownership and control: rethinking corporate governance for the twenty-first century. Washington DC: Brookings Institute.
13. Bloodgood, J. M. (2012). Organizational routine breach response and knowledge management. *Business Process Management Journal*, 18(3):376-399.
14. Brady, M. K. & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived quality: A hierarchical approach. *Journal of Marketing*, 65(3):34-49.
15. Buckley, P. J. & Ghauri, P. N. (2012). Globalisation, Economic Geography and the Strategy of Multinational Enterprise. *Journal of International Business Studies*, 35(2):81-98.
16. Cadbury. A. (2002). Report of the Committee on the Financial Aspects of Corporate Governance. London:Gee & Co. Ltd.
17. Calvin, R. J. (2012). *Entrepreneurial Management*. New York: McGraw-Hill.
18. Carr, N. G. (2013). IT doesn't matter. *Harvard Business Review*, 3(4):41-49.
19. Crosweller, M., & Tschakert, P. (2021). Disaster Management and the need for a reinstated social contract of shared responsibility. *International Journal of Disaster Risk Reduction*.
20. Curry, A., & Sinclair, E. (2002). Assessing the quality of physiotherapy services using SERVQUAL. *International Journal of Health Care Quality Assurance*.
21. Das, D. (2008). Urban quality of life: A case study of Guwahati. *Social indicators Research*
22. Distor, M. (2025). Decentralized Disaster Management in Action: A case study of the Philippines' Disaster Risk Reduction Management Act's (Republic Act 10121) Implementation in the Ilocos Region. Université d'Ottawa
23. Faridatul, I., & Jahan, S. (2014). People's perception regarding the development of community facilities: A case study of rajshahi city corporation.
24. Iuchi, K. (2024). Adaptability to Low-Income Communities in Postdisaster Relocation. *Journal of the American Planning Association*.
25. King, Z. (2017). Between the Sea and the State: Post-Yolanda Disaster Governance through the words of typhoon survivors. *ProQuest Dissertations & Theses*.

26. Lofti, S., & Solaiman, K. (2009). An assessment of urban quality of life by using analytic hierarchy process approach (case study: Comparative study of quality of life in the north of Iran). *Journal of Social Sciences*.
27. Mohammed, M. P. (2018). Disaster risk reduction and management of Tarlac City, *Procedia engineering*.
28. Okulicz-Kozaryn, A., & Valente, R. R. (2019). Livability and subjective well-being across European Cities. *Applied Research in Quality of Life*.
29. Palagi, S. (2020). Achieving Risk Reduction & Livability: Connecting Relocation Decision Making to Outcomes at Relocation Communities. *ProQuest Dissertations & Theses*.
30. Silalahi et al., (2017). Service quality analysis for online transportation services: Case study of GO-JEK. *Procedia Computer Science*.