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A SOCIO-LEGAL STUDY ON THE UNDERUTILIZATION OF LEGAL SEPARATION IN THE PHILIPPINES: PERCEPTIONS OF INFORMALLY SEPARATED COUPLES

Prince Lanz Archie H. Almazan¹, Eric N. Awi²

¹Political Science Student, College of Education, Liberal Arts and Sciences

²Dean, College of Education, Liberal Arts and Sciences

*Corresponding author Email: princelanzarchie.almazan@letran.edu.ph

ABSTRACT

This study explores the underutilization of legal separation in the Philippines through the lived experiences of informally separated individuals. Despite being a legally available remedy, legal separation remains rare due to its complex, costly, and restrictive nature. Guided by a socio-legal perspective and grounded in Social Constructivism Theory, the study employed a qualitative narrative inquiry design using semi-structured interviews with thirty informally separated participants. Findings revealed that participants perceive legal separation as a “half-measure” that fails to grant emotional or legal closure since it does not dissolve the marriage nor permit remarriage. Legal, financial, and procedural barriers such as the high cost of litigation, the five-year prescriptive period, and the doctrine of In Pari Delicto discourages its pursuit. Social stigma and limited legal awareness further reinforce the preference for de facto separation. It recommends reforms to make marital remedies more accessible and humane, including extending the prescriptive period, lowering filing costs, and enacting a Divorce or Dissolution of Marriage Law to ensure genuine closure and protection for separated individuals.

Keywords: *Legal Separation, Socio-Legal Perspective, Social Stigma, Thematic Narrative Analysis, Social Constructivism Theory*

INTRODUCTION

Marriage is a sacred commitment recognized by both the Church and the State. Marriage is a contract of permanent union between a man and a woman who entered into it in accordance with law for the establishment of conjugal and family life (Article 1 F.C., 1987). In such circumstances, legal separation becomes a meaningful alternative. It allows couples to live apart while maintaining the marital bond. It legally provides for the separation of properties, offering both emotional and practical relief within the bounds of the law and faith.

In the Philippines, where marriage holds deep cultural and religious significance, many couples find themselves unable to legally separate due to the process being both costly and time-consuming. As a result, families often remain stuck in toxic, abusive, or broken relationships. Research shows that union dissolution is on the rise, with more couples choosing informal separation rather than going through the legal hurdles of annulment, declaration of nullity, or legal separation (Abalos, 2017). It leads to the phenomenon of informally separated couples, also known as de facto separation, where spouses choose to live apart without a final judgment (Respicio, 2024a). These barriers impact women the most, as they tend to face not only financial burdens but also social stigma when attempting to leave unhappy marriages (Constable, 2003; Raposas, 2008).

Marriage in the Philippines is both constitutionally and culturally upheld as a permanent and sacred institution. Article 15 (2) of the 1987 Constitution states that “Marriage is an inviolable social institution,” emphasizing its permanence and protection by the State, a view reinforced by Supreme Court rulings that allow dissolution only in rare cases (Lazaro, 2018; Alliance for the Family Foundation Philippines Inc., 2020). Culturally, this permanence is deeply rooted in tradition and religion, as approximately 80% of the Filipinos are catholic and they view marriage as a divine sacrament central to family and social life (Lazaro,

2018). Centuries of Catholic influence and indigenous practices have shaped a society where marriage is seen not merely as a legal contract, but as a lifelong spiritual and communal commitment. Consequently, the Philippines is among the few nations that do not have a comprehensive divorce law, which underscores the country’s enduring respect for the sanctity and permanence of marriage (Lazaro, 2018).

Despite the cultural and legal emphasis on the sanctity of marriage in the Philippines, many unions face serious challenges that lead couples to seek separation. Legal dissolution options are limited in the Philippines, with divorce still not legalized and annulment or legal separation often inaccessible due to strict legal grounds, high costs, and lengthy procedures (Barrero, 2023; De Vera, 2025; Respicio, 2024a; Respicio, 2024c). The system’s complexity and expense make it difficult for most to access, and the law rarely accommodates more personal or emotional reasons for separation (Barrero, 2023; Respicio, 2024a; De Vera, 2025).

As such, studies show that many Filipinos end their marriages by simply living apart, especially among poorer couples who cannot afford the cost and complexity of legal separation or annulment (Aglam, 2024). This trend leaves women and children vulnerable, lacking legal protection for support, property, or safety.

As union dissolution rises, informal separations and cohabitation have become more common, seen as easier alternatives to marriage but offering little to no legal safeguards (Abalos, 2017). Moreover, existing research in the Philippines mainly centers on annulment and the divorce debate, leaving legal separation underexplored and underutilized despite its legal availability. Public discourse and studies often overlook the lived experiences of legally or significantly separated individuals, creating a gap in understanding their realities. While annulment cases have increased, legal separation remains rare and seldom addressed in research or policy discussions (Abalos, 2017; Dagami et al., 2022).

Legal separation in the Philippines functions as an alternative to absolute divorce, aligning with the Philippines' constitutional and cultural view of marriage as a sacred and enduring union. It permits spouses to live apart and divide their assets but does not dissolve the marital bond, thereby preventing either party from remarrying (Respicio, 2024b; FCB Law Office, 2024). This legal measure serves as a middle ground within the country's conservative legal framework, where divorce continues to be prohibited.

Legal separation in the Philippines is regulated under Articles 55 to 67 of the Family Code, which limits its grounds to serious marital misconduct such as repeated physical abuse, abandonment, drug addiction, adultery, or imprisonment exceeding six years (Global Rights for Women, 2024). These provisions emphasize the law's view of marriage as an indissoluble union, allowing separation only under severe circumstances (Respicio, 2024b). Additionally, a six-month cooling-off period is mandated before the decree may be granted, underscoring the State's intent to promote reconciliation between spouses whenever possible (Respicio, 2025).

Despite being a legally available option, legal separation in the Philippines remains underutilized mainly due to its complex, costly, and evidence-intensive nature, which is comparable to the annulment process. It suggests that it mainly serves individuals bound by moral or religious beliefs who still seek legal remedies for safety and property concerns (Respicio, 2024b; FCB Law Office, 2024). Often regarded as a "moral substitute" for divorce, it reflects a legal framework that values reconciliation and family preservation over the dissolution of marriage (Respicio, 2025; Global Rights for Women, 2024). However, this contends that it inadequately protects victims of long-term domestic abuse, as the marital bond endures even after separation, preventing them from fully rebuilding their lives (Respicio, 2024b; Respicio, 2025; FCB Law Office, 2024).

Hence, by analyzing the lived experiences of informally separated individuals, this study sheds light on the practical and emotional barriers that deter individuals from pursuing legal separation. The State maintains strict control over granting annulments and legal separations, as it seeks to safeguard the family. Further elaborated in Article 15, Section 1 of the 1987 Constitution: "The State recognizes the Filipino family as the foundation of the nation." Furthermore, Article 2, Section 12 emphasizes, "The State recognizes the sanctity of family life and shall protect and strengthen the family as a basic autonomous social institution." Lastly, marriage, as defined in Article 1 of the Family Code of the Philippines (F.C., 1987), states: "Marriage is a special contract of permanent union between a man and a woman." This definition highlights the Family Code's clear stance on the term "permanent," emphasizing the enduring and indissoluble nature of marital unions under Philippine law.

The study's objectives are: (1) To examine the perceptions and lived experiences of informally separated individuals in legal separation as a remedy for irreparable marital relationships. (2) To explore the legal, social, and economic barriers that contribute to the underutilization of legal separation in the Philippines. (3) To identify key socio-legal barriers and generate insights from participants' experiences that could propose policy recommendations regarding the underutilization of legal separation in the Philippines.

In line with these objectives, this study seeks to capture and understand the lived experiences of informally separated individuals in the Philippines, particularly in relation to their decision not to pursue legal separation despite its availability under existing law. This paper aims to answer the following questions: (1) How do informally separated individuals in the Philippines narrate their decisions not to pursue legal

separation? (2) How do they perceive the legal, financial, procedural, and social barriers to legal separation? (3) What policy reforms do participants believe would make legal remedies more accessible and meaningful?

This study is limited to the perceptions and lived experiences of informally separated individuals (De facto separation) in the Philippines who are no longer cohabitating with their spouses but have not pursued any legal remedy regarding their marital status. This focus was intentionally chosen due to the extremely low number of Legal Separation cases filed annually in the Philippines. The research explores how these individuals perceive legal separation as a potential remedy and seeks to understand the factors that contribute to its persistent underutilization. The rarity of the legal separation makes it impractical to rely solely on respondents who have undergone the legal separation process.

The study is grounded in a socio-legal perspective, which aims to bridge a gap between Family Law and the lived realities of couples who are effectively separated but remain bound together by the law. This paper intends to emphasize how Social, Cultural, Legal, and economic contents shape their understanding of legal separation.

This study contributes to the Socio-legal understanding of family laws in the Philippines by examining the underutilization of legal separation through the lens of lived experiences and perceptions of informally separated individuals. By highlighting the practical, emotional, and legal barriers to pursuing legal separation, the research provides insights that may inform policy reforms aimed at making marital dissolution more accessible and equitable, especially amidst the ongoing national debates on divorce and family law reform.

Review Related Literature

This section presents a review of existing literature and related studies that explore the underutilization of legal separation in the Philippines. It focuses on how cultural norms, legal structures, and economic realities influence individuals' decisions to remain informally separated rather than pursuing formal legal remedies. The review provides a foundation for understanding the broader socio-legal context of marital dissolution in the country, highlighting how societal values, gender roles, and financial constraints shape perceptions and choices regarding separation. By examining these themes, this section aims to deepen understanding of the factors contributing to the low utilization of legal separation.

Legal Framework of Legal Separation and its Benefit

Legal Separation, also referred to as relative divorce, is one of the legal remedies available to couples in the Philippines. It allows spouses to live separately and divide their property, but the marital bond remains legally intact. Despite being a legal option, it is rarely utilized, as it does not grant complete marital dissolution. In 2024, only 200 legal separation cases were filed, in stark contrast to the 13,166 cases filed for annulment and declaration of nullity (Philippine Statistics Authority, 2024).

Grounds for legal separation encompass several serious violations that justify the dissolution of conjugal relations without terminating the marriage itself (Article 55 F.C., 1987).

The grounds are as follows; Article 55 (1) addresses repeated physical violence or the grossly abusive conduct directed against the petitioner, their typical child, or the petitioner's child, which includes continuous physical harm or severe verbal and psychological abuse. Article 55(2) protects a spouse's freedom of religion and political beliefs by recognizing as grounds the use of physical violence or moral pressure to coerce the petitioner into changing their religious or political affiliation. Furthermore, Article 55(3) criminalizes attempts to corrupt or induce the petitioner or their children into prostitution, including any collusion in

such acts, as a serious breach of marital trust. Under Article 55(4), a final judgment sentencing the respondent to imprisonment exceeding six years, regardless of whether a pardon has been granted, also constitutes valid grounds for legal separation. The law also recognizes the respondent's drug addiction or habitual alcoholism as a ground, as stated in Article 55(5), where chronic substance abuse impairs the respondent's ability to fulfill marital obligations. Article 55(6) lists lesbianism or homosexuality of the respondent as grounds, reflecting the traditional views on marital relations. Article 55(7) states that if the respondent enters into another marriage while the first one still exists, whether the bigamous union occurs in the Philippines or abroad, that becomes a valid ground for legal separation because it violates the monogamous nature of marriage. Under Article 55(8), the respondent's acts of infidelity or sexual misconduct likewise qualify as grounds for legal separation. Article 55(9) adds that any attempt by the respondent to take the petitioner's life is also a sufficient basis for filing. Finally, Article 55(10) considers the respondent's unjustified abandonment of the petitioner for more than one year as another lawful ground for legal separation.

However, under the current legal framework, the State still does not allow the complete dissolution of marriage, which limits the autonomy of individuals who are trapped in irreparable unions. It is one of the reasons why legal separation is not a popular option, as it keeps the marriage bond legally intact, preventing couples from entirely breaking free from a broken marriage (Daytec-Yangot, 2014). Although legal separation does not dissolve the marriage, it can still offer significant benefits to those who choose to avail themselves of it. It is particularly suitable for couples who uphold the sanctity of marriage but seek a way to live apart from their aggrieved spouse.

Article 63(1) of the Family Code, which states that "the spouses shall be entitled to live separately from each other, but the marriage bond shall remain intact and shall not be severed" outlines the legal effects of legal separation. Upon the issuance of a decree, the marital relationship continues to exist in law despite the physical separation of the spouses. They can still be held criminally liable for adultery, concubinage, or bigamy if they commit the act (Santa Maria, 2022). Under Article 63(2), the dissolution and liquidation of property are governed by the existing property regime (either the Conjugal Partnership of Gains or the Absolute Community of Property). Notably, the offending spouse forfeits all rights to any net profits earned by the respective regime. Article 63(3) F.C. awards the custody of the minor child to the innocent child, subject to the Article 213 of the Family Code. Article 63(4) disqualifies the offending spouse from inheriting from the innocent spouse by intestate and testate succession pursuant to Article 921(4) of the New Civil Code.

While in custody and support of the children, it is often awarded to the innocent spouse. The parent who best suits to take care of them, except for a child who is below 7 years of age, in which Article 213 will govern. Article 56 of the Family Code of the Philippines states that a petition for legal separation may be dismissed when any disqualifying circumstance is present. These include: (1) Condonation, or the act of forgiving the offense after its commission; (2) Consent, when either party agreed to or did not object, with full knowledge, to the act that constitutes a ground for legal separation; (3) Connivance, where a party knowingly facilitates or cooperates in the commission of a wrongful act that is later used as a ground for separation; (4) Equal guilt, also known as *in pari delicto*, where both parties acted in bad faith by committing acts that constitute grounds for legal separation; (5) Collusion, where there is a corrupt agreement between both parties to obtain the decree; and (6) Prescription, where a ground for legal separation must be filed within its prescriptive period; otherwise, it will not be granted. Article 57 expounds Article 56(6)

further by stating that the petition must be filed within five years from the occurrence of the ground.

Lived Experiences of Informal Separation or De Facto Separation

A rise in informal separations corresponds with the growing prevalence of cohabitation, a union type associated with higher rates of dissolution compared to formal marriage. Between 1993 and 2013, the percentage of cohabiting Filipino women almost tripled from 5.2% to 14.5% (Abalos, 2017). In the predominantly Catholic Philippines, marriage is regarded as sacred and unbreakable, with any form of separation or marital breakdown often seen as a violation of traditional family values (Abalos, 2017; Barrero, 2023). Those who seek Legal Separation are often expected to maintain the marriage regardless of hardships; commonly, it discourages women from pursuing legal separation despite the abuse or neglect. Children from separated families experience stigma and are commonly labeled as born out of wedlock, which affects the children's social integration and self-esteem (Collantes et al., 2024). This stigma is powerful in rural areas, where traditional values are deeply rooted. Women are expected to maintain the image of a stable family, even at the expense of their well-being.

In contrast, those from urban areas are more likely to leave toxic marriages due to greater access to legal resources and more progressive social views (Abalos, 2021). Women who pursue them are often judged harshly and told they should not "give up" on their marriage. These gendered expectations reinforce harmful narratives that keep women trapped in dysfunctional unions (Barrero, 2023).

Adultery, Concubinage, and Bigamy in De Facto Separation

De Facto Separation occurs when spouses choose to live separately without a formal court decree. This informal arrangement often leads to potential legal complications for either party. Article 333 of the Revised Penal Code defines adultery when it is committed by a woman who engages in sexual relations with a man not her husband. Similarly, concubinage, defined in Article 334 RPC, applies to a man who keeps a mistress in his home or has sexual intercourse with a woman who is not his wife. Even when spouses are granted legal separation by the state, they are still legally married; thus, involvement with a third party may still constitute a criminal offense. Bigamy, as defined in Article 349 RPC, is committed by one person who contracts a subsequent marriage while the former marriage is valid and subsisting.

Rights of an individual in De Facto Separation

Article 127 of the Family Code states that a de facto separation, where married couples live apart without obtaining a formal court decree, does not legally dissolve the marriage. However, Separation in fact only offers a few remedies on Support, Court authorization, and family support liability.

Summary Judicial Authorization on separation in fact between husband and wife focuses on when the law requires spousal consent. The Family Code provides a summary procedure for judicial authorization when consent is withheld or cannot be obtained. Separation, in fact, will not affect the property regime as it will retain its conjugal nature (Villanueva v. Chiong, G.R. No. 159889, June 05, 2008). Summary Judicial Authorization gives remedy to those who are in a de facto status where both spouse consent are required for such transaction or there is not enough community or conjugal property and the present spouse need the authority to administer or encumber the other spouse separate property to support the family (Family Code of the Philippines, 1987, Art. 100 & Art. 127).

Article 370 of the New Civil Code provides married women with several permissible options for how they may style their surnames. They may

retain their maiden surname and append their husband's surname, use their maiden first name and surname together with their husband's surname, or take their husband's complete name with an appropriate title indicating their marital status. These surname choices may be adjusted even while the marriage subsists. Philippine jurisprudence, particularly *Remo v. Secretary of Foreign Affairs* (G.R. No. 169202, March 5, 2010), clarifies that adopting the husband's surname is a privilege granted to the wife and is not a compulsory requirement.

Article 134 of the Family Code of the Philippines protects both parties to their property relations between spouses under *de facto* Separation, which continues to be governed by the existing property regime, whether it be absolute community of property or conjugal partnership of gains. It means that assets acquired during their Separation are still presumed to belong to both spouses unless proven otherwise. Moreover, any dealings involving joint property generally require the consent of both parties; if one acts without the other's consent, the aggrieved spouse may contest the transaction in court. In addition, both spouses will remain legally obligated to support each other and their children as mandated in Article 68 of the Family Code of the Philippines. Even when living apart, a dependent or non-working spouse may seek financial support, and both parents continue to share equal responsibility for the care, education, and upbringing of their children. Failure to fulfill these duties may lead to legal consequences. In regard to custody, *De Facto* Separation does not change parental authority. Both parents continue to share custody rights unless modified by a court order. It ensures that children remain under the joint protection of both parents despite the Separation. However, because such arrangements lack judicial enforcement, conflicts over custody, support, or property often arise.

Moreover, lastly, for personal safety and protection, a spouse who experiences abuse in a *de facto* separation may seek remedies under Republic Act No. 9262, or the Anti-Violent Against Women and Their Children Act. This law provides for protection orders, financial support, and access to social and legal services through local government units. Often, once a petition for Legal Separation has been approved, both parties are legally permitted to live apart and independently manage their assets (Saklaw, 2025). Parental custody then comes into play, as the court determines which parent shall have custody of the minor children, always considering the best interests and welfare of the child as provided under Article 213 of the Family Code of the Philippines. The parent not granted custody is typically given visitation rights and may still be required to provide child support. The parental responsibilities do not cease. Instead, they evolve into a co-parenting arrangement where both parents must collaborate in raising their children despite living apart. The success or failure of this dynamic significantly influences the emotional and psychological well-being of the children.

Often, once a petition for Legal Separation has been approved, both parties are legally permitted to live apart and independently manage their assets (Saklaw, 2025). Parental custody then comes into play, as the court determines which parent shall have custody of the minor children, always considering the best interests and welfare of the child as provided under Article 213 of the Family Code of the Philippines. The parent not granted custody is typically given visitation rights and may still be required to provide child support. The parental responsibilities do not cease. Instead, they evolve into a co-parenting arrangement where both parents must collaborate in raising their children despite living apart. The success or failure of this dynamic significantly influences the emotional and psychological well-being of the children.

Barriers to Legal Separation

A process of obtaining an annulment or Legal Separation can be financially burdensome to Filipinos. The average income for Filipino

families reached ₱353,230 per year, or approximately ₱29,435 per month (Manila Bulletin, 2024). This income level, while reflecting a 15 percent increase from ₱307,190 in 2021, still may not be sufficient to cover the substantial expenses that arise during an annulment, declaration of nullity case, or Legal Separation, especially when the family income is already stretched thin.

One of the most significant expenses in the annulment process is the attorney's fee, which can vary depending on the complexity of some instances and the lawyer's experience. These fees can range from ₱100,000 to ₱500,000, or even more (Respicio, 2024). Adding to the struggle, every year only 5,860 cases out of 13,166 cases of declaration of nullity and annulment cases had been Decided, This does not includes the backlog of previous year cases; not topping to an additional pending which results to remaining undecided cases to 12,212 for December 2024; In contrast to Legal Separation, to 200 cases were filed and only 87 were decided (Philippine Statistics Authority, 2024). Legal separation cases in the Philippines can take up to two years before reaching finality, and even then, there is no guarantee that the petition will be granted. Filing for legal separation requires a thorough understanding of the grounds specified under the Family Code of the Philippines, as the petitioner must carefully choose and justify the most applicable basis for their case. The process is often lengthy, emotionally draining, and financially burdensome. It demands not only legal knowledge but also the ability to present substantial evidence to support one's claims. The Philippine law opts to push both couples to stay intact due to the sanctity of marriage. Article 1 of the Family Code states that "Marriage is a special contract of permanent union between a man and a woman entered into in accordance with law for the establishment of conjugal and family life." It shows the constitutional mandate, explicitly stating that marriage is a permanent and inviolable institution. Consistent with this principle, Article 58 of the Family Code imposes a mandatory six-month cooling-off period at the outset of a petition for legal separation, during which the family court is tasked with facilitating reconciliation efforts (Art. 59, F.C.). The cooling-off period aims to allow both spouses to reconsider the path of their marital relationship and, where possible, to restore conjugal relations.

Marriage Dissolution is not an option in the Philippines. Stigma from Socio-Cultural Beliefs.

Not all Catholics are up for the "No to Divorce" stance. Most of the younger Generation Y supports Divorce and Divorce Bills; Filipinos tend to engage at a high level of religiosity, resulting in less approval of the concept of divorce. The majority of high-level religiosity is Generation X and Generation Baby Boomer (Liwana, Palermo et al., 2023). Further, the catholic church's influence in the Philippines impacts political decisions, particularly concerning the legalization of divorce. With this, the deep-rooted catholic beliefs of many Filipinos play a significant role in shaping attitudes toward divorce. The catholic church's firm stance against it often leads families to view marital dissolution as a sin or a sign of moral failure. This religious influence significantly contributes to the stigma surrounding divorce and other methods of marriage dissolution. It remains one of the most substantial barriers to its legalization and acceptance in Philippine society (Aglam et al., 2024).

Family-driven social stigma heavily influences how divorce is perceived in the Philippines, often casting it as shameful and dishonorable. Women, in particular, face pressure to endure unhappy or abusive marriages to protect their family's reputation and avoid community judgment. Many are discouraged from leaving due to fears of being ostracized or seen as having failed their duties as wives (Fajardo-Jarilla, 2023). This stigma is powerful in rural areas, where traditional values are deeply rooted. Women are expected to maintain the image of a stable family, even at the expense of their well-being.

In contrast, those from urban areas are more likely to leave toxic marriages due to greater access to legal resources and more progressive social views (Abalos, 2021). Even annulments and legal separations, the only legal ways to end a marriage, carry a heavy stigma. Women who pursue them are often judged harshly and told they should not “give up” on their marriage. These gendered expectations reinforce harmful narratives that keep women trapped in dysfunctional unions (Barrero, 2023).

Church annulment refers to the catholic church’s declaration that a marriage was invalid from the start, which focuses on the validity of the marriage under Canon Law (De Borja, 2022). church annulment is offered in the Philippines and often used to bring spiritual and emotional relief to those who want to seek spiritual closure (Amos, 2017). Church annulment does not have any legal bearing in the Philippines; it only offers spiritual closure. Civil annulment addresses the legal status of marriage under Philippine law, which allows both parties to remarry legally, while church annulment focuses on the sacramental validity of the marriage.

Theoretical Framework

This study is anchored on social constructivism theory, which posits that social interaction, cultural beliefs, and shared meanings shape individuals’ understanding of the world. In the Philippine context, the legal concept of separation is not merely a legal mechanism, but one that is filtered through religious norms, familial expectations, and societal stigma. Informally Separated Individuals construct their own meanings around legal separation, often viewing it as unnecessary, inappropriate, or inaccessible, regardless of its actual legal provisions. By applying Social Constructivism, this study aims to uncover how such perceptions are formed and how they contribute to the persistent underutilization of legal separation in the Philippines. This paper will utilize Social Constructivism theory as its theoretical framework. The research ought to focus on learning as a social process in which an individual constructs their knowledge through interactions with others, particularly within a cultural and historical context (Creswell, 2013). Constructivism provides a framework for inquiry in which researchers engage with participants to explore personally constructed and subjective realities (Boyland, 2019).

METHODS

This study utilizes a qualitative Narrative Inquiry design, which treats the stories as the primary source of data to explore the lived experiences of informally separated individuals. Narrative inquiry enables the researcher to examine on how the individuals interpret and construct meaning from their personal experiences. In this study, the narrative inquiry design was employed to obtain an in-depth insight into the underutilization of legal separation through the participants personal experiences (De Mierop et al., 2023). Given the study’s focus on the socio-legal factors that influence the decision not to pursue legal separation, this approach allows a comprehensive examination of the emotional, cultural, and legal dimensions that shapes participants decisions. Through this narrative approach, the study explores the lived experiences and perspectives of individuals who have undergone informal marital separation and the factors contributing to the underutilization of legal separation in the Philippines. To ensure methodological transparency and rigor in qualitative research design, the study followed the Standards for Reporting Qualitative Research (SRQR) guidelines.

The study employed purposive sampling to intentionally select the individuals who have experienced a de facto separation, as they were the best positioned to provide rich, relevant, and in-depth insights into the phenomenon that is being investigated. Since the study aims to document

the lived experiences, perceptions, and decision-making processes of individuals who chose not to pursue legal separation despite its availability, it was essential to engage participants who directly met these criteria. The sample consist of 30 participants. In qualitative research, sample sizes are typically determined based on the richness of the data and the depth of participants’ narratives rather than statistical representation (Patton, 2002). According to Creswell (2013), determining an appropriate sample size is essential for generating realistic and meaningful insights from in-depth qualitative interviews. Thus, the inclusion of 30 participants was considered appropriate for generating rich narratives and thematic insights rather than statistical generalization. The Criteria were (a) Filipino men or women adults aged 25-49 who have experienced informal marital separation-that is, (b) individuals who lived apart from their spouse for at least one year without having undergone a formal legal process such as annulment or legal separation, (c) with or without children. This group was highly relevant because, as studies show, most marital dissolutions in the Philippines occur informally due to the inaccessibility, cost, and complexity of formal legal remedies (Abalos, 2017; Tsoi et al., 2024).

The study used semi-structured interviews, done both face-to-face and online, to gather detailed and personal stories from participants. This method allowed the researcher to ask key questions while also giving participants the freedom to share their experiences in their own words. The set of questions used in both in-person and online interviews helped reach individuals from different places and backgrounds, making the process more flexible and accessible. Furthermore, the semi-structured text encouraged open dialogue that enabled the participants to reflect on their personal experiences while allowing the researcher to explore further the themes and clarify responses in real time. Through this process, the study captured the complexity of the de facto separation but also highlights the diverse realities in shaping their circumstances. This approach provided a more profound and more precise understanding of the social, emotional, and legal challenges informally separated individuals face.

The analysis employed a thematic narrative analysis, focusing on the identifying patterns with participants narrative while preserving the integrity of their stories (Reissmann, 2008). The Procedures for recognizing and organizing patterns in qualitative data were informed by the thematic analysis (Braun & Clarke, 2006), which guided the systematic coding and categorization of the data. Through this dynamic process, the researcher actively explored the collected information of de facto individuals to discern meaningful themes and patterns and to develop potential themes relevant to the research questions (Maguire, 2017). The approach involved the identification and review of potential themes, leading to a comprehensive understanding of the data relevant to the research question (Braun & Clarke, 2006; Maguire, 2017). In maintaining the narrative approach, the researcher returned to the data, examining each narrative in its entirety. Riessman’s (2008) thematic narrative analysis which focuses on analyzing the content of the narratives to identify recurring themes while at the same time, preserving the contextual meaning of the narrative. Initial coding involved identifying significant experiences, perceptions, and reflections expressed in the narratives of de facto individuals. These coded segments are then reviewed and grouped into broader thematic categories. To maintain the narrative orientation of the study, the researcher has repeatedly returned to each of participants narrative that ensures the themes are interpreted within the context of the participants stories. This approach allowed the identification of recurring themes while preserving the contextual meaning of the narratives.

Given the sensitive nature of the interview that was conducted, ethical considerations are prioritized throughout the study. The experiences shared by the participants observed ethical considerations by ensuring

informed consent, maintaining strict confidentiality, allowing voluntary participation, and creating a safe, non-judgmental space for participants to share their personal narratives. Participation was entirely voluntary, and they had the right to withdraw from the study at any point without any consequences. They were fully informed of the study procedures and written, or online consent form were obtained from the participants. Participants were provided with a comprehensive data protection plan outlining their rights. To ensure anonymity, pseudonyms are employed in this study to ensure their identities remain protected (Itzik & Walsh, 2023). A debriefing was done before or during the interview to protect the participants from emotional harm. The debriefing process ensured the participants were fully informed about the nature of the study after they participated in it (Stileman, 2023). It includes the goals, procedures, data management, and available support services. It also provided an opportunity for participants to clarify any concerns or withdraw their data if they wish and receive guidance for emotional well-being. The researcher used measures to ensure safety of the data collected, this includes all transcripts, audio recordings, notes were treated with confidentiality. Only the researcher and adviser are granted access to these materials in accordance with the Data Protection Act of 2012. The data are only retained until the completion of this study. Data will be retained only until the completion of the study, at which point they will be securely destroyed.

FINDINGS

The findings reveal their lived experiences, perceptions, and challenges to the decision not to pursue legal separation and the use of the de facto status. Through careful thematic narrative analysis, the results provide a deeper understanding of how personal circumstances and systemic legal barriers drive the underutilization and rejection of using a formal remedy. The reporting of findings relies exclusively on participant numbers for identification, in compliance with the requirements of the ethics board.

Table 1. Socio-Demographics of the Participants

Participant Code	Sex	Age	Years Married	Years Informally Separated	Children
P01	F	31	3	2	Son (1)
P02	F	37	11	11	N/A
P03	M	45	5	1	N/A
P04	M	43	13	5	Daughter (22)
P05	F	46	21	12	Daughter (26); Daughter (20)
P06	M	27	5	5	N/A
P07	M	47	20	20	Son (20)
P08	F	46	22	14	Son (21); Daughter (20); Daughter (19); Son (15); Son (10)
P09	M	45	15	10	Daughter (8)
P10	F	28	4	1	Son (2)
P11	F	38	6	1.5	Daughter (6); Son (4)
P12	F	30	7	6	Son (7)
P13	F	30	6	5	N/A

P14	M	39	15	10	Daughter (14)
P15	F	47	26	2.4	Daughter (26); Daughter (23)
P16	F	48	22	13	Son (21)
P17	F	45	22	15	Daughter (19)
P18	F	46	20	10	Son (23); Daughter (20)
P19	F	44	17	6	Daughter (21); Son (16)
P20	F	43	15	4	Son (18); Son (13)
P21	F	47	19	9	Son (20); Daughter (19)
P22	M	38	13	6	Daughter (10)
P23	F	36	6	2	Son (5); Daughter (3)
P24	M	45	20	11	Son (23); Son (22); Daughter (14); Daughter (10)
P25	F	44	16	7	Son (15); Daughter (13)
P26	M	43	18	10	Daughter (20); Son (17); Daughter (13)
P27	M	41	12	7	Son (10)

Note. The years informally separated are calculated from the date the participants decided to separate. The majority of the participants are female (70%) and fall within the 35 to 49 age range (66.7%). The majority of participants have children (86.7%). This table provides the detailed individual demographic profile necessary to contextualize the narratives presented in the study.

Legal Separation Fails to Deliver True Freedom

This theme captures the lived experiences of informally separated individuals who continues to navigate the legal and social constraints of marriage. Participants described how their de facto status creates lingering legal and emotional ties that prevent them to fully reclaim their personal freedom. Several narratives highlighted issues related to legal identity, marital relationships, and moral perceptions associated with remaining legally married.

A recurring concern among the female participants involved the inability to revert to their maiden name on official record because of their status. For many, the use of their spouse surname symbolized the persistence of a marital bond where they no longer recognized emotionally or socially. Participants have described this restriction as a constant reminder of their past relationships and the trauma associated with their separation. Participant 16 reflected on this experience, explaining on how the presence of her spouse's surname on official documents continues to affect her sense of *identity* "For me, everytime that I see my ex's last name on my documents... I am still Mrs. X.. no matter what I do.. I will still relieved all the pain and trauma that he has caused me. This is just not a last name... rather this is a reminder that I still cannot get away from my past" (P16, F, 48). This narrative illustrates that the marital name is interpreted by participants as a denial of their right to self-determination and an enforced continuity with their painful past, ultimately contributing to the perception of legal separation as an inadequate remedy. For these individuals, the inability to use their maiden name reinforces the perception that legal separation provides only partial relief, leaving them legally bound to a past they are trying to move forward.

In addition, the extreme lengths participants went to manage this legal constraint further illustrate its burden. Participant 7 and Participant 9 detailed narratives of relocating to entirely different cities to minimize or altogether avoid contact with their previous partners, physically enforcing the separation that the law failed to guarantee. However, for participants whose spouses has abandoned them, maintaining complete separation really did not prevent them from rebuilding their personal lives as some participants eventually entered a new relationship despite being married. Participant 24 described how relocating to another region allowed him to move forward and establish a new life: *“Ever since I separated from my ex—that was around 10 years ago—I went to Mindanao so that I could have peace of mind. Little did I know that I would eventually start my own life there. Currently, I have a family here. My old friends also told me that my ex also has her own family now. I guess that leaves us no choice but to not settle our marriage, because it might not end well. We might get sued, or worse, cause pain to our own families.”* (P24, M, 45). Despite the attempts to rebuild their own lives, the participants explained that such relationship are often kept discreet due to the fear of being charged by Adultery or Concubinage. The legal risk was further highlighted by Participant 15 who shared that she now has a child with a second partner even though both of them remain legally married to their previous spouses. These narratives illustrate how the law places informally separated individuals in a difficult position, forcing them to choose between remaining legally bound to a dissolved relationship or pursuing a new life while facing potential criminal liability.

Moreover, the inadequacy of legal separation was further framed by moral and religious commitments. Participants 21 & 2, who were both firm religious believers, opted for having a church annulment to maintain the sanctity of the marriage that they both have. This decision highlights the civil remedy, particularly legal separation, which was perceived as irrelevant in their pursuit of spiritual and moral closures only obtainable through the church process. legal separation was viewed as a failure to address what was needed in their marital status, strengthening their decision in a de facto status, while pursuing a faith-process resolution.

The doctrine of In Pari Delicto (Equal Fault) was consistently identified as a significant doctrinal barrier to pursuing legal separation. Participants 6 and 17 are automatically rendered as invalid to avail legal separation due to their committing grounds of infidelity, despite being physically and mentally abused by their spouse. The application of In Pari Delicto effectively punished the victim for their own fault, regardless of the physical and mental trauma that it had caused.

Findings related to legal advice confirmed that the underutilization of legal separation is also due to an abandonment of the remedy by practitioners. The data showed that initial public knowledge of legal separation was low. Only 8 out of the 30 participants reported a complete understanding of the legal separation's effects. While 24 out of 30 only knew the concept of "separation in bed." The majority of the participants had consulted a Family Lawyer to inquire about ending their marriage. Lawyers have explained the differences between annulment, declaration of nullity, and legal separation, explaining that declaration of nullity and annulment have greater benefits offered by the alternative remedies. In every instance, the majority of the participants will push through the declaration of nullity on the grounds of Psychological Incapacity.

A compelling non-legal reason for the purposeful maintenance of the de facto status demonstrating that, for some participants, inaction serves as an act of emotional ease. Participant 4, who separated due to the spouse's infidelity, made a conscious decision not to pursue any legal remedy. For him, the de facto status was an act of revenge, forcing the initiating partner to bear the procedural burden of legally ending the relationship they destroyed. As he explained, *“For me, doing nothing is revenge itself. She cheated on me and left for another man. I may sound bitter, but I know that doing*

nothing is going to be hard for her. As far as I know, they already have a kid. Think of this, why would I act on pursuing legal remedy? Why would I spend money? I was the one who cheated and left. She should be the one who works on it.” (P4, M, 43). This narration illustrates for some participants that maintaining the informal status was not just a passive outcome of legal barrier but also can be an intentional decision that provided a sense of moral procedural advantage. By refusing to initiate through legal action, the participant stand firm on his perceived moral authority and the shifting of legal and financial responsibility of resolving the marriage to her offending spouse. In this manner, the de facto status offered a non-monetary form of emotional relief, reinforcing the participant stance to remain outside the formal legal process.

Overall, the findings under this theme demonstrate that participants widely perceive that legal separation is as a limited and inadequate remedy. The inability to reclaim personal identity, the difficulties of forming new relationships due to fear of criminal sanctions, the doctrinal barriers such as the In Pari Delicto doctrine, and the limited practical benefits of the remedy collectively contribute to the perception that legal separation fails to provide genuine freedom or closure. As a result, many of the participants resort to managing their marital situations outside the formal legal framework.

Legal Loopholes and Risks Outweigh the Benefit of a Legal Separation Decree

This theme establishes the contextual conditions that led participants to pursue de facto separation. Participants described traumatic experiences within their marriages that compelled them to leave immediately, often prioritizing safety and emotional survival over pursuing formal legal remedies.

Cause of Informal Separation

This section establishes the foundational context by detailing the traumatic and complex reasons that led participants to physically separate, framing the urgency and necessity of their subsequent strategic legal maneuvers. Table 2 demonstrates the leading causes for the de facto separation, illustrating the frequency of reported factors that led participants to leave their marriage.

Table 2. Circumstance leading to informal separation among participants

Circumstance leading to Informal Separation	Frequency (N = 34)	Percentage %
Infidelity	12	35.3%
Physical Abuse	10	29.4%
Sexual Assault	4	11.8%
Emotional Abuse	2	5.9%
Abandonment	2	5.9%
Emotional Disconnection	2	5.9%
Attempted Murder	2	5.9%
Total	34	100.0%

Note: The data were derived from a descriptive frequency count of circumstances cited across 30 participant narratives. The total frequency of reported circumstances (N = 34) exceeds the number of participants, which indicates many of the individuals experienced multiple circumstances that led them to de facto separate.

As shown in table 2, Findings reveal that the two most frequently cited factors are infidelity (cited 12 times, representing approximately 35.3% of all reported factors) and physical abuse (cited 10 times, representing 29.4% of all reported factors). This severe context fundamentally dictated

the subsequent choice to seek an immediate de facto separation over formal legal action.

For many participants, the trauma of infidelity was a decisive factor. Participant 25 described immediately separating de facto after discovering her partner committing sexual acts with another woman. She states, "The moment that I saw him enter Sogo with another girl. I knew at that moment that our marriage is already over" (P25, F, 44). This experience prompted the definitive realization that continued cohabitation would lead to fatal consequences, resulting in an immediate exit via de facto separation. The prevalence of domestic violence and betrayal is the primary condition compelling participants to leave their marriages. Sexual assault, cited 4 times, 11.8%, demonstrates a multifaceted pattern of violence in the marital union. While less frequent, emotional neglect and detachment also played a role in Emotional Abuse and Lack of Emotional Support, and Loss of Love/Emotional Disconnection were each cited twice, at 5.9% each.

Overall, the data underscores that separation in the Philippines often stems from serious marital issues such as violence and betrayal rather than trivial disagreements, reflecting how the absence of accessibility to legal separation pushes individuals to leave abusive or unhealthy marriages without formal legal protection. Collectively, these categories demonstrate that informal separation is not a matter of convenience but rather a last resort driven by serious and often traumatic marital conditions.

Legal Loophole and Risks

This sub-theme demonstrates that participants actively choose alternative, often complicated, legal strategies because legal separation fails to grant the necessary material security or path to complete dissolution. The findings show that essential needs could be achieved without the formal legal separation decree, rendering legal separation redundant.

Some of the participants who have a property demonstrated a deep, pragmatic understanding of property law that protects their newly acquired assets. Participant 17, who is still in a de facto status, wished to purchase a property but strategically placed it under her parents' names. Her parents then executed a will ensuring she is the sole inheritor. This deliberate legal maneuver ensures the property is classified under gratuitous title (inheritance), which, in the lens of the law, renders the property not included in the existing Conjugal Partnership or Absolute Community of Property.

The participants prioritized seeking Judicial Separation of Property as a remedy, which immediately secures financial assets and bypasses the procedural friction of legal separation. Participant 14 is planning to pursue Judicial Separation of Property because both spouses are in agreement to dissolve their property regime, thus eliminating the need to go through complex loopholes to maintain inheritance and ownership. "Ever since my business booms, my main issue is now about the properties that I plan to acquire. Since my ex and I are somewhat still okay, we talked about ending the marriage, but since annulment tend to be expensive, we both consulted a lawyer and the Judicial Separation of Property was suggested to us. Currently, we are now working on it to secure our own sets of assets." (P14, M, 39). This narrative demonstrates a clear preference for a direct and efficient legal remedy. Despite consulting a lawyer and recognizing that Judicial Separation of Property provides many of the benefits associated with legal separation, the participant and some in similar situations chose not to pursue legal separation. This highlights how participants strategically prioritize remedies that meet their immediate needs while avoiding the procedural burdens or costs of formal legal separation.

The severe constraint on remarriage and finality pushes participants toward seeking legal loopholes and, consequently, exposes them to risk. Participants actively consulted and heard about options such as converting to Islam and proceeding with Shariah divorce to end the marriage quickly. Participant 13 reported hearing about the option of converting to Islam and pursuing Shariah divorce to end a marriage quickly. She explained: "While I was looking for possible legal remedy on Facebook, I stumble on a page that offers divorce, I inquired about it and they say to me that all I need to do was pay a 100,000 PHP and they will help me circumnavigate through changing my religion and applying for divorce in Shariah Court. I was stopped by my friend and told me that these methods are scams. I did not push through." (P13, F, 30). Although none of the participants have pursued conversion of their religion or other alternative legal pathways, these narratives demonstrate how the inaccessibility of formal remedies drives individuals to consider high-risk options in an effort to achieve marital finality.

In addition, participants mentioned hearing about other high-risk, illegal actions, such as the falsification of documents for reasons of going abroad or other purposes related to mitigating their status. This shows that the lack of accessible, legal means to achieve finality forces some participants to consider or use illegal strategies, confirming the extreme vulnerability created by the law's inflexibility.

Time, Cost, and Redundancy to File for Legal Separation

This theme focuses on the bureaucratic and financial obstacles associated with pursuing the Legal Process, which are too high, and the limited benefits are entirely negated by the participants' use of informal, low-cost strategies for critical issues like property and custody.

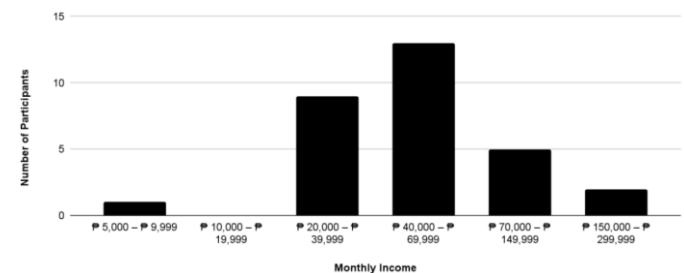


Figure 1. Monthly income of participants

As shown in Figure 1, 1 participant falls in the category of Poor, 9 participants are in Lower Middle Income, 13 of the participants fall in Middle Middle Class (₱40,000 - 69,000) of the participants fall in Upper Middle Income (₱70,000-149,999), and 2 participants fall in Upper Income. Participants consistently cited the high legal fees as the primary deterrent, noting that the cost of filing for legal separation was perceived to be unacceptably close to or even comparable to the cost of pursuing the final remedies of annulment or nullity. The high costs of pursuing legal separation have been one of the issues for those who seek to find a Legal remedy. Out of the 30 participants, only 14 (46.7%) see the availability of legal separation if there were an instance where legal separation would be feasible for those who seek a formal remedy. The rest remain at a strict stance regarding their option not to pursue legal separation despite making it more affordable.

Participants have effectively bypassed the adversarial judicial process by opting for mutual co-parenting regarding custody, visitation, and support. This choice demonstrates a preference for cooperative, low-conflict resolution over the expense of fighting rights through court. For example, Participant 26 successfully negotiated with his previous partner to create a letter outlining their mutual agreement on custody and visitation rights. "What we did was we created a letter as it serves as a evidence that we both agree to have visitation. Yes, we did not go through legal separation or annulment, due to the price. The letter is just for protection for the both of us since we are not living together

anymore.” (P24, M, 45). Participant 18, on the other hand, did not opt for legal separation due to fear of losing the custody of their child at the time of their separation, which led to mutual understanding that both parties are obliged to contribute to their children despite the de facto status that they are in. For the Participants whose partner abandons them, Participant 24 chose not to see the positive effects that legal separation could bring, but rather file for a declaration of nullity on the grounds of psychological capacity.

Beyond the concern regarding costs, the five-year prescriptive period for filing legal separation constitutes a barrier. The majority of participants are ineligible to file simply due to the emotional and temporal lag required to process trauma and seek help. Specifically, out of the 30 participants, only three were currently eligible to file for legal separation under the statutory period. The time needed to seek relief exceeds the prescriptive period. Participant 3 explained, *“The trauma that my Fu— ex did, sorry for my term. Was too much. I became depressed and locked myself at home for at least a few years. I am still recovering. But with that, 5 years is not enough for me since it took me 4 years to be okay and look for legal remedies regarding our marriage.”* (Similarly, participant 5 also took her 7 years to have the strength to open up about her struggles, long past the point of being able to seek legal remedy. Participant 12 took him at least 2 years to prepare for filing a legal remedy, but it was postponed due to family-related matters.

These narratives collectively highlight that the prescriptive period, in combination with the emotional burden of marital trauma, functions as a barrier that prevents participants from exercising the legal remedies that might otherwise support their de facto separation.

DISCUSSION

In this section, the researcher analyzed and interpreted the findings drawn from the participants’ narratives, connecting their lived experiences to the broader socio-legal landscape of the Philippines. The discussion examined recurring themes, shared struggles, and differing perspectives that reflect how cultural norms, financial limitations, and legal barriers influence the decision not to pursue legal separation. Moreover, the researcher explored how these individual stories reveal systemic gaps in existing family laws and policies, emphasizing the need for more accessible, inclusive, and responsive legal remedies for separated couples.

Participants perceive legal separation as an incomplete remedy that denies personal identity restoration, freedom to remarry, and emotional closure, prompting them to maintain de facto status or pursue alternative strategies. Their decisions to de facto separate are primarily driven by severe marital issues, restrictive-costly procedure, prescriptive period, and the exploration of other legal avenues. This supports the notion of Social Constructivism, where individuals garner their understanding of appropriate action and meaning through social interactions, cultural norms, and personal experiences, actively constructing strategies to navigate the limitations of the legal and social system.

The primary reason for the underutilization of legal separation stems from its failure to grant existential closure—a rejection of failed existential closure (Theme 1). One of the main functions of a Legal remedy should be to provide a resolution that would provide an appropriate relief; however, if not met, that can result in an emotional withdrawal or social retreat, which leads to failure to achieve closure or resolution in social or relational contexts (Schaan, 2020). It can be seen in Participant 16’s concern regarding the effect of legal separation, which does not help ease the sensation of separation due to the inability to change her last name to maiden name in such particular records. Under the Article 372 of the New Civil Code, once a legal separation is granted,

the wife must continue using the name and surname she used prior to the decree. Since legal separation does not sever the marriage bond, there are no universal rule that grants an automatic right to revert to their maiden name; This was affirmed in *Laperal v. Republic of the Philippines* (G.R. No. L-18008), in which it clarifies that a married woman cannot change her civil registry last name solely through legal separation.

Section 5(f) of Republic Act No. 11983 offers a chance to those who seek to change their last name back to their maiden name; reversion to married-name has been offered in a once- only policy. The change of their name must adhere to article 370 NCC which allows a married woman to (a) keep her maiden name, (b) add her husband’s surname, and (c) use her husband’s full name with “Mrs.”. The use of the husband’s surname is permissive, not mandatory (*Yasin v. Judge Shari’a District court, G.R. No. 94986, February 23, 1995*). For particular records such as Passports and other ID records, a revision to the maiden name after already using the husband’s name requires statutory grounds. Second, and more critically, the inability to remarry plays a decisive factor in the participants’ struggle in their de facto status. The majority of the participants had explicitly raised that the fundamental reason they sought a legal remedy was to move forward or have a new life, which critically meant by having the legal freedom to pursue a new relationship. Since legal separation cannot grant this crucial relief, it is less advantageous for those who seek authentic post-marital restoration. The supreme court emphasized that legal separation does not dissolve the marriage bond and does not authorize the parties to remarry (*Borja-Manzano v. Sanchez, A.M NO. MTJ-00-1329, March 08, 2001*). Consequently, the inability to legally terminate the marriage is one of their struggles as participants reported maintaining new relationships in absolute secrecy (Participants 24, 28) due to the fear of criminal charges for adultery or concubinage. The Supreme Court has noted that in administrative and criminal cases, individuals who are still legally married but enter into new relationships may face criminal, civil, and administrative consequences (*Hosoya v. Contado, A.C. No. 10731, October 5, 2021*).

Not all are looking for marriage dissolution, as there are still couples who are religious and stand on the sanctity of the marriage. Participants 21 and 2 are firm religious believers and just opted for a church annulment in accordance with the Canon law. They see that pushing through church is in their pursuit of spiritual and moral closure only. The Supreme Court held that church annulment has no bearing on the civil status of the parties; hence, in the civil aspect, the marriage remains valid and existing (*Te v. Gutierrez Yu-Te, G.R. No. 161793, February 13, 2009; Tilar v. Republic, G.R. No. 214529, July 12, 2017*).

Furthermore, the legal doctrine of *In Pari Delicto* (equal fault) in Article 56 (4) of the Family Code acts as a profound barrier that directly contradicts the goal of protecting victims. The participants’ narratives reveal that marital breakdown is overwhelmingly driven by severe abuse and betrayal; despite this, the doctrine can still be invoked to deny the remedy if the aggrieved spouse also committed an offense. This failure shows a flaw that the law treats retaliatory or trauma offenses as morally and legally equivalent to the original fault. It is exemplified by Participant 6 and Participant 17, who demonstrated clear grounds for legal separation, which faced a risk of denial if their subsequent acts of emotional desperation or infidelity were cited. This application is found in the case of *Yu v. Yu* (G.R. No. 200072, June 20, 2016), the Supreme Court denied the petition for legal separation precisely because it found that both spouses committed grounds for legal separation. This outcome confirms that the Court strictly adheres to the principle that neither party is entitled to relief when both are “mutually at fault,” even if one spouse’s fault was retaliatory or a reaction to prolonged abuse. Parental separation shows that children tend to have more emotional and behavioral problems on average after experiencing parental separation (Krapf, 2024).

For Property Relations, legal separation is often neglected in favor of Judicial Separation of Property as a standalone remedy. Participant 14 noted that the legal separation is rendered as unusable as it requires a long, tedious process and grounds just for it to be granted, hence they opted to push through Judicial Separation of property once their financial affairs were already settled. It can be seen in the case of *Adolfo v. Adolfo* (G.R. No. 201427) that the Supreme Court recognized that Judicial Separation of Property is a targeted remedy for spouses who are estranged but do not wish to pursue legal separation or annulment. The Court explained that Judicial Separation of Property is proper when the parties are separated, and the financial affairs need to be settled, even if the marriage itself is not dissolved. Judicial separation of property is relevant and often more of a practical remedy than legal separation when the concern is about the division of assets, rather than the broader consequences of marriage.

Legal loophole Participant 17, who utilized the legal status of an acquired gratuitous title (inheritance) to safeguard newly acquired property. The case of *Candano-Lim v. Lim, et al* (G.R. Nos. 26727-28) clarified that property acquired by gratuitous title (e.g., inheritance) remains the exclusive property of the spouse, either absolute or Conjugal Partnership. It means that a spouse can safeguard inherited property, even without a legal separation process.

The success of informal and non-adversarial agreements regarding custody, visitation, and financial support does not encapsulate everyone who is similar in this setup. One must acknowledge the fact that there are others who seek but cannot gain anything from their partner. Here, legal separation stands as once granted, it enforces the non-custodial spouse to the plausible effects of custody, support, and property regime all at the same time, and is enforceable.

The Five-year prescriptive period proves to be the most critical, the data showing the vast majority (only 3 out of 30 participants) are ineligible to file due to the prescriptive period. The time of discovery of specific grounds under legal separation is not material in counting. Meaning, if either of the parties committed infidelity and the partner discovered it 7 years later from the time it was committed, He cannot file for a legal separation case as it has already prescribed. The lack of an accessible and final solution contributes to the vulnerability of participants, pushing them toward a high-risk and illegal avenue. These include the fraudulent schemes of quick marital dissolution of marriage, Change Database, Printed similar copy of CENOMAR, and the recognition of Shariah Divorce. The Supreme Court has addressed the issue of non-Muslims converting to Islam for the purpose of obtaining a divorce or remarrying. In the Case of *Malaki v. People* (G.R. No. 221075, November 15, 2021), it discusses the practice of converting to Islam to circumvent the laws on bigamy and divorce. Such conversions, when done solely to evade civil law restrictions, are not condoned and do not provide a legal loophole.

Cost has a factor on their decision to not push through legal separation, data confirms that the high legal fees of legal separation together with the half-measure of legal separation has led to only 46.7% (see figure 1) that will push through legal separation as it retains the criminal and relational constraints, participants rationally choose not to invest in an “Incomplete” remedy.

CONCLUSION

This study critically examines the underutilization of legal separation in the Philippines as a decisive act of strategic resistance and rational rejection by the Filipino people. These findings align with Social

Constructivism, which demonstrates that individuals actively construct meaning and strategies from their lived experiences, social interactions, and cultural context when formal legal remedies are inadequate. The paper reveals that the current legal separation does not function as a protective mechanism for failed marriages; instead, it operates as a structural source of injustice and economic oppression for victims. The law punishes the traumatized. In the current situation, the five-year prescriptive period and the *in pari delicto* doctrine are like imposing a limitation on healing and punishing the victims for not being able to stand up and fight in time. The Philippine family law is currently designed to reward patience and penalize pain. An analysis of the population's finances demonstrates that 53.3% are not able to afford the legal remedy. The study concludes that the majority of Filipinos and the benefits of legal relief (support, custody, property division) are commodified and placed behind a prohibitive financial wall, forcing people into high-risk informal or illegal solutions. Legal separation is designed for couples who have issues with their property, yet this can be resolved through going through the Judicial Separation of Property. This study also shows that any legal remedy that denies the right to remarry will be rationally bypassed by both parties, rendering the half-measure that legal separation provides redundant and obsolete. The paper argues that legal separation does not need to be fixed; instead, it needs to be replaced. Only the legislative enactment of an accessible absolute divorce can thoroughly solve the current system's failure to provide security and closure for citizens who want to leave an irreparable marriage. Future researchers may further examine the persistent underutilization of legal separation in the Philippines by broader socio-legal, economic, and cultural factors that influence an individual's decision to remain in *de facto* separation rather than pursuing legal remedy.

Additionally, comparative studies involving individuals who have pursued legal separation or annulment may provide a much deeper insights on the structural and procedural barriers within the Philippine framework. Given that this study is limited only to the underutilization of legal separation and its socio-cultural factors, it can also serve as a guide for related studies within the lens of the family code. This paper has a limitation on its reliance on narratives. While this study adheres strictly to COREQ guidelines to ensure rigor and minimize bias, its findings are inherently limited only by the scope of the sample. Additionally, the study focuses primarily on experiences within the civil legal system, with limited exploration of alternative religious or customary marital dissolution processes.

RECOMMENDATIONS

The findings of this study confirm that the Underutilization of legal separation is a strategic, rational rejection of an insufficient remedy. To address the systemic failure of the current law to meet the needs of separated Filipinos, the following recommendations are put forth for legislative bodies, the judiciary, and legal practitioners. (1) Abolish or Extend the Prescriptive Period: the five-year prescriptive period must be extended (e.g., to 10 to 15 years) to reflect the psychological reality of trauma recovery. The law should not impose a statute of limitations on a victim's ability to seek justice after an emotional breakdown. (2) implement a low-cost remedy to file for legal separation where the lower to middle income bracket can avail. (3) Implement a dissolution of marriage law-divorce law: The inability to remarry (Theme 1) is the primary driver for the rejection of legal separation and the use of high-risk, illegal strategies. The law must align with the social reality that a marriage has irrevocably ended. Driver for the rejection of legal separation and the use of high-risk, illegal strategies. The law must align with the social reality that a marriage has irrevocably ended.

REFERENCES

- Abalos, J. (2017). Divorce and separation in the Philippines: Trends and correlates. *Demographic Research*, 36, 1515–1548. <https://doi.org/10.4054/demres.2017.36.50>
- Adolfo v. Adolfo, G.R. No. 201427 (Supreme Court of the Philippines, March 18, 2015). https://lawphil.net/judjuris/juri2015/mar2015/gr_201427_2015.html
- Aglam, Dorothy Grace and Bongolto, Katrina Lei and Pobeda, Gabrielle Rigel and Vega, Princess Jennielle and Vallespin, Mc Rollyn, A Comprehensive Literature Review of Marital Dissolution in the Philippines: Legal, Socio-Cultural, and Feasibility Perspectives (May 7, 2024).
- ALLiance for the Family Foundation Philippines Inc. (2020, February 5). THE SOCIAL SCIENCE OF DIVORCE. <https://alfi.org.ph/2020/02/the-social-science-of-divorce-3/>
- Amos, J. R. (2017, October 27). Fostering therapeutic effects of annulments. <https://www.linkedin.com/pulse/fostering-therapeutic-effects-annulments-john-r-amos/>
- ATLAS.ti. (2025, February 11). The Ultimate Guide to Qualitative Research - Part 2: Handling Qualitative Data. <https://atlasti.com/guides/qualitative-research-guide-part-2/narrative-research>
- Barrero, I. (2023, June 27). Divorce Prohibition in the Philippines: A system serving the Patriarchy. Institut Du Genre En Géopolitique. <https://igg-geo.org/en/2023/06/27/divorce-prohibition-in-the-philippines-a-system-serving-the-patriarchy/#:~:text=high%20levels%20of%20social%20stigma>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Borja Manzano v. Sanchez, A.M. No. MTJ-00-1329 (Supreme Court of the Philippines, March 8, 2001). https://lawphil.net/judjuris/juri2001/mar2001/am_mtj-00-1329_2001.html
- Boyland, J. R. (2019). A social constructivist approach to the gathering of empirical data. *Australian Counselling Research Journal*. <https://www.acrjournal.com.au/resources/assets/journals/Volume-13-Issue-2-2019/Manuscript5%20-%20A%20Social%20Constructivist%20Approach.pdf>
- Bulletin, M. (2024, August 14). Is your family earning more? Average income rise to P353,230 for Filipino households. Manila Bulletin. <https://mb.com.ph/2024/8/15/is-your-family-earning-more-average-income-rise-to-p353-230-for-filipino-households>
- Candano-Lim v. Lim, G.R. Nos. 262727–28 (Supreme Court of the Philippines, January 27, 2025). https://lawphil.net/judjuris/juri2025/jan2025/gr_262727_2025.html
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661.
- Collantes, K. E., Aurelia, D. J., Castillo, J. J., Mangalindan, G. F., Nicolas, D. V., & Villarama, J. (2024). Stolen Youth: Case study on Psychological Effects of Parental Separation. *Journal of Interdisciplinary Perspectives*, 2(9). <https://doi.org/10.69569/jip.2024.0340>
- Constable, N. (2003). Romance on a global stage: Pen pals, virtual ethnography, and "mail-order" marriages. University of California Press.
- Creswell, J.W. (2013). Qualitative inquiry & research design: choosing among the five approaches. Thousand Oaks, CA: Sage Publications, Inc.
- Dagami, J. P., Cadano, M. J. O., Arceño, A. J. M., Atay, M. J. P., Dosal, A. T., & Padullo, C. a. C. (2022). Uncovering the causes of high incidence of parental separation: a case in Barangay Zone II, Santa Fe, Leyte. *International Journal of Research Publications*, 103(1). <https://doi.org/10.47119/ijrp1001031620223447>
- De Borja, F. (2022, March 4). Church Annulment Vs Civil Annulment In The Philippines. De Borja Law. <https://deborjalaw.com/church-annulment-vs-civil-annulment-in-the-philippines/>
- De Mieroop, D. V., McCabe, A., & Minami, M. (2023). Narrative inquiry. John Benjamins Publishing Catalog, 33(2). <https://doi.org/10.1075/ni>
- De Vera, M. (2025, February 6). What are the legal barriers to the possibility of divorce in the Philippines? Pinoy Law Group. <https://pinoylawgroup.com/blog/what-are-the-legal-barriers-to-the-possibility-of-divorce-in-the-philippines>
- Fajardo-Jarilla, R. (2023, March 8). Philippines: Single mothers continue to fight stigma. Institute for War and Peace Reporting.
- FCB Law Office. (2024, July 7). Legal separation in the Philippines. <https://lawyerphilippines.org/legal-separation-in-the-philippines/>
- Global Rights for Women. (2024, January 18). Examining the absence of divorce on victims of domestic violence in the Philippines. <https://globalrightsforwomen.org/absence-of-divorce-and-domestic-violence-philippines-part-1/>
- Hosoya v. Contado, A.C. No. 10731 (Supreme Court of the Philippines, October 5, 2021). https://lawphil.net/judjuris/juri2021/oct2021/ac_10731_2021.html
- Itzik, L., & Walsh, S. D. (2023). Giving them a choice: qualitative research participants chosen pseudonyms as a reflection of Self-Identity. *Journal of Cross-Cultural Psychology*, 54(6–7), 705–721. <https://doi.org/10.1177/00220221231193146>
- Ishtiaq, M. (2019). Book Review Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage. *English Language Teaching*, 12(5), 40. <https://doi.org/10.5539/elt.v12n5p40>
- Kleinschlömer, P., & Krapf, S. (2023). Parental separation and children's well-being: Does the quality of parent-child relationships moderate the effect? *Journal of Social and Personal Relationships*, 40(12), 4197–4218. <https://doi.org/10.1177/02654075231201564>
- Lazaro, M. M. (2018, April 23). 'Marriage is an indissoluble/ inviolable divine and constitutional institution.' Manila Bulletin. <https://mb.com.ph/2018/4/23/marriage-is-an-indissoluble-inviolable-divine-and-constitutional-institution>
- Laparel v. Republic of the Philippines, G.R No. L-18008, (Supreme Court of the Philippines, October 30, 1962) https://lawphil.net/judjuris/juri1962/oct1962/gr_l-18008_1962.html
- Liwanag, L. a. L., Palermo, A. R., Diao, J. M. A., Genotiva, A. E., Capulla, R. P., Turingan, M. D., & Labor, S. M. G. (2023). Attitudes towards divorce and Divorce bill among married
- Malaki v. People, G.R. No. 221075 (Supreme Court of the Philippines, November 15, 2021). https://lawphil.net/judjuris/juri2021/nov2021/gr_221075_2021.html
- Manila Bulletin. (2024). Average annual family income in PH increases to ₱353K — PSA. <https://mb.com.ph/2024/04/17/average-annual-family-income-in-ph-increases-to-p353k-psa/>
- Memon, M. (202 C.E., June). SAMPLE SIZE FOR SURVEY RESEARCH: REVIEW AND RECOMMENDATIONS. *Journal of Applied Structural Equation Modeling*. Retrieved May 19, 2025, from https://jasemjournal.com/wp-content/uploads/2020/08/Memon-et-al_JASEM-Editorial_V4_Iss2_June2020.pdf

Yanuaría, J. (2025, November 10). BIR Tax Table. MPM Consulting Services Inc. <https://mpm.ph/bir-tax-table/>



CLOUDCONSTRUCT: CLOUD-BASED PROJECT MANAGEMENT SYSTEM FOR D.R. LOPEZ CONSTRUCTION SERVICES

Gino Louis E. Herrera¹, Dave V. Lopez¹, John Marcus M. Loyola¹, Cristina De los Santos²

¹Information Technology Student, College of Engineering and Information Technology

²OIC-Dean, College of Engineering and Information Technology

*Corresponding author Email: dave.lopez@lettran.edu.ph

ABSTRACT

This capstone project aims to develop and implement a cloud-based Project Management System for D.R. Lopez Construction Services, addressing the company's complete reliance on manual processes for billing, progress tracking, reporting, and cost estimation. Such reliance often leads to delays, errors, and inefficiencies. The system is designed to deliver projects in an organized manner, on time and within budget, enhancing overall efficiency by centralizing project documentation, automating billing and progress tracking, digitizing cost estimation, and streamlining the generation of site and safety reports. The system utilizes JavaScript, React, Express, MySQL, and is deployed via Vercel and Railway. It follows the Rapid Application Development (RAD) methodology to enable fast development and iterative improvements based on user feedback. The system was evaluated using the ISO 25010 standard. Three quality characteristics—functionality, portability, and security—were assessed through test cases, while all eight ISO 25010 characteristics were measured using a Likert-scale survey completed by 60 respondents, composed of Civil Engineering and IT students, professors, and industry professionals. The system achieved an average mean score of 4.50, which was interpreted as "Very Good," indicating that it meets user expectations. It demonstrates enhanced workflow efficiency, overcomes the limitations of manual processes, and provides a fully functional solution for project management. Future improvements may focus on mobile accessibility and predefined cost estimation templates to further streamline the workflow.

Keywords: *Cloud-based, Project Management, React.js, Express.js, MySQL, Vercel, Railway, Rapid Application Development (RAD) methodology, ISO 25010*

INTRODUCTION

Digitalization has had a significant impact on the construction industry. It has been the driving improvements in operational performance and productivity. The Department of Public Works and Highways (DPWH, 2023) emphasized that investing in state-of-the-art technologies not only supports better infrastructure development but also enhances the overall management of construction process. As a result, many construction firms are adopting digital solutions such as cloud computing and automation to streamline project management.

Nevertheless, despite these advancements, several construction companies still rely on outdated practices for critical tasks. For instance, D.R. Lopez Construction Services, established in late 2020 in Tanza, Cavite by Engr. Douglas R. Lopez, specializes in general construction and civil engineering projects. While the company manages several projects, essential activities—such as billing, progress tracking, and inventory monitoring—manually, resulting from issues in coordination of various tasks, tracking of updates, and maintenance of project documentation. Smaller construction firms often suffer these challenges due to high cost and limited technological support (Philippine News Agency, 2022). This is the same situation faced by the company, which relies on manual methods due to the lack of affordable digital tools.

A major issue in the company is the drafting of proposals, a process that is extremely time-consuming and requires extensive checking at each step. Engr. Lopez expressed his frustration, saying, "As a project manager, it is very exhausting to write an entire proposal by hand. This practice usually leads to mistakes in computation and takes up my time to the

extent that I feel worn out." This constant checking slows down the entire process and increases the likelihood of mistakes. Engineers also continue to use physical documents for site progress reports, making collaboration slower and updates harder to track. Inventory is recorded in a logbook, so shortages are only discovered during manual checks, which delays material replenishment.

Because of these challenges, there is a clear need for a digital system that can help the company manage documentation more effectively, improve collaboration, and reduce delays in project activities. In addressing the inefficiencies at D.R. Lopez Construction Services, the implementation of a cloud-based Project Management System emerges as an effective solution.

Objectives of the Study

This study aimed to develop and implement a cloud-based Project Management System to ensure organized project execution, timely completion, and adherence to budget for D.R. Lopez Construction Services. The system includes project scheduling to assign tasks to engineers, automated cost estimation using the Bill of Quantities (BOQ) and Bill of Materials (BOM) for accurate project costing, and resource management that updates quantities as they are issued. It also generates detailed reports to monitor project progress and performance, and its quality is evaluated based on ISO/IEC 25010 standards.

Scope and Delimitation of the Study

This study focuses on the development of a cloud-based application entitled "CloudConstruct: Cloud-based Project Management System for D.R. Lopez Construction Services" to digitalize and streamline key

construction management processes. The system focuses on proposal planning, site progress tracking, and resource management, aiming to reduce computation errors, improve collaboration, and enhance efficiency in monitoring project updates and material stocks. It includes user roles for the admin/project manager, site engineer, and safety engineer. The Admin/Project Manager can assign tasks using the calendar, create projects, prepare proposals by encoding Bill of Quantities (BOQ) dimensions and generating total estimates, manage the Bill of Materials (BOM) with automatic cost computations based on the BOQ, handle document management, create progress billing, and manage project resources.

Site Engineers can request materials and submit daily site reports. They also monitor ongoing activities at the project site to ensure tasks are completed efficiently. Safety Engineers can create incident reports and file safety reports. They also oversee compliance with safety procedures to maintain a safe working environment.

The system has limitations that may impact its functionality and user experience. For instance, it requires an internet connection since it is cloud-based, making it unavailable offline. It does not have a mobile application for on-site engineers, who typically carry phones rather than laptops, though it can be accessed through mobile browsers. Additionally, there is no live communication or chat feature that allows users to send direct messages within the system. Furthermore, the system does not include a procurement module, meaning material purchasing and supplier management must still be handled separately.

Significance of the Study

This study benefits D.R. Lopez Construction Services by introducing a cloud-based project management system designed to automate project operations and modernize administrative tasks. The company is provided with modules for resource management, cost estimation, and progress monitoring, enabling it to organize resources, keep track of projects, and streamline the flow of ongoing tasks through modernization and automation. The system allows managers and engineers to supervise projects in real time, leading to timely, budgeted, and organized project delivery. The project management process has been a major driver of operational efficiency, yet staff cannot be programmed to perform higher-level activities such as strategizing, planning, and dedicating themselves to the project.

In addition, this system eliminates the need for manual tracking, which is the main source of errors, and establishes a more accurate and reliable standard for project management. The construction team benefits in their daily activities, as the system not only makes coordination among the three groups—administrators, site engineers, and safety engineers—easier but also provides better access to reports and documents. The researchers also gain practical experience in programming, system design, and problem-solving, while future researchers may use this study as a reference for developing or improving construction management solutions.

Review Related Literature

Digitalization in the Construction Industry

As the construction industry evolves, companies worldwide are turning to new technologies to boost efficiency, productivity, and overall project performance. Digitalization has become a key factor in driving innovation and competitiveness, completely transforming traditional construction methods. Various research studies have highlighted the effects of digital transformation in the construction sector, including its impact on decision-making, risk reduction, cost management, and project effectiveness (Musarat et al., 2022; Botton & Forgues, 2020; Siman, 2023).

The shift toward digital tools has considerably enhanced project management by improving communication, streamlining workflows, and reducing delays. According to Musarat et al. (2022), digitization increases construction efficiency by reducing manual labor, accelerating construction, and lowering expenses. This aligns with Botton and Forgues' (2020) concept of Building 4.0, which focuses on automating and decentralizing construction operations through the use of IoT and data-driven decision-making. Construction 4.0 seeks to increase overall operational efficiency, ensure project accuracy, and improve real-time decision-making by minimizing the need for human intervention.

Cloud computing has become a key enabler of online collaboration in the Philippine construction industry. According to Siman (2023), cloud platforms enable real-time communication, remote construction operations, and efficient data sharing. This also improves accessibility, allowing stakeholders to stay connected and make decisions from anywhere, thereby enhancing overall project efficiency. Similarly, Alviar et al. (2024) found that mobile technology significantly improves communication, reduces project delays, enhances collaboration among stakeholders, and streamlines operations. It supports real-time data access for informed decision-making and performance tracking.

The impacts of digitalization have also been driven by external pressures, such as the COVID-19 pandemic, which forced construction firms to adopt digital technologies to maintain business operations. Anastacio et al. (2021) conducted research on construction management in San Jose City, Philippines, and found that interruptions caused by the pandemic—such as labor shortages, rising material costs, and strict health protocols—significantly delayed project schedules. However, companies that adopted cloud computing and digital collaboration tools were better able to adapt to the crisis.

Intranet systems within construction firms also play an important role in effective collaboration and enhancing operational efficiency, as emphasized by Norma (2020). They allow employees and contractors to access real-time information, share construction guidelines, provide training materials, track acknowledgments, and ensure document compliance. This seamless communication significantly reduces operational delays and streamlines construction management processes.

Cloud Computing in Project Management System

Cloud computing has transformed how technology is accessed and utilized, offering on-demand services such as data storage, networking, and application development over the internet. Instead of managing physical hardware, users rely on powerful remote servers housed in large data centers. According to Susnjara and Smalley (2025), this flexibility and scalability make cloud computing essential for various activities, including email access, streaming services, business operations, and advancements in artificial intelligence. Companies benefit by reducing costs, improving collaboration, and efficiently scaling resources.

Drapkin (2024) noted that cloud-based project management has transformed the way teams plan and execute projects. Unlike traditional on-premise systems, where everything is managed locally, cloud project management brings all project-related activities into one accessible digital platform. This shift makes collaboration easier while also reducing maintenance costs and improving security. As Nidamanuri (2023) highlights, leveraging cloud-based solutions such as SaaS, IaaS, and PaaS allows organizations to streamline workflows, reduce costs, and adapt to the dynamic demands of modern ICT projects.

Thobejane and Marnewick (2020) found that cloud computing projects introduce higher complexity due to novel operational dependencies and

governance challenges, identifying 18 unique complexity factors alongside 78 shared with traditional IT projects. Their study highlights five key project management knowledge areas—risk management, stakeholder management, resource management, integration management, and business case development—as essential for successful cloud project execution.

Cloud computing has significantly changed the e-commerce sector by providing scalable, flexible, and affordable resources that enable online retailers to meet changing consumer needs. By removing the need for physical servers and offering on-demand access to servers, storage, and advanced analytics via the internet, it enables operations with increased security and reliability. This allows companies to use real-time information for personalized experiences, scale smoothly during peak periods, and recover swiftly from disruptions. By using cloud technologies, e-commerce systems can efficiently handle, store, and analyze data while quickly adapting to shifting market demands. Cloud technology also provides vital business features for customer relations, inventory management, and sales analytics, in addition to strong security measures to maintain client satisfaction (Wagner, 2023; Haldiya, 2024; Mpingana et al., 2024).

In the construction sector, cloud computing has transformed project data management by providing scalable, on-demand resources that allow documents, plans, and schedules to be securely stored and accessed. It enhances collaboration among project teams by centralizing information and enabling real-time updates, thereby improving coordination and decision-making. Cloud solutions also streamline project execution, reduce operational costs, and increase flexibility, allowing construction projects to be managed more efficiently (Haldiya, 2024).

The Philippine government is taking new steps toward digital transformation, and one of its key initiatives is cloud integration. Bower (2022) stated that this transition is expected to bring numerous benefits, from minimizing costs to improving efficiency. By switching to cloud-based systems, the government can access top-tier computing resources without the need for expensive hardware, turning large capital expenses into more manageable subscription fees. This change also leads to lower labor and energy costs, better security, and faster innovation. More importantly, it has the potential to boost productivity and streamline public services.

Features & Benefits of Cloud Computing in Construction Management

Cloud computing improves construction project management by enabling real-time collaboration, enhancing resource management, and minimizing operational costs (Golightly et al., 2023). Risks such as data breaches are minimized through strong cybersecurity solutions, including intrusion detection and prevention systems.

Cloud computing also enhances project management by improving collaboration, efficiency, and scalability through real-time data access and integration across distributed teams. It enables seamless communication, resource sharing, and automation, reducing delays and increasing productivity. Somanathan (2023) highlights that multi-cloud deployments introduce security challenges such as misconfigurations, inconsistent security standards, and interoperability issues, requiring meticulous oversight and cohesive security policies. By leveraging cloud-based solutions with standardized frameworks, organizations can optimize workflows, streamline operations, and adapt to evolving project demands with greater flexibility (Somanathan, 2023).

As noted by Altes et al. (2024), if Filipinos believe cloud storage (CS) would benefit them and be relevant to their career or studies, they are

more likely to use it. However, the tendency to utilize CS services is influenced by social factors and security concerns. Providers should strengthen security protocols and highlight the usefulness of cloud storage in everyday tasks to boost adoption.

According to Lauri (2024), the Bill of Materials (BOM) and Bill of Quantities (BOQ) are enhanced when cost estimation, procurement, and inventory control are incorporated into cloud-based project management. By ensuring that all components and materials are available, a BOM reduces shortages and boosts manufacturing efficiency (Landau, 2024). Meanwhile, a BOQ provides a thorough cost breakdown, facilitating precise resource allocation and budget planning (Falak, 2021). Construction companies can reduce errors in cost estimation and project execution, automate computations, and track materials in real time by utilizing cloud technologies.

As Industry 4.0 drives the adoption of smart technologies, automation, and real-time analytics, cloud-based BOM and BOQ systems can introduce automated processes that align with these advancements. According to Bongo, Abellana, and Caballes (2020) from Cebu Technological University, successful implementation of Industry 4.0 requires financial investment, infrastructure readiness, and a highly skilled workforce. Integrating BOM and BOQ into a cloud-based, automated system can reduce human error, improve productivity, and enable data-driven decision-making, representing a key step toward a fully digitalized, Industry 4.0-ready construction environment.

Bello et al. (2021) noted that cloud computing brings many advantages, such as eliminating data silos and providing affordable IT solutions for small and medium-sized companies. This technology integrates advancements like BIM, IoT, and big data analysis, making construction more connected and efficient. Cloud computing will be essential for future businesses in enhancing long-term sustainability, competitiveness, and productivity.

Conceptual Framework

The study’s conceptual framework is described using the Input-Process-Output (IPO) system approach.

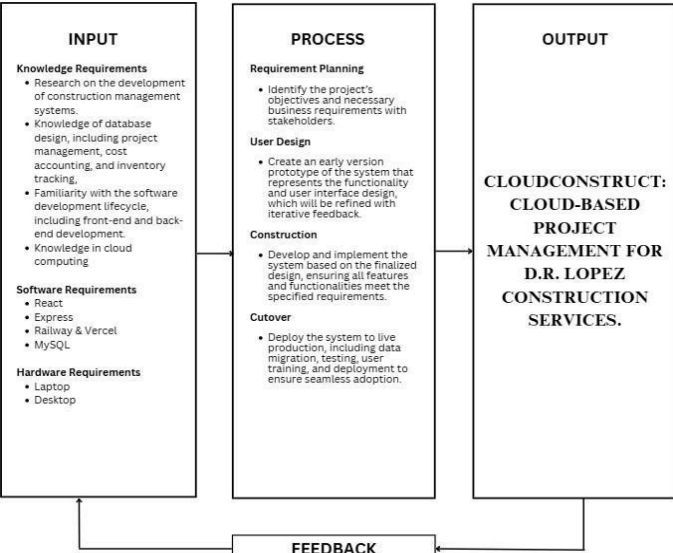


Figure 1. IPO Model

The input phase showcases the knowledge requirements that must be acquired for this study, which involve identifying and gathering necessary research about construction processes, databases, and project management. The proponents must have a strong understanding of

software development tools such as React.js, Express.js, MySQL, and cloud services like Railway and Vercel. The hardware requirements for the project include a laptop or desktop computer capable of running the necessary development tools and software.

The process phase employs the Rapid Application Development (RAD) method, which is a quick, adaptable, and iterative system development approach. User requirements and client workflow information are collected, analyzed, and classified to determine the system features. These requirements are validated during demonstrations of initial prototypes and user feedback sessions so that the system is suitable for the need. During the design phase, the initial blueprints, architecture, and user-interface layouts are created so that the system adheres to the recognized requirements. Subsequently, coding and debugging are carried out alongside system construction to fix any issues, while continuous testing and user feedback are relied upon to enhance features and usability. Finally, the system goes live, users are trained, and it begins replacing the manual processes.

The output phase delivers the final product of the system, which includes automated project proposal cost estimation and billing, resource records, digitalized reporting, print functions, and a cloud-based project management platform for D.R. Lopez Construction Services. This showcases the completion of the project objectives and the fulfillment of user needs.

User feedback is a continuous process that takes place throughout the entire development period and is aimed at improving the system. Feedback is meticulously scrutinized and applied to bug fixes, feature enhancements, and usability improvements. This procedure ensures that the system effectively satisfies user needs, aligns with the project's aims, and is fully ready for launch.

METHODOLOGY

Project Design and Development

In this study, the researchers utilized the Rapid Application Development (RAD) model in constructing the cloud-based Project Management System for D.R. Lopez Construction Services. This model was chosen because it enables fast development, iterative prototyping, and continuous user feedback, ensuring that the system meets client requirements efficiently.

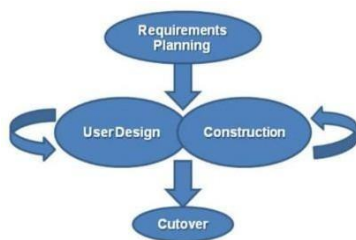


Figure 2. Rapid Application Development Model

During the initial phase of project development, the proponents conducted surveys and interviews with the client to gather user requirements and carefully determine the limitations of the current business operations. The collected requirements were validated through client discussions, which included prototype demonstration and feedback sessions to confirm that the proposed system features met their actual operational needs. Additionally, the client demonstrated how business costs are computed, allowing the proponents to understand the fundamentals of project estimation in civil engineering.

Furthermore, the scope of the system was outlined, which includes features such as user account profiles, automated Bill of Quantities (BOQ) and Bill of Materials (BOM) for cost estimation; progress billing; document records; resource management; and digitalized safety and site reports — to ensure accuracy, efficiency, and proper project management.

In the User Design phase, the proponents systematically designed the future system's processes and created corresponding models. Priority was given to designing user-friendly interfaces to ensure that users could navigate the system with ease. At the same time, the database architecture was structured to effectively manage and retrieve data related to computed calculations and various administrative tasks.

After the design phase, the Construction phase began. Once all requirements and plans were finalized, project management-initiated construction activities according to the project schedule while keeping the design specifications in line. Engineering calculations were continuously analyzed and converted into corresponding system modules to ensure accurate calculated completion. Extensive testing and debugging were conducted during this phase to confirm that all features were functioning properly and operating as intended.

The Cutover phase is the final stage, in which the system is transitioned from development and testing to full operational use. This means it is functioning properly and ready to replace current processes. The project team launched the system and completed the following: connecting all modules, configuring servers and databases, and performing final checks to confirm that each feature worked correctly. Before full deployment, the system underwent pilot testing in the company's actual work environment, where selected users performed real operational tasks to evaluate system functionality and identify potential issues.

Stakeholders received training to familiarize themselves with the system's workflows, functionalities, and reporting tools. In addition, user manuals, guides, and video tutorials were provided. The phase concluded when the system was formally handed over, including reports on deployment status, user acceptance, and overall readiness.

The use of diagramming tools—including sitemaps, data flow diagrams, relational database models, data dictionaries, and use case diagrams—aided in visualizing, designing, and analyzing the system's workflow throughout its development cycle.

Project development began in the third week of January of the second semester of academic year 2025–2026 and is expected to be completed by December of the first semester of the same academic year, spanning a total of 45 weeks.

Testing Procedure

The ISO/IEC 25010 software quality model was used as the main testing methodology to ensure that the application met international industry standards, serving as the primary basis for the overall evaluation of the system. This model guided the evaluators in assessing three main quality aspects of the project: functionality, portability, and security.

Functional testing focused on validating the operation of all features based on the documented requirements and their interaction with real users. The login procedure for all user roles—Admin, Site Engineer, and Safety Engineer—was verified, and it was found that access to the dashboard and visibility of profiles aligned with the designated permissions.

Additionally, the cost estimation module was subjected to extensive testing to ensure that create, read, update, and delete (CRUD) operations functioned as expected and that automatic computations were accurate and consistent. The material request feature was also examined, and it was confirmed that items could be distributed, their movement tracked and accurately recorded in the material usage logs without errors.

Moreover, the progress billing feature was scrutinized to ensure that billing for each cycle accurately reflected project progress, while the submission of Site and Safety reports was evaluated for completeness, correctness, and proper handling of attachments.

Portability testing assessed the system’s capability to run on different device types, screen sizes, and environments. It also included checking compatibility with leading browsers, ensuring uniformity on the latest stable versions, and testing layout adaptability on computers, tablets, and mobile devices. The software was tested under various network scenarios to confirm that it remained accessible and responsive even when internet connections were slow or unstable.

Security testing ensured that the system was protected against unauthorized access and common cyber threats. Testers verified that JWT token authentication was correctly applied for secure login sessions, role-based access control properly restricted features according to user roles, and passwords were securely encrypted in the database.

Additional tests checked login attempt limitations and account-locking delays, ensuring that brute-force attacks were prevented and suspicious login patterns were detected.

To complete these tests, unit testing, integration testing, and system testing were applied in combination throughout the evaluation process. Testers validated each characteristic’s compliance with specifications using test cases organized to list inputs, steps, and expected outcomes. The thorough and structured testing procedure demonstrated that the system met ISO/IEC 25010 standards and confirmed its readiness for operation in real-world scenarios.

Evaluation Procedure

The system was evaluated by 60 respondents from different stakeholder groups, including Civil Engineering and IT students, professionals, and employees of D.R. Lopez Construction Services. All respondents were provided with a recorded video system demonstration and Google links for evaluation purposes.

The Likert Scale was used to gather responses on specific topics. It allows for a qualitative interpretation of data by assigning numerical values to levels of agreement or disagreement with given statements.

Table 1. Likert Table for System Evaluation

Numerical Scale	Interpretation
5.0	Excellent
4.0	Very Good
3.0	Good
2.0	Fair
1.0	Poor

The ISO/IEC 25010 software quality model was used for the evaluation of the application, providing a structured listing of features for determining software quality. The criteria include Functional Suitability, which checks the system’s completeness and correctness; Performance Efficiency, which evaluates time behavior and resource usage;

Compatibility, which determines how well the system coexists and interoperates with other components; Usability, which measures how simple and intuitive the system is; Reliability, which checks stability and consistency; Security, which assesses the protection of data and integrity; Maintainability, which evaluates how easily the system can be improved or modified; and Portability, which measures how well the system works across different environments. The input gathered will be used to confirm the system’s quality and readiness for deployment.

Statistical Tools

The survey data were interpreted using percentage and mean calculations. Percentage was used to determine the fraction of respondents who selected each answer, whereas the mean (average) was utilized to provide a summary of the overall assessment for each question, thus offering a measure of central tendency. The use of these tools made the interpretation of respondents’ evaluations of the system more effective.

Table 2. Descriptive Evaluation of the Mean

Numerical Scale	Interpretation
4.51 - 5.00	Excellent
3.51 - 4.50	Very Good
2.51 - 3.50	Good
1.51 - 2.50	Fair
1.00 - 1.50	Poor

Project Structure

The system was developed to switch the company’s manual project management processes to a digital platform. It focused on cost estimation and billing for the construction company. The proponents utilized JavaScript with frameworks such as React.js for the frontend and Express.js for the backend, while MySQL served as the database. For deployment, Vercel was used for the frontend, and Railway was used for the backend and database.

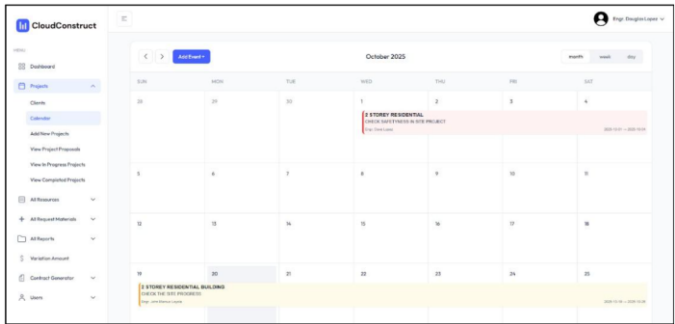


Figure 3. Calendar

The Calendar Module (figure 3) is capable of presenting the tasks assigned to various users along with their due dates. The admin can designate engineers’ duties within a fixed period. Additionally, the module provides the admin with the ability to observe and control project activity timelines, thereby ensuring that deadlines are met. By viewing their tasks by day, users can easily manage their workload, allowing for better planning and time management.

Item Label	Unit	Floor	Length	Width	Depth	Initial Qty	\$	Adjusted Qty	Actions
Excavation	cu.m					207.20	1.20	207.20	
Formwork	sq.m					104.52	0.00	0.00	
Steel Reinforcing Bars	kg					1.00	0.00	0.00	
Concrete	cu.m					200.00	0.00	0.00	
Steel Reinforcing Bars	kg					200.00	0.00	0.00	

Figure 4. Quantity Take-Off (Bill of Quantities)

The Quantity Take-Off page (figure 4) displays a detailed breakdown of measurements for a specific project. It shows item labels, units, floors, dimensions, initial quantities, allowances, and adjusted quantities, allowing project managers to calculate and manage construction volumes without checking every row for accuracy, thanks to the system's predefined formulas. The Project Manager can select General Dimension, which refers to the volumes and areas of work, and Rebar Dimension, which specifies the quantity of rebar for each activity. The Project Manager can also input and update the measurements for each activity if the initial entry was incorrect, ensuring proper planning.

Item Label	Unit	Floor	Length	Width	Depth	Initial Qty	\$	Adjusted Qty	Actions
Temporary Formwork	sq.m					104.52	0.00	0.00	
Temporary Reinforcing	kg					1.00	0.00	0.00	
Temporary Reinforcing Bars	kg					1.00	0.00	0.00	

Figure 5. Material Take-Off (Bill of Materials)

The Material Take-Off page is the primary and sole source of reference for all construction materials needed for a specific project at a given time. The information is systematized and presented in such a clear manner that project managers, estimators, and engineers can access material data that is not only accurate but also updated at all times. For every material entry, descriptions are provided along with the material name, type, specifications, unit of measure, and unit cost.

The page automatically integrates the Quantities Take-Off, meaning that all total quantities shown are based on measurements taken from the QTO calculations. This reduces manual errors and ensures uniformity between dimensional calculations and the material listing.

Material Name	Brand Name	Unit	Cost	Stock	Actions
Concrete	Generic	cu.m	\$100.00	30	
Cement	Generic	kg	\$100.00	40	
Steel Reinforcing Bars	Generic	kg	\$100.00	40	

Figure 6. Resource Management

The Resource Management module provides an overview of all materials and equipment available in the system. It displays key statistics, including the total number of resources and distinct brands. Users can easily add new resources, ensuring efficient tracking and management of materials. Damaged items are tracked to ensure proper maintenance or replacement, while returned items are recorded to monitor resource usage and availability.

Item Label	Unit	Floor	Length	Width	Depth	Initial Qty	\$	Adjusted Qty	Actions
Excavation	cu.m					207.20	1.20	207.20	
Formwork	sq.m					104.52	0.00	0.00	
Steel Reinforcing Bars	kg					1.00	0.00	0.00	
Concrete	cu.m					200.00	0.00	0.00	
Steel Reinforcing Bars	kg					200.00	0.00	0.00	

Figure 7. Generated Report

The Generate Report feature allows users to create comprehensive reports based on project data. It enables the admin and other users to select specific timeframes or criteria for the reports. The system automatically sorts the data into formats that are easy to understand for analysis. Generated reports can include progress summaries, resource usage, and estimation details. This functionality reduces the risk of stakeholders making incorrect decisions and, at the same time, allows for efficient monitoring of project performance.

The system is cloud-based and requires an internet connection. However, it lacks a dedicated mobile app for on-site engineers, does not support live messaging, and excludes a procurement module, requiring material purchasing and supplier management to be handled separately.

RESULTS AND DISCUSSION

The evaluation of the system was carried out based on the ISO/IEC 25010 software quality model, which is a widely accepted international standard for assessing software quality. This model examines the main quality attributes such as functional suitability, reliability, usability, performance efficiency, security, portability, compatibility, and maintainability, through which the system's effectiveness in meeting user needs and adapting to various construction workflows is rated. These measures serve as the primary factors for determining system capability, stability, and overall user satisfaction.

In the table below, the system's overall rating is displayed as a summary of the evaluation across different criteria. It provides a comprehensive assessment that indicates the system's total performance, offering crucial information about its efficiency and strengths.

Table 3. Respondent's Overall Rating

CRITERIA	MEAN	INTERPRETATION
Functional sustainability	4.63	Excellent
Reliability	4.41	Very Good
Portability	4.49	Very Good
Usability	4.50	Very Good
Performance efficiency	4.52	Excellent
Security	4.49	Very Good
Compatibility	4.49	Very Good
Maintainability	4.47	Very Good
TOTAL	4.50	Very Good

The evaluation of the system reveals that the solution is highly rated across all ISO/IEC 25010 criteria, as indicated by mean scores ranging from 4.41 to 4.63. The highest score, 4.63 (“Excellent”), was assigned to Functional Suitability, reflecting the system's strong accuracy and completeness in handling construction-related tasks such as project scheduling, resource tracking, and cost estimation. Reliability received the lowest average score of 4.41 (“Very Good”), showing that while there were minor slowdowns during heavy data retrieval, the system remained stable with no major failures. Other criteria—Performance Efficiency (4.52), Usability (4.50), Portability (4.49), Security (4.49), Compatibility (4.49), and Maintainability (4.47)—were also classified as “Very Good,” demonstrating lasting efficiency, adaptability, and user-friendliness.

The findings emphasize that a well-designed, technology-based project management system can deliver large-scale operational efficiency even for a small firm. The system was evaluated by 60 participants, including industry professionals, and received an overall rating of 4.50, signifying both high effectiveness and a positive user experience. The data obtained from testing support the assertion that the system has achieved its goal of making construction processes more efficient.

The research highlights that the system is capable of effectively managing project workflows and reducing inefficiencies in construction management. Improved communication and coordination between site workers and the project manager were among the main outcomes, leading to the timely and accurate execution of tasks. These outcomes match the characteristics of cloud-based project management systems described by Drapkin (2024) and Nidamanuri (2023), which highlight centralized data management and real-time information access to enhance project team collaboration.

CONCLUSION

This capstone project successfully developed and implemented a Cloud-Based Project Management System for D.R. Lopez Construction Services, achieving its objective of delivering projects in an organized manner, on time, and within budget. The system offers the benefits of centralizing project data, automating scheduling and budgeting through Bill of Quantities (BOQ) and Bill of Materials (BOM) integration, and making reporting more efficient, which has resulted in better communication between office staff and on-site engineers. The tests for functionality, portability, and security, performed based on ISO/IEC 25010 standards, attributed trustworthiness, effectiveness, safety, and usability to the system. Users reported that the system is easy to navigate and supports coordination between different project activities. The

outcomes of the testing confirm that the system has a significant impact on project management processes and user satisfaction.

In addition, the use of cloud-based tools has been validated, as they can significantly enhance construction project efficiency, reliability, and accuracy from a management perspective. The system, for instance, highlights the benefits of integrating automated scheduling, budgeting, and reporting, as it enables smoother workflows, fewer mistakes, and better communication between office staff and the on-site crew. The results imply that the real estate and construction industry can benefit from the application of such systems by operating with higher accuracy, greater timeliness, and improved accountability. Moreover, the system is aligned with current technological standards in construction management. These implications indicate that the system can serve as a driver for the continuous development of project organization, implementation, and overall operational efficiency.

RECOMMENDATIONS

Several recommendations are proposed to enhance the system in future development. It is highly recommended to develop a mobile version of the system customized for engineers. Since fieldwork often limits the use of desktop devices, a mobile app would enable users to submit reports, track progress, and access project data in real time during on-site operations in a convenient manner. Future versions of the system may also allow the use of predefined project templates, which would eliminate repetitive manual input. For instance, selecting a particular project type could automatically generate the associated work items, materials, and budget conditions.

Adding an image-uploading feature to the site material request process would be a step toward accurate verification and documentation of materials. Last but not least, a Gantt chart for the admin dashboard would not only assist in visualizing project timelines but also make monitoring overall progress easier. The cloud-based project management system can serve as a secure, reliable, and efficient platform that supports the daily operations of construction professionals and encourages continuous improvement in project management by adopting these advancements.

REFERENCES

Altes, G. C., Ong, A. K. S., & German, J. D. (2024). Determining factors affecting Filipino consumers' behavioral intention to use cloud storage services: An extended technology acceptance model integrating valence framework. *Heliyon*, 10(4), e26447. <https://doi.org/10.1016/j.heliyon.2024.e26447>

Alviar, R. P., Casuat, C. D., & Belizar, J. P. (2024). Mobile technology for improving project management in the construction industry - Philippine setting. *Proceedings of the International Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates, February 12-14, 2024*. IEOM Society International. <https://ieomsociety.org/proceedings/2024dubai/42.pdf>

Anastacio, J. A., Valerio, R. A., Dizon, J. L., & Ramos, J. M. (2021). Construction project management in San Jose City, Nueva Ecija amid the COVID-19 pandemic: A case study. Unpublished undergraduate research, Nueva Ecija University of Science and Technology. https://scholar.googleusercontent.com/scholar?q=cache:ZniKUktuysJ:scholar.google.com/+san+jose+nueva+ecija+anastacio+et+a+l+construction+management&hl=en&as_sdt=0,5

Bello, S. A., Oyedele, L. O., Akinade, O. O., Bilal, M., Delgado, J. M. D., Akanbi, L. A., Ajayi, A. O., & Owolabi, H. A. (2021). Cloud computing in construction industry: Use cases, benefits and

- challenges. *Automation in Construction*, 122, 103441. <https://doi.org/10.1016/j.autcon.2020.103441>
- Bongo, M., Abellana, D. P., Caballes, S. A., Ancheta Jr., R., Himang, C., Obiso, J.-J., Ocampo, L., & Deocarís, C. (2020). Critical success factors in implementing Industry 4.0 from an organisational point of view: A literature analysis. *International Journal of Advanced Operations Management*, 12(3), 273–301. <https://doi.org/10.1504/IJAOM.2020.109804>
- Boton, C., & Forgues, D. (2020). Construction 4.0: The next revolution in the construction industry. *Espace ÉTS*. <https://espace2.etsmtl.ca/id/eprint/20437/>
- Bower, L. (2022, November 18). Impact of the Philippine government's migration to the cloud: Proceedings of the 15th International Conference on Theory and Practice of Electronic Governance. ACM Other Conferences. <https://dl.acm.org/doi/abs/10.1145/3560107.3560133>
- Drapkin, A. (2024, January 2). What is cloud project management? Benefits & examples. Tech.co. <https://tech.co/project-management-software/what-is-cloud-project-management>
- Falak, A. (2021, August 3). Billing of quantities (BOQ): Types: Example BOQ: Advantages and limitations. *EngineeringCivil.org*. <https://engineeringcivil.org/articles/billing-of-quantities-boq-types-example-boq-advantages-and-limitations/>
- Golightly, L., & et al. (2022). Adoption of cloud computing as innovation in the organization. *SAGE Open*. <https://journals.sagepub.com/doi/full/10.1177/18479790221093992>
- Haldiya P. (2024, August 13). Cloud computing in e-commerce: Benefits, use cases, and challenges. *RipenApps Technologies*. <https://ripenapps.com/blog/cloud-computing-in-e-commerce/#:~:text=Cloud%20computing%20in%20e%2Dcommerce%20refers%20to%20using%20internet%2Dhosted,cloud%20computing%20is%20internet%20connectivity>
- Journal Online. (2022, October 17). DPWH embraces innovation and technology in infrastructure development. *Journal Online*. <https://journal.com.ph/dpwh-embraces-innovation-and-technology-in-infrastructure-development/>
- Lauri, K. H. (2024, August 1). Bill of materials (BOM) – A complete guide with examples. *Blog for Manufacturers and Distributors*. <https://www.mrpeasy.com/blog/bill-of-materials/>
- Mpingana, W. B., Akinradewo, O., Aigbavboa, C., & Khan, S. A. (2024). Evaluating the drivers of cloud data management usage in the South African construction industry. *Engineering Proceedings*, 76(1), 39. <https://www.mdpi.com/2673-4591/76/1/39>
- Musarat, M. A., Hamid, R. A., Alzahrani, A. A., Yahaya, A. S., & Shah, S. Q. A. (2024). Digitalization in Malaysian construction industry: Awareness, challenges and opportunities. *Results in Engineering*, 21, 101187. <https://www.sciencedirect.com/science/article/pii/S2590123024002664>
- Nidamanuri, N. D. S. (2022). Optimizing library data handling with cloud and big data technologies. *European Journal of Advances in Engineering and Technology*, 9(8), 75-81. https://scholar.googleusercontent.com/scholar?q=cache:vpKJgZoCUaEJ:scholar.google.com/+Nidamanuri+iaas+paas&hl=en&as_sdt=0,5&as_ylo=2020&as_yhi=2025
- Philippine News Agency. (2022, August 11). DPWH pushes for digitalization of infrastructure development. *PNA.gov.ph*. <https://www.pna.gov.ph/articles/1181157>
- Siman, B. P. (2023). A critical analysis of the Philippine construction industry: Current trends, forecast, and business focus for engineering design firms. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(8), 2691-2699. <https://doi.org/10.11594/ijmaber.04.08.01>
- Somanathan, S. (2023). Securing the cloud: Project management approaches to cloud security in multi-cloud environments. *International Journal of Applied Engineering & Technology*, 5(2). https://www.researchgate.net/profile/Sureshkumar-Somanathan/publication/389397751_Securing_the_Cloud_Project_Management_Approaches_to_Cloud_Security_in_Multi_Cloud_Environments/links/67c11937207c0c20fa9ab542/Securing-the-Cloud-Project-Management-Approaches-to-Cloud-Security-in-Multi-Cloud-Environments.pdf
- Susnjara, S., & Smalley, I. (2025, February 13). What is cloud computing? IBM. <https://www.ibm.com/think/topics/cloud-computing>
- Thobejane, M., & Marnewick, C. (2020). The effective implementation of cloud computing through project management: Conceptual framework. *Journal of Contemporary Management*, 17(2), 416–444. <https://doi.org/10.35683/jcm20079.82ResearchGate>
- Wagner, A. (2023, November 7). The role of cloud computing in e-commerce. *American Cloud*. <https://americancloud.com/blog/the-role-of-cloud-computing-in-e-commerce>



DIGITAL SKILLS OF ACCOUNTANTS IN THE BANKING INDUSTRY: A COMPARATIVE ANALYSIS ACROSS LEVELS OF AUTHORITY

Justine Kayne D. Lasa¹, Philip Fonzy B. Acera¹, Timothy Andrei C. Barrera¹, Althea Shan Lorraine G. Daa¹,
Valerie Joyce L. Paguinto¹, Ma. Luisa Porciuncula²

¹Accounting Information Systems Student, College of Business Administration and Accountancy

²Faculty, College of Business Administration and Accountancy

*Corresponding author Email: justinekayne.lasa@letran.edu.ph

ABSTRACT

This study examined the utilization and perceived importance of digital skills among accountants in the banking industry of Makati City across top, middle, and lower levels of authority. Guided by Becker's Human Capital Theory, the study aimed to assess variations in digital skill utilization, differences in perceived importance, and the presence of significant differences when accountants are grouped by level of authority. Quantitative design was employed using a structured survey questionnaire administered to 189 accountants. The study focused on five digital skills: Data Management and Analytics, Accounting Software Proficiency, Advanced Excel Skills, Problem Solving and Critical Thinking, and Cybersecurity Awareness. Descriptive statistics and Analysis of Variance were used for data analysis. Results showed that all five digital skills were highly utilized and regarded as important across all authority levels. Significant differences were found based on the level of authority. The study concludes that continuous digital training is essential.

Keywords: *Digital Skills, Accountants, Banking Industry, Level of Authority, Human Capital Theory*

INTRODUCTION

In the modern digital economy, technology plays a significant role in transforming professional practices across industries. In the accounting profession, notable changes have emerged through the adoption of information technology and the integration of digital tools into accounting processes. As a result, digital skills have become an essential requirement for accountants, enabling professionals to perform their responsibilities more efficiently and support organizational decision-making (Montgomery, 2022). Accountants who lack sufficient digital competencies may experience difficulty adapting to modern financial systems and meeting the demands of the contemporary workplace.

Digital skills in accounting extend beyond the basic use of applications such as Microsoft Office. Accountants are expected to utilize accounting information systems and other digital technologies that facilitate the efficient execution of accounting tasks. In highly digitalized sectors such as banking, accountants regularly interact with information technology systems and electronic financial platforms. Within such environments, digital competencies are considered a fundamental professional requirement (Brila & Catapang, 2020; Bangko Sentral ng Pilipinas [BSP], 2024). As the banking industry continues to integrate advanced information systems, the ability of accountants to manage, analyze, and interpret financial data within digital environments has become increasingly important.

Organizations typically operate within hierarchical structures in which responsibilities and decision-making authority vary across levels. In accounting departments, authority is commonly distributed among top-level, middle-level, and lower-level accountants, each assigned different roles and responsibilities. Higher-level accountants are generally involved in planning, financial analysis, and strategic decision-making, whereas

lower-level accountants are primarily responsible for operational tasks such as recording transactions and preparing financial reports (Liu et al., 2023; Xicang, 2024). Due to these differences in roles, the types and levels of digital skills required may vary depending on the accountant's position within the organizational hierarchy.

Despite the growing body of research emphasizing the importance of digital competencies in accounting, limited studies have examined how these skills differ across hierarchical levels within organizations. Most existing research focuses on the overall importance of digital skills among accounting students or professionals without considering variations in their application and significance across levels of authority (Pargmann, Zolnowski, & Müller, 2023; Rahim et al., 2024). This limitation suggests a research gap, particularly in banking institutions where digital technologies are extensively implemented.

To address this gap, the present study aims to examine the usage and significance of selected digital skills among accountants working in commercial banking institutions and to determine how these skills vary across different levels of authority. Specifically, the study focuses on five key digital competencies: data management and analytics, accounting software proficiency, advanced Excel skills, problem-solving and critical thinking, and cybersecurity awareness. By analyzing these competencies across hierarchical levels, the study seeks to generate insights that may contribute to the development of professional training programs and the improvement of accounting education curricula for future accountants.

Theoretical Background

This study is guided by Becker's Human Capital Theory (1964), which explains that education and training are investments that help individuals gain knowledge and skills, increasing their productivity and value in the workplace. Human capital refers to the abilities and knowledge that

improve work performance and contribute to organizational success. In this study, Human Capital Theory is used solely as a conceptual framework and is not empirically tested. It serves as a guiding lens for understanding how digital skills function as human capital among accountants in the banking industry. As accounting work becomes increasingly technology-driven, digital competencies are essential for maintaining accuracy, efficiency, and reliability in financial operations.

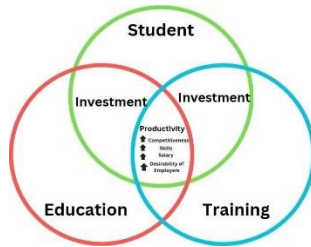


Figure 1. Becker's Human Capital Model

The digital competencies examined in this study include Data Management and Analytics, Accounting Software Proficiency, Advanced Excel Skills, Problem-Solving and Critical Thinking, and Cybersecurity Awareness. These competencies directly support productivity in accounting tasks. For instance, proficiency in accounting software improves the speed and accuracy of financial reporting, advanced Excel skills enhance data analysis and reconciliation, problem-solving skills assist in addressing complex financial issues, and cybersecurity awareness helps safeguard sensitive financial information. Although the acquisition pathways of these digital skills were not examined, Human Capital Theory provides a theoretical lens for evaluating their importance, utilization, and contribution to workplace performance. Through this framework, the study examines how digital competencies are valued and applied across different levels of authority within the banking sector, illustrating how human capital is manifested through digital proficiency in professional accounting practice.

Review of Related Literature

Digital Skills in Accounting

The accounting profession has undergone significant changes due to the rapid development of digital technologies. Traditional accounting activities have increasingly shifted toward technology-based processes, requiring accounting professionals to demonstrate competencies in areas such as data management, data analysis, and the interpretation of accounting information through digital tools (Montgomery, 2022). As financial transactions and reporting processes are increasingly managed through digital platforms, accountants are required to develop technological competencies that support the efficient and accurate processing of financial information.

Previous studies have emphasized that digital literacy and technological competence are now considered essential skills for accounting professionals. According to Pargmann, Zolnowski, and Müller (2023), digitalization has transformed accounting processes through the integration of automated systems, data analytics, and cloud-based financial management tools. Similarly, Elo (2024) noted that accountants are expected to possess both traditional accounting knowledge and technological competencies in order to operate effectively within contemporary financial environments.

Despite the increasing importance of digital competencies, several studies indicate that accounting graduates often lack sufficient technological skills when entering the workforce. Briones, Dela Cruz, and Santos (2021) found that accounting graduates experience difficulties in the use of spreadsheet applications and accounting software, which may affect their

work performance. Similarly, Rodriguez, Delos Santos, and Cruz (2024) reported that limited exposure to digital tools during academic training contributes to skill gaps among accounting graduates when they transition to professional practice. These findings suggest the need to strengthen digital competency development within accounting education and professional training programs.

ERP and Accounting Information System (AIS) Adoption

The adoption of Enterprise Resource Planning (ERP) systems and Accounting Information Systems (AIS) has contributed to the digital transformation of accounting practices. These systems allow organizations to integrate financial information, automate reporting processes, and improve the management of financial data (Brila & Catapang, 2020). As organizations increasingly rely on these systems, accountants are required to demonstrate competence in using digital accounting technologies to support financial operations.

Existing research indicates that the implementation of AIS and ERP systems can improve efficiency, transparency, and regulatory compliance in financial management processes. Cammayo and Gonzales (2020) reported that accounting information systems contribute to improved financial reporting accuracy by reducing the occurrence of manual errors. In addition, Castrol, Santos, and Reyes (2024) observed that digital accounting tools enable accountants to process large volumes of financial data more efficiently.

In the banking sector, the role of digital technologies has become more prominent due to the complexity of financial transactions and the need to comply with regulatory requirements. Reports from the Bangko Sentral ng Pilipinas (2024) indicate that financial institutions increasingly utilize digital financial platforms and electronic reporting systems to ensure compliance with financial regulations and reporting standards. Consequently, accountants working in banking institutions are expected to possess competencies in the use of digital financial systems to support regulatory compliance and financial reporting.

Authority Levels and Skill Variation

Organizational hierarchy plays an important role in defining the responsibilities and functions of accounting professionals. In many organizations, accounting personnel operate within hierarchical structures that include top-level, middle-level, and lower-level accountants. Each level involves specific responsibilities that influence the manner in which digital tools and technological competencies are applied within the workplace.

Lower-level accountants typically perform operational functions such as data entry, reconciliation, and report preparation, which require technical proficiency in spreadsheet applications and accounting software (Garcia, 2024). In contrast, middle-level accountants are more frequently responsible for financial analysis, monitoring activities, and compliance-related tasks, which require the use of analytical tools and financial management systems (Liu et al., 2023). At the top level, accountants are commonly involved in strategic planning, evaluation of financial systems, and organizational decision-making, which require the interpretation of complex financial data and the assessment of organizational performance (Santos & Dela Cruz, 2023).

Access to digital tools and training opportunities may also vary according to hierarchical position within an organization. Zafar et al. (2023) reported that employees occupying higher managerial positions are more likely to receive advanced digital training and exposure to complex information systems compared to employees in operational roles. This variation in training and system access may influence the development

and application of digital competencies across different levels of authority.

Gaps in Education and Industry Alignment

Educational and organizational contexts influence the development of digital competencies among accounting professionals. Integrating information technology (IT) and accounting information systems (AIS) into accounting curricula improves students' technical proficiency and preparedness for digital accounting environments (Baylon et al., 2020; Baldris et al., 2024). However, studies report that accounting graduates often lack practical exposure to enterprise resource planning (ERP) systems and advanced accounting software, indicating a gap between academic preparation and industry requirements (Guanlao et al., 2023).

Despite the recognized importance of digital competencies, limited research has examined how these skills vary across hierarchical levels within organizations. Most existing studies assess digital competencies among accounting graduates or professionals as a general group without analyzing differences in skill utilization across authority levels. This study addresses this gap by examining the utilization and perceived importance of digital skills among accountants working at different levels of authority within commercial banking institutions.

Conceptual Framework

Figure 2 presents the conceptual framework of the study, which explains the relationship between the digital skills of accountants and their application in the banking industry. The independent variable, Digital Skills of Accountants, consists of five competencies: Data Management and Analytics, Accounting Software Proficiency, Advanced Excel Skills, Problem-Solving and Critical Thinking, and Cybersecurity Awareness. The dependent variables include the extent of utilization of digital skills, their perceived importance, and the differences in digital skills across levels of authority.

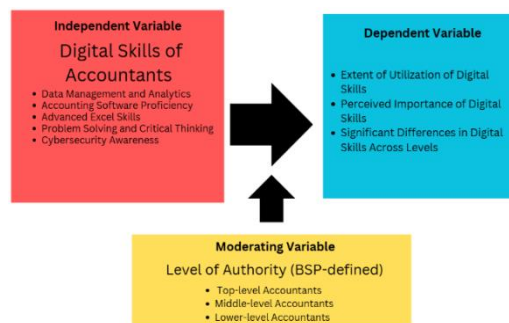


Figure 2. The Relationship Among Digital Skills of Accountants, Level of Authority, and Their Utilization and Perceived Importance in the Banking Industry

The Level of Authority, classified as Top-level, Middle-level, and Lower-level accountants based on the Bangko Sentral ng Pilipinas (BSP) structure, serves as the moderating variable that influences how these skills are applied and valued in practice. The framework is grounded in Gary Becker's Human Capital Theory (1964), which views skills as valuable resources that enhance work performance.

The selection of the five digital skills is supported by prior frameworks and studies discussed in the Review of Related Literature. Technical and analytical competencies—such as data management, accounting software proficiency, and advanced Excel skills—have been shown to improve efficiency, accuracy, and compliance in accounting and banking operations (Brila & Catapang, 2020; Cammayo & Gonzales, 2020). Problem-solving and critical thinking are identified as essential cognitive skills that support professional judgment and decision-making,

particularly at higher organizational levels (Santos & Dela Cruz, 2023). Cybersecurity awareness is likewise recognized as a core compliance and risk-management competency due to the banking sector's reliance on digital systems and strict data protection requirements (Bangko Sentral ng Pilipinas, 2020). Together, these skill categories reflect the core digital competencies required for effective accounting practice in the modern banking environment.

METHODOLOGY

Research Design

This study employed a quantitative descriptive-comparative research design to examine the level of utilization and perceived importance of digital skills among accountants in the banking industry according to their level of authority.

A quantitative approach was appropriate because the study involved the collection and analysis of numerical data to measure patterns of digital skill utilization and perceived importance. The descriptive component was used to determine the frequency of digital skill usage and the extent to which these skills are considered important in the performance of accounting tasks. This approach enabled the researchers to systematically describe the current digital skill practices of accountants in the banking sector.

The comparative component was applied to determine whether significant differences exist in digital skill utilization among accountants when grouped according to their level of authority. Specifically, the study compared top-level, middle-level, and lower-level accountants. This design is appropriate for examining variations across naturally occurring groups without manipulating the variables under investigation.

Subjects of the Study

The respondents of the study were accounting professionals employed in commercial banks located in Makati City, Metro Manila. The study population consisted of 595 accounting employees from 13 commercial banks.

The required sample size was determined using the Cochran formula, which produced a target sample of 234 respondents. However, a total of 189 valid responses were obtained and included in the final analysis.

Purposive sampling was used to select respondents who met specific professional qualifications relevant to the objectives of the study. This sampling method was appropriate because access to bank personnel is limited, and the research required participants who are directly involved in accounting operations and digital financial processes. The following inclusion criteria were applied:

1. The respondent must be assigned to the accounting department.
2. The respondent must hold a bachelor's degree in Accountancy or a related program.
3. The respondent must have at least three to five years of work experience in the banking industry.
4. The respondent must be employed in a commercial bank located in Makati City.
5. The respondent must occupy a recognized level of authority within the organization.

Respondents were categorized according to their level of authority based on the managerial hierarchy framework recognized in the organizational structure of the Bangko Sentral ng Pilipinas (BSP). The BSP Organization Primer classifies personnel into hierarchical tiers such as top

management, middle management, and first-line management, reflecting differences in responsibility and decision-making authority (Bangko Sentral ng Pilipinas, 2024).

Consistent with this framework and common banking industry practice, respondents were classified into three groups:

- Top-level accountants – individuals occupying managerial positions responsible for decision-making and strategic financial oversight.
- Middle-level accountants – individuals performing supervisory or senior roles involved in financial monitoring and coordination.
- Lower-level accountants – individuals performing operational accounting tasks such as transaction recording, reconciliation, and report preparation.

This classification enabled systematic comparison of digital skill utilization across different authority levels.

Study Site

The study was conducted in commercial banks located in Makati City, Metro Manila. Makati City was selected because it serves as the financial and commercial center of the Philippines, hosting the headquarters and major offices of many banking institutions.

Commercial banks were selected as the study setting because these institutions rely extensively on digital technologies to support financial operations. Accounting activities in banks commonly involve the use of digital accounting systems, enterprise resource planning (ERP) platforms, and financial management software. These systems require accountants to regularly interact with digital tools in the performance of their professional duties. The concentration of banking institutions in Makati City also provided an appropriate environment for obtaining respondents with relevant professional experience.

Data Measures and Instrumentation

Data were collected using a researcher-developed structured questionnaire based on a review of related literature concerning digital competencies in accounting and banking. The instrument consisted of two sections. The first section gathered demographic and professional information, including level of authority, years of work experience, and the accounting systems used by the respondents. The second section measured five dimensions of digital skills relevant to accounting practice:

- Data Management and Analytics Skills
- Accounting Software Skills
- Advanced Excel Skills
- Problem Solving and Critical Thinking Skills
- Cybersecurity Awareness Skills

A four-point Likert scale was used to measure responses. For digital skill utilization, the following scale was applied: 1 – Never Used, 2 – Rarely Used, 3 – Often Used, and 4 – Very Often Used. For perceived importance: 1 – Strongly Disagree, 2 – Disagree, 3 – Agree, and 4 – Strongly Agree.

Content validity was established through expert evaluation, in which specialists in accounting and research methodology reviewed the questionnaire to assess the relevance and clarity of the items. A pilot test was subsequently conducted to evaluate the reliability of the instrument.

Reliability analysis using Cronbach's alpha produced the following results: Data Management and Analytics ($\alpha = 0.960$, Excellent), Accounting Software Proficiency ($\alpha = 0.803$, Good), Advanced Excel Skills ($\alpha = 0.837$, Good), Problem Solving and Critical Thinking ($\alpha = 0.718$,

Acceptable), and Cybersecurity Awareness ($\alpha = 0.954$, Excellent). These results confirm that the instrument is reliable for the study. These values indicate acceptable to high internal consistency, confirming that the instrument is suitable for data collection.

Data Collection Procedure and Ethical Considerations

Data were collected through an online survey administered using Google Forms. Before completing the questionnaire, respondents were provided with a clear explanation of the purpose of the study, the procedures involved, and the estimated time required to complete the survey. Participation in the study was voluntary, and respondents were required to provide informed consent before proceeding with the questionnaire.

Ethical principles were observed throughout the research process. Respondents were assured that their participation would remain confidential and anonymous, and no personally identifiable information was included in the data analysis. The collected data were stored in password-protected digital files and were accessible only to the researchers responsible for the study.

All procedures complied with the provisions of the Data Privacy Act of 2012 (Republic Act No. 10173). The research protocol was also reviewed and approved by the Research Ethics Committee prior to data collection.

Data Analysis

After data collection, the responses were organized and analyzed using appropriate statistical techniques to determine the level of utilization and perceived importance of digital skills among accountants. Descriptive statistics, including means and standard deviations, were used to summarize the levels of digital skill utilization and perceived importance across the five competency areas.

To determine whether significant differences exist among accountants when grouped according to their level of authority, Analysis of Variance (ANOVA) was employed. This statistical test is appropriate for comparing the means of three independent groups. Prior to conducting ANOVA, the assumptions of normality and homogeneity of variance were examined to ensure the validity of the analysis. The decision to accept or reject the null hypothesis was based on the results of the ANOVA using a predetermined level of significance.

RESULTS AND FINDINGS

Profile of the Respondents

The demographic and professional profile of the respondents indicates that the workforce is largely concentrated in the early to mid-career stages. A substantial proportion of respondents fall within the 30–36 age group and report between one and eight years of professional experience. This distribution suggests that the accounting workforce in the surveyed institutions is primarily composed of individuals in the early stages of their professional careers, where technical competence and digital adaptability are required for the execution of routine accounting tasks. The predominance of respondents occupying entry-level and junior positions reflects the operational structure commonly observed in banking institutions, where a larger number of personnel is required to perform transaction processing, financial documentation, and reporting functions compared with the smaller number of personnel assigned to supervisory or managerial roles.

The distribution of authority among respondents reflects a hierarchical organizational structure characterized by a larger proportion of lower-level accountants and a smaller representation of middle- and top-level personnel. This pyramidal structure indicates that the data collected in the

study largely represents the perspectives of accountants involved in operational and data-intensive activities. In contrast, the smaller proportion of respondents in higher authority levels reflects positions that are typically associated with supervisory responsibilities, financial analysis, and decision-making functions.

Table 1. Summary of the Respondents' Demographic Profile

Profile		Frequency	Percentage
Gender	Male	106	56%
	Female	83	44%
Age	23 - 29	49	26%
	30 - 36	89	46%
	37 - 43	22	12%
	44 - 50	18	10%
	51 - 57	11	6%
Years of Experience	1 - 8	124	66%
	9 - 16	28	15%
	17 - 24	25	12%
	25 - 32	9	5%
	33 - 40	3	2%
ERP/Systems	SAP	26	14%
	Oracle	55	29%
	NetSuite	27	14%
	Finacle	38	20%
	IBPS	20	11%
	Temenos	23	12%
Level of Authority	Top-level accountants	13	7%
	Middle-level accountants	52	27%
	Lower-level accountants	124	66%
TOTAL		189	100%

In addition, the reported use of multiple accounting systems, including Oracle, Finacle, SAP, and NetSuite, indicates that the participating institutions operate within a heterogeneous technological environment. The presence of several financial management platforms suggests that accounting personnel are required to work with different digital systems depending on departmental functions and operational requirements. This multi-system environment implies that accountants in the banking sector must demonstrate familiarity with various financial software platforms rather than relying on a single standardized system across the organization.

Extent of Utilization of Digital Skills by Level of Authority

Data Management and Analytics

Table 2 responses indicate that accountants across different authority levels engage in data management and analytical processes in the performance of accounting tasks, including handling financial data, organizing accounting information, and interpreting outputs generated by digital systems. Variations in responses across authority levels indicate differences in the extent to which these skills are applied within specific roles. These differences may reflect variations in job responsibilities, where certain positions require greater engagement with data evaluation and analytical interpretation.

Table 2. Mean and Standard Deviation: Data and Management Analytics

Data Management and Analytics	Mean	SD	Interpretation
Top-level accountants	3.67	0.48	Strongly Agree
Middle-level accountants	3.53	0.51	Strongly Agree
Lower-level accountants	3.33	0.52	Strongly Agree

Accounting Software Proficiency

Table 3 responses indicate that the use of accounting software forms part of routine accounting activities within banking institutions. These systems support financial transaction recording, monitoring of financial data, and preparation of accounting reports. Differences in responses among the authority levels suggest variation in how accounting systems are used within different roles. Some positions may involve direct interaction with system inputs and transaction processing, while others may focus more on reviewing outputs or monitoring system-generated reports.

Table 3. Mean and Standard Deviation: Accounting Software Proficiency

Accounting Software Proficiency	Mean	SD	Interpretation
Top-level accountants	3.58	0.48	Strongly Agree
Middle-level accountants	3.48	0.50	Strongly Agree
Lower-level accountants	3.40	0.52	Strongly Agree

Advanced Excel Skills

Table 4 responses indicate that accounting software is used in routine accounting activities, including transaction recording, financial data monitoring, and report preparation within banking institutions. Variations across authority levels suggest differences in system interaction, where some roles involve direct engagement with transaction processing while others focus on reviewing outputs and monitoring system-generated reports.

Table 4. Mean and Standard Deviation: Accounting Software Proficiency

Advanced Excel Skills	Mean	SD	Interpretation
Top-level accountants	3.70	0.45	Strongly Agree
Middle-level accountants	3.62	0.53	Strongly Agree
Lower-level accountants	3.56	0.54	Strongly Agree

Problem Solving and Critical Thinking

Table 5 responses indicate that analytical reasoning and evaluation processes are applied in accounting tasks, including examining financial records, identifying issues in accounting data, and assessing financial information during reporting or review activities. Variations across authority levels suggest differences in the nature and scope of analytical responsibilities. Some roles require greater involvement in evaluating financial information and addressing accounting-related issues, reflecting the distribution of tasks according to hierarchical position.

Table 5. Mean and Standard Deviation: Problem Solving and Critical Thinking

Problem Solving and Critical Thinking	Mean	SD	Interpretation
Top-level accountants	3.92	0.28	Strongly Agree
Middle-level accountants	3.37	0.48	Strongly Agree
Lower-level accountants	3.36	0.51	Strongly Agree

Cybersecurity Awareness

Table 6 responses indicate that accountants demonstrate awareness of practices for protecting financial information within digital accounting systems, including responsible data handling and adherence to security procedures. Variations across authority levels suggest that this awareness is linked to interaction with digital financial systems. Accountants at all levels recognize the importance of safeguarding financial records processed through technology-based platforms.

Table 6. Mean and Standard Deviation: Cybersecurity Awareness

Cybersecurity Awareness	Mean	SD	Interpretation
Top-level accountants	3.62	0.50	Strongly Agree
Middle-level accountants	3.54	0.52	Strongly Agree
Lower-level accountants	3.50	0.54	Strongly Agree

Perceived Most Essential Digital Skills by Level of Authority

Top-Level Accountants

Table 7 responses indicate that accountants recognize digital competencies related to information evaluation and analytical interpretation, which support reviewing financial information and assessing accounting data. Variations in responses suggest that these skills are particularly relevant in roles involving managerial oversight and financial evaluation. This pattern reflects the association between analytical digital competencies and responsibilities that require higher-level decision-making.

Table 7. Mean and Standard Deviation: Perceived Most Essential Digital Skills by Top-level Accountants

Top-Level Accountants	Mean	SD	Interpretation
Data Management and Analytics	3.67	0.48	Strongly Agree
Accounting Software Proficiency	3.58	0.48	Strongly Agree
Advanced Excel Skills	3.70	0.45	Strongly Agree
Problem Solving and Critical Thinking	3.92	0.28	Strongly Agree
Cybersecurity Awareness	3.62	0.50	Strongly Agree

Middle-Level Accountants

Table 8 responses indicate that accountants recognize digital competencies that support the management of accounting data and the preparation of financial reports. These skills are associated with tasks involving the coordination of accounting processes and supervision of financial information. The pattern of responses suggests that digital tools facilitating both analytical and operational activities are particularly relevant to middle-level accounting responsibilities.

Table 8. Mean and Standard Deviation: Perceived Most Essential Digital Skills by Middle-level Accountants

Middle-Level Accountants	Mean	SD	Interpretation
Data Management and Analytics	3.53	0.51	Strongly Agree
Accounting Software Proficiency	3.48	0.50	Strongly Agree
Advanced Excel Skills	3.62	0.53	Strongly Agree
Problem Solving and Critical Thinking	3.37	0.48	Strongly Agree
Cybersecurity Awareness	3.54	0.52	Strongly Agree

Lower-Level Accountants

Table 9. Mean and Standard Deviation: Perceived Most Essential Digital Skills by Lower-level Accountants

Lower-Level Accountants	Mean	SD	Interpretation
Data Management and Analytics	3.33	0.52	Strongly Agree
Accounting Software Proficiency	3.40	0.52	Strongly Agree
Advanced Excel Skills	3.56	0.54	Strongly Agree
Problem Solving and Critical Thinking	3.36	0.51	Strongly Agree
Cybersecurity Awareness	3.50	0.54	Strongly Agree

Table 9 responses highlight competencies associated with operational accounting tasks that require direct interaction with digital tools. Skills in accounting software, spreadsheet applications, and financial data

handling are particularly relevant to these roles. The pattern of responses reflects the focus of lower-level accounting positions on system-based processes and routine management of financial information.

Differences in Digital Skills When Grouped According to Level of Authority

Table 10. Differences in Digital Skills when Grouped According to Level of Authority

Digital Skills	F	p-value	Decision	Conclusion
Data Management and Analytics	16.68	<.001	Reject Ho	Significant
Accounting Software Proficiency	3.74	0.034	Reject Ho	Significant
Advanced Excel Skills	1.01	0.375	Do not reject Ho	Not significant
Problem Solving and Critical Thinking	43.92	<.001	Reject Ho	Significant
Cybersecurity Awareness	0.51	0.604	Do not reject Ho	Not significant

The analysis compares the responses of top-level, middle-level, and lower-level accountants to assess potential variations in the utilization of the digital skills measured in the study. The statistical procedure evaluates whether differences exist among the groups across the identified competencies. The results provide an overview of how digital skill utilization is distributed across authority levels within the accounting profession in the banking sector

DISCUSSION

This study found that accountants in commercial banks utilize digital skills extensively, with variations in application according to level of authority. The five key competencies, Data Management and Analytics, Accounting Software Proficiency, Advanced Excel Skills, Problem-Solving and Critical Thinking, and Cybersecurity Awareness, were consistently recognized as essential, reflecting the banking sector's reliance on digital systems to support operational and regulatory requirements (Montgomery, 2022; Brila & Catapang, 2020; Bangko Sentral ng Pilipinas, 2024). The pervasive use of these competencies indicates that digital tools are embedded across accounting tasks, from routine data processing to strategic decision-making.

The results indicate that top-level accountants demonstrate greater utilization of data management, problem-solving, and analytical skills, consistent with their responsibilities in strategic planning, performance evaluation, and decision-making. In contrast, middle- and lower-level accountants focus more on technical competencies, including Excel, accounting software, and cybersecurity, reflecting their engagement with operational accounting processes that require accuracy and adherence to system protocols (Santos & Dela Cruz, 2023; Liu et al., 2023; Garcia, 2024; Al-Htaybat & von Alberti-Alhtaybat, 2023). These patterns suggest that the nature of work at different hierarchical levels influences the specific digital skills applied.

ANOVA results confirmed significant differences in certain digital skills across authority levels, particularly in data management, accounting software proficiency, and problem-solving and critical thinking. These differences may be attributed to greater access to advanced systems and targeted training for higher-level roles, enabling engagement in more complex analytical and evaluative tasks (Koh, Hsiao, & Lee, 2024; Zafar et al., 2023). The absence of significant differences in Excel and cybersecurity skills indicates that these competencies are standardized

across roles, likely due to organizational policies and industry-wide operational and security protocols.

These findings align with Becker's Human Capital Theory, demonstrating that the application and value of digital skills are shaped by job responsibilities and organizational role. Practically, the results suggest that banks could implement role-specific digital training programs, enhancing strategic and analytical capabilities for senior accountants while reinforcing technical and cybersecurity competencies among junior staff. Empirically, the study provides evidence that authority level is a critical factor influencing digital skill utilization in technology-driven financial environments, contributing to the alignment of accounting education, professional training, and industry practice.

CONCLUSION

This study examined the utilization of digital competencies among accountants in commercial banks and assessed variations according to authority level. The results indicate that digital skills are extensively applied and considered essential for accounting operations, with competencies in data management, accounting software proficiency, Excel, problem-solving, and cybersecurity supporting accurate and efficient financial processes in technology-driven environments.

The findings further suggest that authority level influences the application of specific digital competencies. Senior accountants engage more frequently in analytical and strategic tasks, utilizing digital tools for decision-making and financial evaluation, whereas middle- and lower-level accountants predominantly apply operational skills for routine accounting functions. Competencies such as Excel and cybersecurity awareness are consistently required across all levels, reflecting standardized operational procedures and security requirements within banking institutions.

These results have implications for both professional practice and accounting education. Banks may enhance workforce capability by implementing role-specific digital training programs that develop analytical and strategic competencies for senior staff while reinforcing technical and cybersecurity skills for junior employees. Accounting curricula should incorporate practical training in digital tools, data analytics, and cybersecurity to better prepare graduates for the evolving demands of the banking sector. Future research could examine the development and application of digital competencies in other financial institutions or organizational contexts, as well as the impact of emerging technologies on accounting practices.

REFERENCES

- Bangko Sentral ng Pilipinas (BSP). (2024). Report on e-payments measurement 2024. Retrieved from https://www.bsp.gov.ph/PaymentAndSettlement/2024_Report_on_E-payments_Measurement.pdf
- Barnes, et al. (2020). Relevance of accounting software literacy: A giant step for undergraduates. *SDCA Journal of Accountancy*, 1(1). St. Dominic College of Asia. Retrieved from <https://sites.google.com/sdca.edu.ph/sdca-rdo/publications/sdca-journal-of-accountancy/sdca-journal-of-accountancy-volume-1-2020/relevance-of-accounting-software-literacy-a-giant-step-for-undergraduates>
- Bercasio, A. (2023). Perception of accounting employers and graduating accounting students on the expected skills for the accounting profession in the new normal era [Undergraduate thesis]. Malayan Colleges Laguna. Retrieved from https://librarythesis.mcl.edu.ph/133F65u870l4l2/ACT_Bercasio_03030_Perception%20of%20accounting%20employers%20and%20graduating%20accounting%20students%20on%20the%20expected%20skills%20for%20the%20accounting%20profession%20in%20the%20new%20normal%20era.pdf
- Castañó-Muñoz, J., et al. (2021). Measuring digital skills among university teachers: A review of international studies. *International Journal of Educational Technology in Higher Education*, 18(1), 12. <https://doi.org/10.1186/s41239-021-00312-8>
- DCO (Digital Competence Observatory). (2024). The digital skills nexus: A global overview. Retrieved from <https://dco.org/wp-content/uploads/2024/10/The-Digital-Skills-Nexus.pdf>
- Delos Santos, R., & Lim, P. (2024). Teachers' digital competence in utilizing educational software in accounting, business, and management strand. ResearchGate. Retrieved from https://www.researchgate.net/publication/385318617_Teachers%27_digital_competence_in_utilizing_educational_software_in_accounting_business_and_management_strand
- Don Honorio Ventura State University. (n.d.). Graduating accountancy students' digital competencies on Industry 4.0 career preparedness moderated by experiential learning. *International Journal of Innovative Science and Research Technology (IJISRT)*. Retrieved from <https://ijisrt.com/graduating-accountancy-students-digital-competencies-on-industry-40-career-preparedness-moderated-by-experiential-learning>
- Elo, K. (2024). The evolving skillset of accountants in the digital era: Implications for education and professional development. *Accounting Education*, 33(2), 145–162. <https://doi.org/10.1080/09639284.2023.2191289>
- Forvis Mazars. (2024). The future of branch banking in the Philippines. Retrieved from <https://www.forvismazars.com/ph/en/insights/our-publications/services-sectors/the-future-of-branch-banking-in-the-philippines>
- García-Holgado, A., et al. (2022). Institutional support and students' digital competencies in higher education: A structural equation modeling approach. *International Journal of Educational Technology in Higher Education*, 19(1), 35. <https://doi.org/10.1186/s41239-022-00350-w>
- Goldston, J. (2020). The Evolution of ERP Systems: A Literature Review. *International Journal of Research Publications*, 50(1). <https://doi.org/10.47119/IJRP100501420201041>
- González-Sanmamed, M., et al. (2020). Institutional readiness and digital skill development during remote teaching. *Computers & Education*, 159, 104008. <https://doi.org/10.1016/j.compedu.2020.104008>
- Huang, Y. (2025). Intelligent financial management systems using blockchain and IoT: Advancing efficiency, transparency, and data security in finance. *Scientific Reports*, 15(1), 12217. <https://doi.org/10.1038/s41598-025-12217-x>
- IJFMR Research Team. (2025). The effect of accounting software usage frequency on cognitive performance and perception of digital skills. *International Journal for Multidisciplinary Research*, 5(2), 1–12. Retrieved from <https://www.ijfmr.com/papers/2025/2/37029.pdf>
- Januszewski, A., Kowalski, M., & Zielińska, P. (2024). Assessing digital preparedness among finance and accounting students: A cross-sectional analysis. *Procedia Computer Science*, 230, 114–123. <https://doi.org/10.1016/j.procs.2024.05.084>
- Karakaya, A., & Yilmaz, T. (2023). Leadership, culture, and digital transformation in higher education: A cross-continental comparison. *Computers & Education Open*, 5, 100087. <https://doi.org/10.1016/j.caeo.2023.100087>
- Karcioglu, R. (2023). Developing a maturity model to identify digital skills and abilities of accounting professionals. *Access Journal of Business*,

- 4(2), 56–73. Retrieved from https://journal.access-bg.org/journalfiles/journal/issue-4-2-2023/developing_a_maturity_model_to_identify_digital_skills_and_abilities_of_accounting_professionals.pdf
- Kumar, P., Rahman, N., & Yusof, A. (2024). Employee readiness for digital banking tools: Extending the technology acceptance model. *Journal of Retailing and Consumer Services*, 74, 103–119. <https://doi.org/10.1016/j.jretconser.2024.103419>
- Larsen, M. (2024). Digital literacy and career progression: A qualitative study of professionals across sectors. *Nordic Journal of Digital Literacy*, 18(1), 45–60. <https://doi.org/10.18261/njdl.18.1.5>
- Mabalacat City Research Team. (2024). Transformational leadership and its practices towards sustainable performance of rural banks in Mabalacat City. ResearchGate. Retrieved from https://www.researchgate.net/publication/381927497_Transformational_Leadership_and_Its_Practices_towards_Sustainable_Performance_of_Rural_Banks_in_Mabalacat_City
- Mokhtar, S., & Abdullah, H. (2023). Digital investments, staff skills, and operational efficiency in banking. *International Review of Economics & Finance*, 87, 254–266. <https://doi.org/10.1016/j.iref.2023.07.018>
- Montgomery, J., et al. (2024). Awareness of accounting graduates on accounting information system and other software: A basis for learning intervention program. ResearchGate. Retrieved from https://www.researchgate.net/publication/381927207_Awareness_of_Accounting_Graduates_on_Accounting_Information_System_and_Other_Software_A_Basis_for_Learning_Intervention_Program
- Pargmann, C., Zolnowski, A., & Müller, O. (2023). Digitalization and the transformation of accounting: A systematic literature review. *Empirical Research in Vocational Education and Training*, 15(1), 14. <https://doi.org/10.1186/s40461-023-00141-1>
- Rahim, F., et al. (2024). Reskilling and upskilling digital competencies: A systematic review for financial sector employee development. ResearchGate Preprint. Retrieved from https://www.researchgate.net/publication/385605091_Reskilling_and_Upskilling_Digital_Competencies_A_Systematic_Review_for_Financial_Sector_Employee_Development
- Rahman, H., & Lee, C. (2024). Graduate digital skills and employment outcomes: A quantitative assessment. *Economies*, 13(7), 196. <https://doi.org/10.3390/economies13070196>
- Reyes, E. (2024). Transforming accounting education: Integrating technological, soft, and research skills in education. ResearchGate. Retrieved from https://www.researchgate.net/publication/390030410_Transforming_accounting_education_integrating_technological_soft_and_research_skills_in_education
- Sacavém, A., da Silva, P., & Marques, J. (2025). Leadership commitment and governance frameworks in digital transformation. *Administrative Sciences*, 15(2), 43. <https://doi.org/10.3390/admsci15020043>
- Sánchez-Caballé, A., et al. (2021). University digital strategies and the development of digital literacy: A meta-analysis. *Frontiers in Education*, 6, 679330. <https://doi.org/10.3389/feduc.2021.679330>
- SGV & Co. (2024). Future forward: How digital transformation drives upskilling in the banking industry. Retrieved from <https://www.sgv.ph/c-suite/Future-forward-How-digital-transformation-drives-upskilling-in-the-banking-industry>
- TAB Finance Philippines. (2024). Proceedings report: Digital leadership and transformation in Philippine finance institutions. Retrieved from <https://www.temenos.com/wp-content/uploads/2025/02/TAB-Finance-Philippines-Proceedings-Report-2024-d.pdf>
- Tagscherer, U., & Carbon, C.-C. (2023). Leadership skills for digital transformation: A systematic review of 92 studies. *Digital Business*, 3(1), 100032. <https://doi.org/10.1016/j.digbus.2023.100032>
- World Bank. (2020). Philippines digital economy report 2020: A better normal under COVID-19—Digitalizing the Philippine economy now. Retrieved from <https://documents1.worldbank.org/curated/en/796871601650398190/pdf/Philippines-Digital-Economy-Report-2020-A-Better-Normal-Under-COVID-19-Digitalizing-the-Philippine-Economy-Now.pdf>
- World Bank. (2024). Philippine higher education digital transformation report. Retrieved from <https://documents1.worldbank.org/curated/en/099925001062333685/pdf/P17757402843a10c90b3e30308406a38304.pdf>
- Xicang, L. (2024). Managerial authority and digital transformation in organizations: A multivariate analysis. *SAGE Open*, 14(1), 21582440241300189. <https://doi.org/10.1177/21582440241300189>
- Yusof, S., et al. (2024). Employer perceptions of graduate digital competencies in Malaysia: A cross-sectional analysis. *PLOS ONE*, 19(6), e11387931. <https://doi.org/10.1371/journal.pone.11387931>
- Zhang, W., & Chen, D. (2023). Senior digital leadership and employee technology adoption: A qualitative study. *Frontiers in Psychology*, 14, 992946. <https://doi.org/10.3389/fpsyg.2023.992946>



UNAWAIN ANG SUMASAKLOLO: FIREFIGHTERS' LIVED EXPERIENCES FOLLOWING AN EMERGENCY RESPONSE OPERATION

Victoria Joy C. Depano¹, Jeremy Calvin S. Enriquez¹, Desiree Castillo-Bisquera²

¹Psychology Student, College of Education, Liberal Arts and Sciences

²Faculty, College of Education, Liberal Arts and Sciences

*Corresponding author Email: victoriajoy.depano@letran.edu.ph

ABSTRACT

The qualitative study aims to explore the lived experiences of firefighters after an emergency response operation, particularly their thoughts and feelings following those events, how those experiences influence their ability to perform effectively, what factors aid/hinder their performance, coping strategies to manage challenges, and how their mental health status shapes their decision-making and behavior. A total of eleven firefighters along stations in Tondo, Manila, using purposive sampling, were involved in the study, with an average of ten years. In which data was collected using face-to-face semi-structured interviews. The findings reveal that they encounter various personal, environmental, and organizational challenges that impact their well-being and performance, such as physical exhaustion, emotional stress, high-pressure decision-making scenarios, community conflicts, and resource limitations. However, they still showed solid coping mechanisms such as recreational activities, including social support from peers and family; as well as organizational support such as compensation and benefits, and financial aid, that all play a critical role in their psychological health and enhancement of their ability to respond effectively. Some firefighters demonstrated satisfaction with the current salary/benefits/support from the organization, while some still demanded necessary equipment, regular stress debriefing, and free health checkups. To conclude, maintenance of the firefighters' mental health is a collective responsibility, including the organization, wherein integration of services for this can enhance the firefighters' emotional regulation, decision-making, and efficiency during response operations. As firefighters in the Philippine context, cultivating resilience and strong interpersonal bonds are the key to their well-being and effectiveness.

Keywords: *lived experiences, ppe and relief efforts are primarily coordinated through the National Disaster Risk Reduction and Manage Psychological toll, firefighters emotional burden*

INTRODUCTION

Nationwide, in every disaster emergency response Office whilst in the local unit of government. In every municipality, according to the Philippine Disaster Risk Reduction and Management Act of 2010, the Municipal Disaster Risk Reduction and Management Office is in charge of disaster risk reduction and management within the city's borders. This unit includes local fire departments, rescue teams, and community disaster volunteers.

A series of severe fire outbreaks has caused an alarm to the public. In the country's capital, where almost two million individuals reside (PSA, 2020), alone, a series of catastrophic fire incidents caused massive destruction to thousands of individuals, raising the public's concern. In the middle of the night of the 23rd, April when more than three hundred forty-three residential homes were destroyed in Barangay 123 in Tondo, Manila, causing the loss of 10 million worth of property and affecting 2,691 individuals. A fire broke out at Port Manila almost five kilometers distant, nearly two hours before the horrific event in Tondo, Manila, leaving 300 families without a place to live (Ong, 2025; NDRMMC, 2025). The Manila Chapter of the Philippine Red Cross responded to another significant fire catastrophe in Tondo in 2015 that destroyed over 1,000 homes and claimed the lives of over 50,000 people (Ong, 2025; DREF, 2015; Quezon City Disaster Risk Reduction and Management Office, n.d.). A recent nationwide record by Bureau of Fire Protection (BFP) shows that last year's fire outbreaks were 11.09% higher than the previous

year (Chavez, 2025). This incident shows that a fire incident is a safety concern in the country.

BFP, is a bureau under the Department of the Interior and Local Government (DILG) whose main responsibility is the prevention and suppression of fires and the imposition of laws regarding them; By law of Republic Act No. 6975, it was created in 1990. The BFP's responsibility does not end in firefighting but also extends to disaster risk reduction, as mandated by the Republic Act No.10121 (Longa & Perena, 2024). The BFP has its different units and offices nationwide for different facets of emergency response and fire protection; the BFP also performs fire related awareness campaigns and safety inspections. Despite strengths in BFP such as being capable in firefighting operations and emergency medical services, there is still a struggle of lack of personnel and equipment in some units, which hinders the true potential of BFP (Longa & Perena, 2024).

A fire incident where flames cannot be managed or contained and is progressively and actively burning everything around it, requires an immediate response from the nearest fire department. In this scenario, BFP serves as a frontline agency in managing these situations. However, there are scenarios where the agency lacks resources to put out the fire (Lagata et al., 2022) volunteer firefighters' group often provide support to overcome these shortages.

TXF Fire Philippines is a non-profit organization that often relies on donations and limited funds. It consists of numerous fire brigade

volunteers like Katuparan Fire and Rescue Volunteer Brigade Inc. and KC West Filipino Chinese Volunteer Fire Brigades Inc. (TXTFire, n.d.). Another firefighting-related organization supporting BFP with over 40 brigade members nationwide is the Association of Philippine Volunteer Fire Brigades Inc. (iOrbit News, 2022). In the National Capital Region (NCR) alone, there are over 800 volunteer brigades aiding the government, acting as another manpower (Manila Bulletin, 2022).

Firefighting does not only require physical strength but is also mentally and emotionally demanding. As stated by Johnston, (2017) there are tasks that can affect firefighters personally that also impacts their physical and psychological well-being. Stress from occupations ranks as the second most frequently common reason why people seek medical support. It can happen when workers feel like their job is too demanding and they can't handle it comfortably (Adegboro, 2019). As stated, firefighters work can be taxing and requires almost most of the time of a firefighters, for instance, a study by Lagata et, al., (2022) results that firefighters experience challenges in managing their responsibilities effectively due to the physically and mentally demanding nature of their works, that significantly strains their capacity to work.

While work efficiency is the ability of the firefighters to perform in their work effectively and without much problem despite the condition of working in an intense and uncertain environment. Firefighters often experience psychological strain due to witnessing trauma (De Guzman Jose, 2025). As studied by Ellis and Knight (2018), there are two forms of trauma that firefighters typically encounter: primary trauma, which occurs when they personally experience the traumatic event, and secondary trauma, which arises when they are not directly involved but are exposed to others' traumatic experiences through frequent observation or hearing about them, resulting in psychological strain.

Firefighters improve their work efficiency through upgrades and advancements of their equipment which helped them keep pace with modernization and challenges in rural and urban areas and respond to them more accordingly and effectively (TDT, 2023). Different studies have probed that those who undergo consistent training and professional development, especially those who undergo consistent job-specific training programs, improve their operational efficiency and skills. Additionally, to improve their operational efficiency, address their physical and mental health, alleviate communication and mental fatigue, and address coordination issues (Ballo, 2023; Widiyanto & Nasri, 2024). Also addressing the firefighters' challenges and enhancing their collaboration can help in their efficiency (Lagata, L.S. et al., 2022). These challenges in facing fire incidents bring high stress levels to the firefighters that could influence the way they work effectively and efficiently for the community.

Responders from the Bureau of Fire Protection also play a crucial role in disaster situations by ensuring swift and effective emergency response, rescue, and recovery operations. They are also responsible for conducting search and rescue missions, providing multi-role emergency responders, delivering fire suppression, basic emergency medical services, technical rescues, disaster assistance, particularly in communities with limited emergency infrastructure, facilitating evacuation to safe areas. These responders also coordinate with local government units, non-government organizations, and other agencies to distribute relief goods and restore essential services. Additionally, they assist in damage assessment and post-disaster rehabilitation efforts to help affected communities recover. Their prompt actions and coordination help minimize casualties, reduce property damage, and enhance overall disaster resilience (LawPhil, 2021).

While the Philippines has established a comprehensive legal and institutional framework for disaster risk reduction (e.g., the DRRM Act of 2010), the existing body of research and policy primarily focuses on

structural and administrative aspects of disaster management, such as preparedness, institutional responsibilities, and coordination among national and local councils. However, there is a notable lack of empirical research that centers on the psychosocial dimensions of disaster response personnel and on how these affect their capacity to work. Relatively, firefighters also require social support; thus, a framework that is based on their experiences can cater to their psychological recovery, improving their efficiency. Moreover, the local implementation of disaster management is often hindered by understaffed, underfunded, or undertrained local councils, which adds additional strain on individual responders. Despite being at the frontlines of disaster situations, the psychological well-being, coping mechanisms, and work performance of these responders remain underexplored, especially in the Philippine context (Harkey, 2014). Furthermore, the study of Amorillo et al. (2024) stated that there is a gap in research that is focused on the firsthand psychological and emotional experiences of firefighters, especially in the context of how they cope, make decisions under stress, and sustain resilience in high-pressure environments.

Additionally, as the population continues to rise, this would be leading to more frequent and unpredictable fire incidents even in previously low-risk areas—there is insufficient focus on how responders are psychologically adapting to this increasing uncertainty. Considering that there is an increase in fire incident occurrences in Tondo, Manila, from different incident reports such as: BFP (2024), DSWD (2025), and Hoey, (2024). Current research tends to generalize community preparedness or focuses on climate-related risks broadly, overlooking the individual experiences of the firefighters who deal directly with high-stress, high-uncertainty environments.

Review of Related Literature

Fire Incident Reports

Numerous fire incidents reported by BFP (Bureau of Fire Protection), PRC (Philippine Red Cross), and TXT Fire (volunteer firefighter group) include the following:

Table 1. Fire Incidents Statistics recorded by BFP

	2022	2023	2024	2025
Fire Incidents	13,195	16,426	18,217	2,442
Documented by BFP				(first 64 days)
Percentage	2.68%	24.49%	10.9%	43% decrease
Increase / Decrease from the past year	increase compared to last year	increase compared to last year	increase compared to last year	compared to last year's first 64 days
Property Damage	5.2 billion Pesos	13.1 billion Pesos	13.8 billion Pesos	–

As seen from the table 1, there were a total of 14,894 fire incidents from January to June in 2024, while recording a total of 4,316 fire incidents during the first 64 days of 2024. Despite this, there was a 43% drop from the same first 64 days of 2025, with a total of 2,442 fire incidents; electrical issues continue to be the main cause of these fire events (Cabato, 2025). According to a narrative report from the BFP, compared to the 16,426 fire occurrences recorded by the BFP in 2023, there were 18,217 fire events reported by the BFP in 2024, representing an increase of 10.9 percent (Chavez, 2024), while the property damages in 2024 were approximately 13.8 billion pesos, which had a slight increase compared to 2023, which was 13.1 billion pesos (Villamente, 2024). the NCR (National Capital Region), including Manila, has the most fires, and electrical problems are the primary cause of these incidents. The BFP emphasized that they do need 159 more fire trucks among different parts of the Philippines (Cariaso, 2024).

Tondo, Manila, for this study specifically, as there are a significant number of fire incidents in Tondo, Manila, such as the fire incident in Port Area, Barangay 650, Tondo; Barangay 123, Tondo; Barangay 58, Coral Street, Tondo; and Barangay 20, Islang Puting Bato, Tondo (BFP, 2024; DSWD, 2025; Hoey, 2024). All of which were from November 2024 to April 2025. Resilience in the context of disaster risk reduction (DRR) is increasingly viewed through a community lens, offering a more localized and holistic understanding of disaster response and recovery. While communities may be fragmented and not always act cohesively, they nonetheless hold intimate knowledge of their unique vulnerabilities and capacities. Their embedded social networks, norms, and practices—such as bayanihan, a Filipino tradition of mutual aid—play a significant role in shaping disaster outcomes. Community-based preparedness, especially when driven from within rather than imposed externally, has been shown to be more effective and sustainable. This grassroots approach is particularly critical in the Philippines, where geographic vulnerability to natural disasters necessitates that the first line of response is often community members themselves. Thus, evaluating resilience at the community level not only acknowledges local expertise but also empowers the very people most affected by calamities (Alcayna et al., 2016).

According to ODI et al. (2013), bridging the gap between science and policy is essential for effective disaster risk reduction, particularly in contexts like the Philippines where vulnerability is high and disasters are recurrent. They emphasize the importance of producing policy-relevant scientific knowledge and ensuring that policy decisions are grounded in sound, locally contextualized research. This approach supports the notion that community-based insights and scientific expertise must work together to build more resilient and responsive disaster management systems. In the Philippine context, while national mechanisms for disaster response are considered functional, challenges persist in areas such as risk communication, early warning, and long-term recovery. Local capacity building remains crucial, yet is hindered by inadequate contingency planning, political influences, and inconsistent training. Emotional regulation and work efficiency among responders, such as those in LGUs and community-based DRR units, are deeply influenced by these systemic factors. Responders must navigate high levels of uncertainty and psychological strain while operating within networks that are both supportive and, at times, overstretched. Understanding how these responders manage uncertainty is essential for improving not just their own well-being, but the efficiency and resilience of the disaster response.

Firefighters' Challenges and Coping Mechanisms

Firefighters in the Philippines often face the challenge of lack of access to resources (fire trucks and protective gear), lack of manpower, and insufficient tools and equipment that ensure their safety (Lagata, et al., 2022 & Primo and Collado, 2024), and excessive workload places significant stress (De Castro & Cabarrubias, 2023), which results in restraining the ability of the responders to work effectively. Consistently being exposed to work-related traumatic exposures can eventually lead to influencing the quality of life, specifically mental health, of the firefighters; as firefighters' common mental health problems are suicidal ideation, anxiety, depression, and post-traumatic stress disorder (PTSD) symptoms (Whitman, 2023). Despite the difficulties the firefighters struggled with, communication with their colleagues and their belief in God are what give them strength to keep on helping others without expecting anything in return (Castillo & Dela Cruz, 2022).

The study of Umeda and colleagues (2020) has emphasized the importance of alleviating stressful situations and managing crises among responders through a combination of individual awareness and organizational support. Early recognition of personal signs of fatigue and crisis can aid in timely intervention, while psychological first-aid training

equips responders to support each other effectively. Organizations play a crucial role in establishing systems that address trauma even before deployment and in adapting workloads during high-stress periods to reduce psychological strain. In cases of overwhelming stress, involving mental health professionals and assessing a responder's capacity to continue duties becomes essential. Post-deployment, allowing ample recovery time and ongoing access to mental health resources is vital, with workplace adjustments made as needed to support long-term wellbeing.

In the study of Collado and Primo (2024), the experiences, challenges, and coping mechanisms are what define the firefighters' professional lives. These firefighters in Baguio encounter challenges such as conflicts with coworkers and superiors due to staff shortages, insufficient equipment, heightened stress levels, and overwhelming workloads, which affect the performance of the firefighters. Additionally, there is a lack of formal emotional support groups available for firefighters in the Philippines to alleviate their work stress and provide a proper mental health service. However, these firefighters have their own coping mechanisms in responding to these challenges through praying and open forums/peer discussions; moreover, their interpersonal relationships with their colleagues in their workplace also serve as their practical and emotional support community.

These firefighters, who always face life-threatening situations, rely on their ability to manage their fear through their teamwork, experience, and intensive training, helping them act more accordingly during emergency situations. As their dedication and resilience depend on how fulfilled they are in saving lives and their obligation. Lastly, an ideal firefighter for responding to fire incidents would be not just well trained but someone who is well equipped and has a team who is present in aiding them (Amorcillo et al., 2024).

Corey Norton's study highlights the critical mental and emotional health challenges faced by disaster responders, emphasizing the profound impact these issues have not only on their professional performance but also on their personal lives. Research indicates that a significant number of disaster responders experience symptoms of posttraumatic stress disorder (PTSD), depression, and emotional distress, which can lead to increased risks of suicide, substance abuse, and strained relationships (Isabirye et al., 2022; Singh et al., 2021). Studies by Aldrich and Cerel (2020) further reveal that recurring nightmares and intrusive thoughts are common among this population. Given the essential role disaster responders play in maintaining public safety, prioritizing their mental health is not only a matter of individual wellbeing but a societal necessity.

Factors influencing the Firefighters' Performance in responding to Fire Incidents

The factors that influence a firefighters' performance in responding to fire incidents are the individual's mental and physical health, frustration, distribution of workload (Lagata et al., 2022), coping mechanisms, resource availability, stressors in work environment (Primo & Collado, 2024), and training and knowledge (Ballo, 2023). According to a study by Lagata and her colleagues in 2022, being a firefighter requires a high level of mental and physical health, as this will compensate for the job's heavy workload and insufficient personnel, which could lead to heightened stress and fatigue, which wouldn't happen if someone had enough physical and mental stamina; Frustration is another factor that influences a firefighter's performance since this lessens the firefighter's will to work, morale, and motivation, while workload distribution also influences the performance of a firefighter due to a shortage of firefighters, therefore also leading to frustration and fatigue. Coping mechanisms, such as praying and peer discussions with coworkers, positively influence firefighters' performance by helping them manage stress and maintain resilience. Conversely, the availability of resources negatively affects their

performance because essential tools and equipment are necessary to ensure the safety of both rescuers and the community. Additionally, workplace stressors, including exposure to stressful situations and traumatic events, can adversely impact firefighters' mental health, particularly due to the lack of proper access to formal mental health support groups (Primo & Collado, 2024). Lastly, appropriate knowledge and training about health standards, occupational safety, and fire codes would enable the firefighter to provide a safe and effective operation (Ballo, 2023).

Theoretical Framework

This study is anchored on the Stress and Coping Theory proposed by Lazarus and Folkman (1984), this lays out a relevant lens for understanding the lived experiences of firefighters following emergency response operations. This theory posits that psychological stress is a result of an individual's cognitive appraisal of a situation and their perceived ability to cope with its demands. It also outlines two main processes: primary appraisal, where an individual evaluates whether a situation poses a threat, challenge, or harm; and the secondary appraisal, where they assess their accessible tools and choices for handling the circumstance.

In this paper there are two coping strategies, the problem-focused coping where it addresses the source of the stress and the emotion-focused coping where it manages emotional responses to the stressor. This framework, coping, is defined as the cognitive and behavioral efforts made to manage the internal and external demands of stressful situations (Chowdhury, 2019).

In the context of emergency response operations, firefighters are often exposed to high-risk and emotionally taxing situations. These experiences demand rapid assessment (appraisal) and immediate coping strategies, both during and after the incident. The theory helps irradiate how firefighters perceive their experiences, evaluate their capacity to respond, and employ coping mechanisms to maintain their psychological well-being and performance.

This framework is particularly useful in addressing the study's central and specific research questions. It guides the exploration of what goes through firefighters' minds after emergency responses, how these experiences impact their performance, and what personal or environmental factors influence their coping. Furthermore, it provides a basis for understanding how their mental health status interacts with decision-making and behavior, and how their coping strategies shape their capacity to continue operating effectively in future incidents.

By applying Lazarus and Folkman's theory, this study seeks to uncover the subjective processes behind firefighters' experiences—how they make meaning of their roles, respond to stressors, and sustain resilience in the face of danger.

Research Question

Determining the lived experiences of the firefighters following an emergency response operation. Moreover, it aims to specifically provide discussion on the following questions:

1. How do the firefighters perceive, experience, and interpret the psychological and environmental factors that influence their performance and well-being following an emergency response operation?
2. In what ways does their mental health status shape the decision making and behavior of firefighters in the field?

METHODS

Research Design

The study incorporates a qualitative approach to explore the experiences of the firefighters and learn how they interpreted those significant experiences; besides, using the aforementioned method would give contextualized insights regarding the firefighters' experiences, challenges, and coping strategies and provide how these factors influence the way they work. After which the researchers used a narrative inquiry approach to allow the themes to naturally emerge from the respondents' lived experiences. The use of qualitative narrative analysis design allows the researchers to understand how individuals create stories from their personal experiences (McLeod, 2024).

The use of qualitative research design allows the firefighters' an opportunity to answer 'how' and 'why' questions about perceptions, thoughts, and perspectives specifically (Cleland, 2017) and would gain more profound insight through those lived experiences by the responders (firefighters) (Ho & Limpachet, 2022).

Participants and Study Sites

The study involved eleven firefighters from Tondo, Manila, as participants. The sample size was deemed appropriate for a qualitative research design, which prioritizes depth of understanding over numerical representation. Suggesting that a sample size between five and twenty-five is recommended for phenomenological studies, wherein the sample size is neither too low nor too high (Bekele & Ago, 2022). The researchers used a purposive sampling method in gathering their participants in order to be able to handpick respondents who would surely have necessary and valuable information they could provide for the study. The eligibility for being included in the study is to be a firefighter with at least three years of experience; since work experience, along with experience and training in responding to disasters, plays a crucial role in being a predictor of preparedness for disasters (Goniewicz et al., 2021) and the longer the service of a firefighter, the more they are adaptable to challenges, but the more they experience mental health challenges such as depression, PTSD, and substance abuse (Whitman, 2023), allowing the firefighters to have sufficient exposure experience with more developed knowledge and skills in facing their experiences. The criteria of the participants were consistent with the local study as follows: A minimum of 3 years of experience among firefighters in Baguio City was used to identify their lived experiences in the study of Primo and Collado in 2024, giving detailed information about how the firefighters' experiences influenced their response to incidents.

Using the purposive sampling technique and based on the criteria, a total of eleven participants were selected for the study. The participants were recruited through formal coordination with the Bureau of Fire Protection (BFP). An approval letter was submitted to the BFP to request permission to interview firefighters. Upon approval, the office disseminated the letter to the respective station commanders, after which the interviews were scheduled. Table 2 presents the demographic of participants who voluntarily consented to narrate their experiences. This includes pseudonyms of the participants, fictitious names of their fire stations, sex assigned at birth, and years of experiences.

Table 2. Demographics of Participants

Pseudonym	Fire Station	Sex	Years of Experience
Agoncillo	Aguinaldo Station	Male	12 years
Bonifacio	Aguinaldo Station	Male	5 years
Carino	H. Luna Station	Male	3 years
Del Pilar	H. Luna Station	Male	11 years
Escoda	Quezon Station	Male	22 years
Flores	Quezon Station	Male	11 years
Gomes	Aguinaldo Station	Female	11 years
Hilario	H. Luna Station	Male	5 years
Isabelo	H. Luna Station	Male	13 years
Julian	Quezon Station	Male	4 years
Kapitan	Quezon Station	Male	15 years

According to the Philippine Statistics Authority (2020), the National Capital Region (NCR) is the second most populated region in the Philippines, with approximately 13 million residents across 16 cities. Due to its dense population, the NCR, including Manila, frequently experiences floods and typhoons. Furthermore, around 45% of its urban population resides in informal settlements, making the region highly susceptible to urban fires (MECC, 2024; Morin et al., 2016). Given the high incidence of fire incidents in Tondo, Manila—one of the most affected areas in the NCR—the researchers selected this location for participant recruitment. This selection ensured that the target participants possessed substantial experience in responding to emergency situations, thereby meeting the study's inclusion criteria.

Research Instruments

The study incorporated a semi structured interview method with open-ended questions, as it aligned with the narrative inquiry research design that was utilized. This approach served as a guide for the researchers in conducting face-to-face individual interviews, allowing for a balance between structure and flexibility in exploring the participants' lived experiences of the firefighters through their narratives. The interview questions underwent a validation process to ensure their validity, plausibility, and adequacy in capturing the essence of the firefighters' lived experiences.

The interview guide consisted of questions regarding participants' personal information, such as sex, years of service, and working hours. After this, the interviews focused on the emotional, cognitive, and practical aspects of firefighting work. Participants were asked to share stories regarding their experiences after particularly challenging fire incidents, including the thoughts or feelings that tended to linger and the reasons behind their lasting impact. The interviews also explored how these experiences influenced their confidence and approach in future emergency responses.

In addition, questions were directed toward identifying the personal strengths and environmental factors that either supported or hindered optimal performance during fire incidents. Strategies for coping with occupational stress and collective approaches to managing challenges were also discussed. The role of mental well-being in decision-making and on-ground actions during emergencies was examined, along with the types of organizational and psychosocial support that firefighters wished to receive to enhance their effectiveness in disaster response situations. Follow-up questions were also asked when necessary to clarify responses and gain a deeper understanding of participants' experiences.

Data Gathering Process

To deepen their understanding of the topic, the researchers began by reviewing existing literature related to the study. This initial step was necessary to frame the research question and to broaden their knowledge of the context of firefighters (Creswell & Poth, 2018). Through this review, the researchers identified blind spots, gaps, and omissions within the current body of work. Recognizing these research gaps is a crucial step in determining the type of data needed (Booth, Colomb, & Williams, 2016).

To gain a comprehensive and context-rich understanding of the subject, the researchers conducted an ocular visit to the firefighter's department to immerse themselves in the field. This immersion was vital in qualitative research as it enables a deeper grasp of participants' lived experiences (Patton, 2015). Subsequently, a semi-structured interview guide was developed to help the researchers better understand the participants' perspectives. This method was chosen because it provides a balance between structure and flexibility, allowing the researchers to probe for deeper insights while ensuring that all relevant topics are adequately covered. The participants included firefighters with a minimum of three years of experience and were identified through the Bureau of Fire Protection Tondo headquarters office; researchers inquired in the office for possible stations and firefighters that were credible. The researchers also visited these stations and offices increasing the chances of direct engagement. Once contact was made, participant involvement was confirmed, and the interviews were scheduled and conducted based on their availability.

Prior to the interview, informed consents were obtained. Participants were thoroughly briefed about the study's purpose, their voluntary involvement, and the recording of interviews. They were also informed of their right to withdraw at any point without consequence. Confidentiality was emphasized, ensuring that only the researchers and their adviser have access to their identities (Israel & Hay, 2006). The interview was conducted in the morning in a setting where the participants can interact easily with the interviewers, in a conducive environment, allowing participants to speak freely, and comfortably without external interruptions. The researchers ensured that no other individuals were present during the interview to maintain privacy and minimize potential biases. The researcher also prepared a distress protocol to address any potential emotional disturbances during the interview. Despite the sensitivity and emotional weight of the topic, participants remained composed throughout the discussion and were able to recount their experiences clearly and thoughtfully. After all the participants were interviewed, the researchers were welcomed by the other officers on duty and were given a brief tour of the station to verify the participants' claims regarding the availability and condition of firefighting equipment.

After each interview, the researchers expressed their gratitude and requested the participants' contact information for possible follow-up or verification of the gathered data. This process guarantees the findings' reliability and credibility.

Ethical Considerations

The study adheres to strict ethical guidelines to ensure the safety, dignity, and rights of all participants. Given the emotionally and professionally demanding nature of firefighters' work, particular care was taken to protect the psychological well-being of the participants throughout the research process.

Informed consent was obtained prior to the interview. The researchers clearly explained the purpose, procedures, and scope of the study, emphasizing that participation is entirely voluntary. Participants were also

informed of their right to withdraw from the study at any point without any consequences. The informed consent form also stated that interviews were audio-recorded with the participants' permission for the purpose of data accuracy and that all responses will be treated with the utmost confidentiality.

To protect participants' identities, all personally identifiable information was anonymized during transcription, analysis, and publication. The raw data will only be accessible to the researchers and their academic advisor. Data is securely stored and will be destroyed after the completion of the study in accordance with Data Privacy Act of 2012.

Additionally, the researchers acknowledged the potential emotional risks associated with recalling disaster experiences. As such, participants were reminded that they are not required to answer any question that makes them uncomfortable. Should emotional distress arise, the researchers were prepared to pause or terminate the interview and provide participants with referrals to mental health resources, if necessary, which fortunately did not proceed to that course of action.

Data Analysis

The nature of the study was a qualitative approach; therefore, the data underwent inductive thematic analysis (ITA) to uncover recurring patterns, themes, and concepts. ITA is a method where themes are derived directly from the raw data, allowing the findings to naturally emerge from participants' experiences and perspectives. It follows a systematic and structured procedure to ensure accuracy and coherence in data interpretation. First, the researchers became familiar with the data to develop a deep understanding, during this process, the data was transcribed and analyzed for possible codes, manually. These codes then formed the foundation for developing themes, which were further divided into sub-themes based on emerging patterns. After this, it was

essential to review and refine the themes by external validators to ensure they align with the data, making any necessary reorganizations or adjustments to establish clarity and stability. The entire corpus of data was then evaluated to assess the organization of themes and their interrelationships. Each theme was clearly defined to ensure precision and alignment with the study's main objectives. This included refining the themes to remove ambiguity and confirm their relevance to the research goals. Finally, after thematizing all data, researchers answered their research questions, all documenting the dataset, key findings, and all aspects of the analysis process. This report provides a clear and detailed presentation of the themes, ensuring transparency and rigor in the study's qualitative analysis (Nicolas, 2021).

RESULTS

The study aims to explore and understand the lived experiences of the firefighters following emergency response operations. According to the responses of the firefighters, a total of three major themes has emerged. The analysis highlights a few dimensions, including their traumatic recollections and the repercussions of their responses on their psychological being, intrapersonal and interpersonal challenges in firefighting, the support the firefighters received as performance enablers, and the firefighters' strengths for efficient and effective performance. Additionally, the firefighters expressed recommendations and suggestions for further improvement of government support towards firefighters. Table 2 exhibits the following themes mentioned and the subthemes subordinated, encompassing contextualized definitions based on the responses acquired from the firefighters.

Table 2. Table of Themes/subthemes and definitions

Themes and Subthemes	Definition
Traumatic Recollections	The theme shows each negative memorable experience of the firefighters during emergency response operations, including traumatic experiences and the lingering psychological toll of firefighting, which is the lasting psychological effects of their experiences — such as difficulty sleeping or eating, and the thoughts that occupy their minds after a response operation
Work-Related Challenges and Adversities in Firefighting	The theme concentrates on the firefighters' varying challenges and adversities that they face throughout their careers, whether it's within their control or not.
Subtheme 1: Interpersonal and Systemic Challenges	The subtheme's main concentration is the challenges firefighters face in relation to the engagement of the community, organization like equipment and manpower, and work environment.
Subtheme 2: Operating Under Constant Pressure	The subtheme focuses on how, due to the nature of their job, firefighters constantly face intense pressure that makes their work more challenging, such as physical and health challenges and personal limitations and weaknesses— including the urgent, high-stakes situations they encounter and the critical decisions they must make to fulfill their duties.
Personal and External Coping Mechanisms to Manage Stress and Challenges	The theme provides the diverse coping mechanisms of the firefighters they rely on to manage their stress and challenges in their work.
Subtheme 1: Psychological Adaptation and Growth through Firefighting Experiences	The subtheme illustrates the long-term psychological evolution resulting from firefighting service such as strengthened mental and emotional resilience, development of safety and awareness and presence of mind, and lifelong learning and self-development mindset. Covering how exposure to operational demands strengthens mental resilience and fosters adaptive mindsets. This growth is specifically viewed by firefighters as enhancing their operational efficacy and shaping effective decision-making in high-pressure field situations, thereby detailing the individual attributes crucial for sustained performance.
Subtheme 2: Psychosocial Support Enabling Firefighters' Performance	This subtheme shows the combination of external support systems and internal adaptive coping strategies like institutional support, familial and peer support, and their personal coping strategies which maximize the effectiveness of firefighters' performance.
Subtheme 3: Personal and Interpersonal Strengths Enabling Effective Firefighting Performance	This subtheme suggests the firefighters' recommendations and suggestions they would want to be incorporated that would further elevate the support of the organization/government towards firefighters.

Traumatic Recollections

In this first major theme, different negative experiences throughout their service of being a firefighter emerged, having such traumatic recollections in which the firefighters memorialized the victims of fire events in the past they experienced firsthand, showcasing the remembrance of the firefighters of those they weren't able to save, lasting negative memories, and the psychological toll of their experiences. These are evident from the accounts of almost every participant:

"after na bumupa apoy at usok... nakita namin yung magkapatid na magkayakap. So parang pinoprotektahan niya yung kapatid niya na wag masunog, pero wala ng chance wala silang malalabas kasi walang secondary exit- puno ng metal grills ang kanilang bintana; at unang nasunog yung main stair, so saan pa sila dadaan wala na silang ibang dadaanan. So ginawa nila, pumunta sa sulok, niyakap niya yung nakababata niyang kapatid, kaya magkadikit yung katawan nila, na nasunog dun sa insidente na 'yon" (AGONCILLO - 23)

"kung mababalitaan mo, yung nangyari na sunog na barko dito sa may Delfan, 'di ko maalala kung twenty twenty one ba 'yon o twenty twenty two. Isa 'yon sa mga...unforgettable ko na sunog na nangyari sa buhay ko, kasi isa 'yon- malapit na medyo madisgrasya don kasi yung nasunog na 'yon is isang barko na may mga laman na gasoline- basta flammable liquids." (BONIFACIO - 1)

"sa sampaloc ano siya abm nagrerent lang sila tapos magnanay sila. Tapos nasunog ung ano, nakita sila ng mga tao na lumalaban sila na para makalabas doon sa bahay. Kung maalala niyo yung sunog sa sampaloc ano siya yung mag nanay na nakita sa bintana na nakaupo ung bata doon. Ung nanay nilagay niya yung anak niya doon pero hindi pa rin sila nakalabas. Nakakaawa lang tignan eh kasi yung hanggang sa buling bininga nila alam mo yung nanay niya na talagang nililigtas niya yung bata." (GOMES - 12)

"Ayon yung sa may binondo nga, yung... kung familiar kayo, ayun kasi may nasunog doon na eleven na tao, tapos kami yung naunang rumesponde tapos babang lumalaban kami sa sunog, kabharap namin yung mga bangkay nila na sunog." (HILARIO - 12)

"Tapos yon ung namatay dyan sa may binondo. Maghubat ng mga fire victims, onse ata yung namatay doon." (ISABELO - 1)

"halimbawa ako non nadaganan ako ng isang malaking yero, buti nga tumama sa ulo ko, nakahelmet ako. Eh kung dito tumama (points at back of the neck), edi tapyas na ulo ko. Ganon po talaga nangyayari sa amin, pagkatapos nga non tinatanong ko ung kasama ko bui pakitapik mo nga ako kung buhay pa ako baka mamaya kaluluwa ko lang tong nakatayo "eh buhay ka pa naman sir" sabi sa akin. [laughs]." (ISABELO - 2)

"during chinese new year, celebration ng chinese new year, nasunog sa may _ street ung condominium. Wherein di natin naisalba ung dalawang kababayan natin na kasambahay kasi wala eh puno ng usok ung banyo eh saka di namin nabanap kung nasaan sila naka kwarto. Saka sinabi sa amin na may natrap doon na dalawa." (JULIAN - 13)

"I think a year ago lang 'to, Carvajal fire incident, siguro ung mga kasama ko yan din ung sinabi. Dito lang sa may binondo. Nareceive namin ung call, nakarespond kami within two minutes pero ung dinatnan namin labing isang patay. Labing isang patay tapos yung apoy ung term kasi namin ano eh, conflagration kapag na sobrang laki na, ung mawalakan na talaga, tapos ung apoy is fully developed na, technically wala ka nang magagawa kung 'di pigilan lang ung pagkalat niya hanggang mamatay. Pero the rest, property specially life, wala nang makakasurvive doon. Yung challenge doon is how to prevent further challenge talaga, given the fact na ganon yung challenge doon sobrang lungkot mo na din talaga kasi alam mo na nagfail na ung operation mo." (KAPITAN - 11)

The responses emphasize the traumatic feeling of not being able to save the lives of other people despite doing their best and being present in the situation as well as near-death experiences during emergency responses. Along with the lingering psychological toll of these experiences on them, affecting the way they work as firefighters, which is present in the responses below:

"Mayroon akong narespondihan na sunog- so meron kaming na rescue...apat na tao. Kaya lang yung isang nakalabas na 'yon, seventy years old na siya- dito lang yun sa Camba street, corner Moriones, bumalik siya sa loob, so hindi siya na monitor nung family na bumalik- binalikan niya yung kaniyang one thousand peso bill- birthday niya kasi yung araw na 'yon. Di na siya nakalabas- namatay siya. So parang naapektuhan din kami dahil bubay na 'yon na nailigtas" (AGONCILLO - 13)

"So 'yon yung mga experiences ko na hindi ko makakalimutan kasi parang may mga questions sa sarili na 'paano kaya kung nailigtas natin', so bubay pa sana tong magkapatid na 'to o pano kaya kung nagawan natin ng paraan o dumating tayo nang mas maaga o nang mas mabilis" (AGONCILLO - 15)

Participants also expressed fear and recounted near-death experiences that reflected their constant awareness of danger. This is supported by the accounts of Participants, who emphasized their recognition of the risks inherent in firefighting.

"parang nakaka ano lang- baka mamaya ikaw yung isa sa maputukan- maging kuwento ka nalang 'no...siyempre nakakatakot talaga 'yon, kaya 'di ko makakalimutan 'yon lalo na bago pa ko non mga twenty twenty one, twenty twenty two." (BONIFACIO - 10)

"nakaramdam tayo ng takot, pangangamba, kung itutuloy pa natin yung serbisyo na ganun; kasi diba once na madisgrasya ka dito sa ano natin...minsan 'di mo na alam kung ipagpapatuloy pa yung trabaho eh, kasi once na masunog ka- malamang sa malamang di ka na fitted sa gamitong trabaho, so ayun nakakatakot" (BONIFACIO - 12)

"yung isang paa namin is laging nasa buhay 'no. So every fire response o emergency response- medical man 'yan or disaster; nasa panganib lagi din yung buhay namin, and syempre may pamilya kaming iniisip- na uuwian 'no, kaya 'yon yung naiisip namin na siguro yung challenging yuh- kada labas namin ng istasyon ay may pinwedeng mangyari sa amin." (CARINO - 2)

"may mga insidente na meron talagang buhay na nawawala...at yung pinaka...tinatawag natin na traumatic talaga na nangyari- for my experience, yung nangyari last year, August two, two thousand twenty four, kami din area din namin sa San Nicolas dito sa may Binondo Carbajal street, eleven yung namatay, kaya after non- nakikita ko pa yung...yung scenario 'no, kung paano na- yung pose nila nung namatay sila, 'yon nakikita pa rin sa ano ko sa- medyo ano 'di makalimutan talaga." (ESCODA - 15)

"Maghubat ng patay, magcadaver recovery, pag may sunog may namamatay kami rin talaga yung ano, yung kumukuba sa kanila. Yun ung pinakachallenging sa labat...Pagdating mo pa lang may reports na na missing and possibly dead. And upon confirmation patay nga talaga. We were talking three personnel tapos naging eleven sila. Yun siguro ung pinakachallenge, isang buwan akong di nakatulong eh kasi lima doon ako yung ano eh, naghubat" (KAPITAN - 3)

Although participants came from different fire stations, the traumatic recollections that exhibit lingering psychological toll of firefighting emerged as a significant theme. The traumatic recollection's theme highlights that firefighting experiences are a significant source of hardship, producing prolonged stress that alters one's mental and emotional state. This theme also signifies that participants frequently

experience stress leading to existential questioning. Their experiences reveal the presence of lingering trauma, chronic fatigue, and mental exhaustion. Consequently, moral fatigue has become a common dilemma among firefighters, reflecting the cumulative emotional toll of their service.

Work-Related Challenges and Adversities in Firefighting

This theme emerges to highlight firefighters' intrapersonal and interpersonal challenges such as challenges with community engagement, equipment and manpower (organizational), and the environment of the work that pose an obstacle in doing their job that generates immense amounts of pressure. This includes the pressure in making critical decisions in order to perform and the pressure in the physical aspect that makes their job much more challenging. It highlights how the intense nature of firefighting requires continuous perseverance and adaptability to effectively perform their duties.

The first subtheme: Interpersonal and Systemic Challenges, focuses on uncontrolled challenges, specifically, community engagement, equipment and manpower (organizational), and the environment of the work. The following participants recalled how these challenges hindered their performance;

"hindi po talaga labat ay nalalaanan ng budget, So naranasan namin diyan yung hindi sapat yung ating mga equipments, SVE- yun yung mga self continuity apparatus. yun po yung mga isa sa nagpapahirap sa amin sa fire operation. Yan yung mga challenges, pero 'di naman yan dahilan para hindi tayo mag serbisyo sa publiko." (AGONCILLO - 3)

"Pinaka nagpapahirap talaga mag perform samon is yung...mga obstruction sa daan, mga double parking, then, yung mga participation ng mga community, kung paano makakainas sa mga sunog," (BONIFACIO - 21)

"number one talaga na sasabihin na problema namin is yung...advancement natin when it comes to equipment, technologies, compared to the other countries 'no. Kasi nga kung mapapansin natin sa Pilipinas- buong Pilipinas, not only in the Manila, yung ibang firetrucks natin medyo luma na 'no, may kalumaan na, yung iba twenty years old na. 'Yon lang- 'yon lang yung mga nagiging hindrance o challenges namin pag dating sa mga ginagawa naming trabaho. Siyempre pag may maganda kang kagamitan, may maganda kang aparato, mas naperform mo yung duty mo beyond pa don sa expectations ng mga tao." (CARINO - 14)

"may times kasi na 'di maisip nung mga higher ups o nasa taas yung experience na nararanasan namin dito sa operation eh. Yung nasa field kung tawagin namin, siguro 'yon lang- 'di nila mavisualize pa or 'di pa nila nararanasan kasi yung nararanasan namin. Siguro 'yon yung nagiging hadlang para magkaroon ng- mas palakasin nila yung mental support 'no para dun sa mga firefighters natin na nakakaranas ng stress o possibly nakakaranas ng...mental disorder.(traumas)" (CARINO - 22)

"Manila kasi is the most densely populated city in the world 'no, bakit, kasi andito yung mga tinatawag nating informal settlers area. Ano yung mga informal settlers area natin, nandiyan yung Baseco, nandiyan yung Parola, Isla Puting Bato, Happy Lands, Smokey Mountain, Aroma, 'no. All of those places were congested by people with houses made up of materials, kaya napaka prone sa sunog" (ESCODA - 7)

"pag nagpupuna kami dun ng sunog, ay isang informal settlers area o mga highly congested area, may threat na sa buhay namin, so- 'yon na sobrang stressful talaga 'yon 'no; lalo na pag pinagbabantaan na yung buhay mo, minsan binabato yung truck tapos pinagbabantaan kang saksakin- stressful 'no." (ESCODA - 13)

"sa community, kasi 'di rin nila alam eh, natataranta sila kung anong gagawin nila... imbis na mag tulong-tulong para patayin yung apoy, nag babakot ng gamit, kaniya kaniya silang alis. Yung mga fire extinguisher sa barangay minsan walang available" (FLORES - 16)

"traffic eh, ung kapag rumeresponde kami tapos traffic. kung hindi naitawag agad sa amin, kumware hindi natawag sa amin or nalate lang kami ng pagresponde, pagdating namin doon sa nasusunugan parang nasa amin pa yung sisi." (HILARIO - 3)

"Tapos. Abb minsan sa mga paano magresponde minsan di mo alam yung lugar meron kang pagaalinlangan, Tapos pag iniisip mo ung mga gamit mo kulang kulang. Safe ba ko dito o hindi? kasi minsan tulad niyan pag confined space mga kulob na lugar hirap pumasok kelangan naka BA eh kulang kulang ung mga BA" (ISABELO - 6)

The following statements from the firefighters discuss the lacking of allocation of budget for equipment which results to reliance to outdated equipment and technologies used for response operations, obstructions on the road, participation and behavior of the community and aggressive people threatening their lives in some areas, higher ups failing to recognize the magnitude of the problems in the perspective of the ground level, which becomes a hindrance to mental support for the ground level, informal settlers area being prone to fire incidents, unavailability of fire extinguishers in communities, traffic environment which sometimes leads to late responses therefore the blame being pinned on them, and unfamiliar areas which brings uncertainty to their safety. Each and every one of the said challenges were all difficulties encountered by firefighters restraining their performance.

The interpersonal and systemic challenges, which include community, organizational, and work setting, are all environmental factors that hinder the performance of the firefighters in performing their duty of responding to fire responses.

The second subtheme: *Operating Under Constant Pressure*, concentrates on the firefighters' issues regarding their physical health and exhaustion as it piles up along with their work; the psychological aspect of pressure dressed as stress that poses a challenge in their decision-making; and the awareness of the firefighters of their own weaknesses and limitations. The following responses indicate the said subtheme:

"pagod yung katawan, pati yung mind mo, talagang hindi maiiwasan na humina yung aming immune system" (AGONCILLO - 19)

"kapag nakulangan ka sa tulog kasi ano eh malaking factor kasi talaga siya sa mga bumbero... nahihirapan sila lalo na magmaneho ng gabi... chances kasi na kapag kakagaling lang namin sa sunog tapos may sunog na naman eh tapos kapag, tapos may mga duty pa ng gabi mga every three hours, para may malalapitan mga tao kapag gabi, tapos may times na duty ko natatapat ng 3am tapos magkakasunog ng alaisays ayon kulang tulog." (HILARIO - 9)

"stamina and strength, pagsubok talaga yan, ubos parati yan kabiti gaano ka kalakas, kabiti gaano kalakas ang condition mo...In cases na tumatagal ang operation, walang unwan, walang kain, wala talagang rest sa performance ng job namin, yun yung pinakachallenging sa labat." (KAPITAN - 4)

The responses from above emphasized the weakening of the body due to firefighting, lack of sleep because of the frequent fire responses throughout the day and night, depleted stamina and strength, and the absence of rest and eating meals, which all sum up to physical pressures that make performing effectively more difficult.

"Isa sa mga factor na nakakahirap sa pag responde- una dahil tayo ay nag nwork under pressure and stress," (AGONCILLO - 18)

"Challenging...kung paano mo iassess yung situation- kung papaano yung decision-making mo, dapat mabilis. Kailangan mo mag assess ng within split second...dapat mabilis ka- mabilis, yun ang challenge samon" (DEL PILAR - 2)

The statements from the firefighters concentrate on working under pressure and stress, critical decision-making within crucial moments despite it being under pressure, and mandatory compliance despite being difficult for their mental condition, which all contribute to the mental pressure that constrains their peak performance that the firefighters have to put up with.

"minsan nawawalan ka ng lakas ng loob sa mga nararanasan mong pagod." (ISABELO - 5)

"weakness is knowing your own body's limit. I was born with asthma so hindi dapat talaga ako naghubumberto. Ano pa ba? Mayroon akong fear of heights, merong fear of electrocution." (KAPITAN - 17)

The statements displayed the demoralization due to exceeding the threshold of bearable fatigue and being aware of the personal capability. These add as another pressure that restricts the firefighters' effective and efficient performance.

The combination of all these challenges are all personal factors that contribute to the constant pressure for firefighters to work with, despite being hindrances in their performance in responding to fire incidents.

Personal and External Coping Mechanisms to Manage Stress and Challenges

For the first subtheme: Psychological Adaptation and Growth through Firefighting Experiences, despite the traumatic experiences they have encountered from the past and the psychological toll of those experiences, participants still demonstrated how these experiences fostered adaptation and personal growth. This subtheme illustrates how exposure to high-pressure situations enabled firefighters to strengthen their mental and emotional resilience, as well as to develop a more mature and reflective mindset following significant response operations. To further substantiate this subtheme, the firefighters manifested the development of emotional maturity and strengthened interpersonal understanding among firefighters. It also highlights their ability to maintain emotional stability despite exposure to distressing events. Participants Isabelo and Kapitan expressed empathy, adaptability, and emotional steadiness through their accounts:

"Actually doon ka mapapaisip na kelangan talaga ung kalakasan ng loob, pagunawa. Na kelangan mo din lakasan ung pagunawa mo pagintindi sa mga kapwa katrabaho mo, sa mga taong makakasalamuha mo. Minsan nakakalungkot minsan masaya naman." (ISABELO - 10)

"mas naging kalmado ako over problems talaga, kapag ka mayroong situation na nagaarise. Parang nasanay na ako na ung dapat mataramta ka, hindi ka masyadong natataranta." (KAPITAN - 7)

Their psychological adaptation and growth in firefighting also emphasized the importance of safety and maintaining presence of mind during response operations. Participants Bonifacio and Carino reflected a strong sense of situational awareness and prioritization of personal safety as a prerequisite to saving others:

"hindi ka na makakaligtas ng ibang buhay pag napabamak ka eh, so mas marami kang maililigtas na buhay kung hindi ka mapapabamak, so mas maganda safety first" (BONIFACIO - 15)

"presence of mind lang talaga yung kailangan every responses, kasi siyempre nagsasagip ka ng buhay ng ibang tao, 'wag na tayong- kaming dumagdag bilang irectue pa 'no. So magawa namin trabaho namin nang safe din kami." (CARINO - 9)

While also highlighting the continuous learning and self-development that firefighters gain through their professional experiences. Their reflections show how encounters with adversity foster humility, gratitude, and a deeper sense of purpose in service.

"apaka suwerte pala namin. Mas masuwerte pala- para sa'kin o mas blessed tayo nob...yung tayo yung tumutulong, yung hindi tayo yung kailangan bigyan ng tulong. So yun yung naka apetto sa'kin kaya mas minahal ko yung trabaho ko bilang isang bumbero at patuloy tayong nag seserbisyo sa publiko-" (AGONCILLO - 9)

"yung mga experiences namin dito, kinikeep lang namin para, ayun matuto; tsaka shineshare namin sa mga bawat isa sa mga bumbero namin- ka bumberohan, para hindi rin sila mapabamak in the long run" (BONIFACIO - 19)

This subtheme reflects that through their numerous experiences, firefighters undergo a process of positive transformation despite some of these being traumatic. These experiences allowed them to acquire new skills, coping mechanisms, and perspectives that contribute not only to their occupation but also to their personal growth and resilience.

In the second subtheme: Psychosocial Support Enabling Firefighters' Performance, this subtheme emerged as participants shared how they managed to continue performing their duties as firefighters despite experiencing stress and exposure to traumatic events. Multifaceted psychosocial support enables firefighters to sustain and enhance their performance, such as peer and familial support, institutional support, and their personal coping strategies.

This subtheme captures the emotional and social support that firefighters receive from their families, peers, and colleagues. Participants emphasized how these relationships serve as vital sources of strength and emotional release, especially after distressing response operations. Family and peer interactions help them process their emotions, reduce stress, and regain mental balance.

"pinaguusapan na iopen sa pamilya, sa asawa, na merong ganitong pangyayari...para makakuha rin ng opinyon kung ano yung mga makatulong sa decision making mo...dabil marami ka na rin iniisip- para kumbaga mairelease mo lang yung nararamdaman- yung mga emotions na 'yon 'no... sa mga kaibigan, sa mga kapwa rin namang bumbero, so 'yon yung paraan para mairelease mo yung mga stress and problems na naencounter sa work" (AGONCILLO - 21)

"kung hindi man natin masabi sa mga katrabaho, kaibigan natin, siyempre yung family or loved ones namin. Minsan pag ka uwe namin ng station, tumatawag kami, nag vvideo call, kinekwento namin yung buong nangyari 'no- yung experiences namin dun sa mga ginawa namin, para kabit papano nailalabas namin yung saloobin namin kasi mahirap nga naman na- lalo na pag sa mga point na meron tayong casualties, may namatay, siyempre ang bigat isipin pag uwi namin ng istasyon bakit hindi namin naisalba yung buhay niya or 'di namin na rescue yung mga victims natin na 'yon o mga tao na 'yon 'no. 'Yon tatawag kami dun sa loved ones namin- ako, sa fiance ko, kinekwento ko kung ano yung nangyari tapos magaan sa loob na makarinig lang ng mga bagay na "okay lang 'yan, ginawa mo naman yung best niyo diba", "ginawa niyo naman yung trabaho niyo", talagang 'di lang natin maimasan yung mga ganon talagang insidente. At least napapagaan yung loob." (CARINO - 16)

"far away from home eh. tumatawag ako sa parents ko sa kanila ako nakikipagano, through communication lang din naman ang ano ko sa kanila wala naman din akong ginagawa kung di yun lang, makita ko lang sila, nakakausap through video call okay na ako narerefresh na ung sarili ko sa trabaho" (JULIAN - 14)

"you make families on the station eh ang siguro pinakamasayang experience dito kasi eh sa istasyon kasi mas mababa talaga ung oras namin sa station namin over our families." (KAPITAN - 14)

These accounts highlight that firefighters rely heavily on both family and peer support systems to cope with the emotional strain of their work. Familial support provides a space for emotional expression and understanding, while peer support fosters camaraderie and shared resilience within the station. Together, these relationships serve as emotional anchors that sustain firefighters through the demands of their profession.

While there is also institutional support that they receive, it reflects the organizational and governmental support received by firefighters, which strengthens their capacity to perform effectively. Participants noted the availability of benefits, financial assistance, and recognition efforts initiated by their institution. These forms of institutional support provide both emotional assurance and practical aid that enhance their morale and well-being.

“health benefits bilang isang bumbero kasi meron kaming naka MOA sa Chinese Gen na once na ikaw ay ma aksidente during fire operation, meron kang libre na health benefits para sa iyong kalusugan— nangyari sa’yo na accident— sa during fire operation ” (BONIFACIO- 38)

“kung meron mang extraordinary activities, recognition from the higher offices or even dun sa mga non government organization. Malaking bagay na ‘yon samin na nagttrabaho dito sa ground level.” (ESCODA - 30)

It also includes the firefighters’ individual adaptive coping strategies that firefighters employ to manage stress and maintain emotional stability. Participants shared that they engage in recreational activities, exercise, prayer, and rest as ways to strengthen resilience and sustain performance.

“meron tayong mga recreational activities diyan para makatulong sa pag release ng stress, mental health natin, physical activities isa ‘yan sa ginagawa namin, nag bbasketball

kami...nakakapag build din ng camaraderie mahilig ako motor, so nag nature ride tayo” (AGONCILLO - 20)

“nag jogging ako, ayun nawawala yung stress ko eh. Then minsan nag gym din ako, isa rin ‘yon sa pag papawala ng stress ko, then syempre yung time mo sa family, yung pag lalabas kayo ng asawa niyo, isa ‘yon sa nakaka wala talaga ng stress para sakin” (BONIFACIO - 23)

“mahilig ako mag jogging, running ‘yan, mga physical activities, kasi bukod sa stress reliever, ano rin samin ‘yon eh beneficial din samin sa trabaho namin, kailangan din mag palakas ka ng katawan eh kasi mabigat talaga ang trabaho ng— physical ano— physically able talaga sa pag bubumbero.” (FLORES - 23)

These responses reveal that firefighters adopt a range of adaptive strategies to regulate stress and maintain psychological balance. Through physical activity, recreation, and spiritual reflection, they develop mechanisms that promote both mental well-being and work efficiency.

Overall, this subtheme demonstrates that firefighters’ performance is deeply sustained by a combination of personal, social, and institutional support systems. Their shared experiences underscore the importance of camaraderie, external recognition, and structured psychosocial programs in fostering resilience. Furthermore, several participants suggested that group debriefing facilitated by mental health professionals could further enhance their emotional recovery by helping them distinguish between adaptive and maladaptive coping strategies.

As for the third subtheme: Personal and Interpersonal Strengths Enabling Effective Firefighting Performance, while the firefighters utilize their growth and improvement through their firefighting experiences and the psychosocial support that enables their performance, they also have

their natural strengths that aid them in their work. Numerous identified personal and interpersonal strengths that enable them to perform effectively in their line of duty. This subtheme highlights the importance of cognitive, emotional, and physical attributes that contribute to firefighters’ efficiency and endurance in high-pressure situations.

Their strengths focus on how firefighters utilize their cognitive abilities during emergency response operations. It demonstrates that effective firefighting requires focus, quick decision-making, adaptability, and optimism. The ability to remain mentally alert and responsive allows firefighters to manage complex and rapidly changing situations. Participants expressed the following:

“Isa sa mga strength ko kasi ay kaya kong mag cope up sa mga changing situation at yung pag handle ng stress— kasi kami bilang fire officer, katulad din naman sa pulis, kami ay palaging under pressure; kami ay inoorsan. Meron tayong mga minimeet na deadlines at mga time...so palaging work under pressure.” (AGONCILLO - 17)

“minsan sa fire scene...ma aano ka na niyan eh— mental block eh, kasi ‘di mo alam kung ano uunahin mo, pero kapag— na rumeresponde ka...focus lang— focus ka sa mission, focus ka sa lugar, focus ka kung ano yung mga dapat gawin, kasi kapag na distract ka, maaari mong ikapahamak o kaya ipahamak din ng iba na nasa paligid mo” (BONIFACIO - 16)

“pagiging positive sa labat ng pagsubok, kasi sa labat ng responses namin din nairrelate ko siya sa in real life ko din na pag gawa namin nang maayos lagi yung isang bagay. Ganon din naadapt ko rin, naaply ko rin sa sarili ko na kada may gagawin akong bagay— kada may pag dadaanan, kailangan maaccomplish ko siya...nang tama, hangga’t maaari.” (CARINO - 5)

“The first thing that we have to develop as firefighters is resiliency. Kasi minsan ang sunog, twenty four hours, minsan one week, so you have to be resilient, how do you manage yourself para ‘di ka mag break down physically and mentally ‘no— lalo na pag ano— ‘yon nga may namatay— so resiliency and dedication to the job of course” (ESCODA - 19)

While some firefighters also noted that firefighting often involves emotionally charged situations, requiring patience, understanding, and empathy. This subtheme also illustrates how firefighters regulate their emotions and practice composure when dealing with distressed individuals and chaotic environments.

“kelangan habaan mo yung pasensya mo kasi hindi mo kontrolado yung mga tao sa paligid mo. Kasi may mga tao na ano eh kapag rumesponde ka mas marunong pa sayo eh, kaya ayon kelangan sila unawain” (HILARIO - 8)

“yung pagiging minsan unawain, mas mahabang pagunawa. Pagtitimpi minsan, minsa pagrerresponde sa sunog dami mong maririnig na salita puro mga salitang “wala kang silbi, ganon.. Minumura ka. Syempre kelangan mo ng mahabababang pagunawa ung pagintindi na ganon siguro ung nararamdaman ng isang gusto nilang maapula ung sunog. Di nila namamalayan ung mga pinagsasabi nila kaya hinayaan ko na lang pagintindi.” (ISABELO - 13)

These accounts show that emotional regulation is essential to maintaining professionalism and focus amid intense pressure. Firefighters’ ability to remain composed and empathetic helps them navigate both operational challenges and interpersonal dynamics during response situations.

Firefighting is an occupation that demands exceptional endurance and physical fitness. Participants emphasized that physical strength is a key factor that enables them to perform their duties efficiently and safely.

”physical fitness, malakas na pangangatwan kasi ayun talaga yung kailangan bilang isang bumbero eh. kailangan maganda yung pangangatwan mo para maka responde. Kailangan talaga ng malakas na pangangatwan...so sakin naman medyo okay

naman— physical fitness naman tayo— siguro ayun na rin yung pinaka strength ko para sa trabaho ko.” (BONIFACIO - 20)

In summary, this subtheme illustrates that effective firefighting performance is sustained by a combination of resilience, focus, adaptability, patience, empathy, teamwork, and physical fitness. These personal and interpersonal strengths allow firefighters to perform efficiently under pressure while maintaining both their mental stability and sense of purpose.

Despite the firefighters being able to adapt to the traumatic occurrences and manage their challenges, the firefighters still call for aid, hoping for future interventions to lessen the burden and strains of their job. This fourth subtheme: Recommendations for Enhancing Organizational Support encompasses the participants’ recommendations for enhancing organizational support. Organizational support refers to the assistance, programs, and resources that firefighters expect from their organization to help them perform effectively and sustain their well-being and, at the same time, manage their stress and challenges. While most participants noted that their current income is sufficient to meet their daily needs, they also expressed concerns regarding occupational risks and the rising cost of living. As such, the provision of hazard pays, and additional allowances emerged as an essential recommendation to boost morale and recognize the risks associated with firefighting.

”siguro magkaron man lang kami ng...hazard pay, para— siyempre dito sa Manila kasi sobrang dami ng sunog yung lifespan mo talaga ay iikli” (BONIFACIO - 28)

In addition to financial assistance, participants pointed out that equipment and funding deficiencies hinder their operational efficiency. They emphasized that some stations lack adequate protective gear and that firefighters often have to purchase or maintain their own equipment, such as Self-Contained Breathing Apparatus (SCBA). This underscores the need for increased logistical and equipment support from the organization.

“stress debriefing, para mawala yung mga trauma ng mga personnel natin sa mga ganong scenario. Each personnel magkaroon na sana ng SCBA, ayon magandang program na pwedeng makatulong sa kapwa bumbero natin.” (BONIFACIO - 31)

Another major recommendation centered on mental health and psychosocial support, including regular stress debriefing, professional counseling, and morale-boosting activities. Participants emphasized that these interventions could help mitigate the psychological toll of their work and prevent long-term emotional distress.

“naiisip ko lagi...magkaroon tayo ng...post debriefing talaga— regular ‘no, na bindi lang yung within the station level— ‘di lang kami-kami. Magkaron agad ng intervention para ‘di na dumating pa sa point na iisipin namin ‘yan for one month or one year na sinisisi namin yung sarili namin dahil dun sa nangyari.” (CARINO - 23)

“yon ang number one motivation. Pero aside from that, ‘yon nga yung sinasabi niyong mental health...na dapat ipolicy that will support the mental health of the Bureau of Fire Protection personnel, especially sa ground na ‘to kasi nandito yung bakbakan eh, dapat focus yung mental health ng nasa baba, especially pag may mga crisis situation nirerespondehan diba.” (ESCODA 34)

In addition, participants raised the importance of medical assistance and healthcare benefits as part of organizational support. They noted that firefighting exposes them to numerous health risks, including long-term respiratory and cardiovascular conditions. Free health check-ups and a dedicated Bureau of Fire Protection (BFP) hospital were among the most significant recommendations.

“Free health check up, kasi mostly kapag retiree na ung mga bumbero nandyan nagkakaroon ng sakit eh, kabiti free quarterly or annually checkup na nanggaling sa government.” (JULLAN - 18)

“Establishment of a BFP hospital for our health conditions, for our families health conditions, needs. Kasi marami kaming medical personnel sa BFP, I think sixty percent of BFP are medical ano or fifty percent. Pwede kaming gumawa kasi, para meron kaming prioritization talaga saka kapag retire namin, sigurado kasi yan kapag ka retire namin lalabas ang mga sakit namin. The operation alone, everytime na pumupunta kami sa sunog meron tayong carcinogens na dumidikit sa ating PPEs so everytime na rumeresponde kami sa sunog. Diba ang sigarilho nagbabawas ng limang minuto kada stick. I think kapag sumugod ako sa isang sunog, nababawasan ng limang araw ang lifespan ko. So I need myself to be healthy, to be treated, and my family. So ayon ang gusto ko sana BFP Hospital.” (KAPITAN -33)

This subtheme highlights firefighters’ recommendations to strengthen institutional, financial, psychological, and logistical support within their organization. Participants believe that improved equipment and logistical resources will ensure their safety and efficiency during operations. Meanwhile, organizational initiatives that address mental health and provide adequate medical assistance are seen as essential for maintaining morale, reducing emotional strain, and fostering long-term well-being among firefighters.

DISCUSSION

Based on the findings of the study, the firefighters recall their traumatic experiences about certain emergency responses; this reflection covers the firefighters' near-death experiences and responses in which numerous victims died before their eyes that continue to persist in their memories, bringing emotional and psychological burdens, making it an unforgettable experience for the firefighters. Narrating their experiences in a precisely detailed manner, emphasizing the danger each firefighter faces in order to perform effectively as a firefighter. The firefighters interacted with those who passed away shortly after, collected their bodies afterwards, and saw them right in front of their eyes perish as they were seeing them suffer being burnt alive, not being able to do anything. These experiences of the firefighters result in a lingering psychological toll, in which they experience guilt, self-blame, self-questioning, fear, anxiety, recurring flashbacks of the poses of their dead bodies, and even not being able to eat meat for a month due to the same smell of burning meat and difficulty in sleeping for a month. These are parallel with the current study's findings, which also elaborate on firefighters potentially acquiring longer post-traumatic stress due to witnessing dismembered bodies and burnt victims firsthand during operations (De Castro & Cabarrubias, 2023) and exposure to traumatic and tragic events causing emotional exhaustion and tolls in addition to their resource challenges (Primo & Collado, 2024), acting as unique experiences of the firefighters throughout their service.

The impact of the firefighters' experiences strengthens numerous of their abilities, resulting in effective performance. Their experiences made them more understanding and patient towards the people around them despite the intense pressure, and they were calm whenever distressing events occurred, which focused on their strengthened mental and emotional resiliency and how essential emotional regulation is as an ability for effective performance in firefighting. Furthermore, by keeping their experiences in firefighting, they have turned them into lifelong learnings, which led to a self-developmental mindset after experiencing those occurrences, leading to new skills and outlooks and perspectives. Since the firefighting profession is a demanding job that involves a lot of immediate critical decision-making scenarios, exposure to these situations made them adapt to it; they were able to cope with changing situations,

they were able to be optimistic through challenges, and they were able to be resilient as firefighters. The firefighters' exposure to emergencies shapes adaptive thinking, improves calm under pressure and emotional regulation in stressful situations, and makes them more efficacious during fire response operations (De Castro & Cabarrubias, 2023). Recurrent exposure to fire incidents builds adaptability and sustained resilience, improving the quality of service (Maskay & Maskay, 2025); their experiences are one of the things that determine their profession as a firefighter (Collado & Primo, 2024). Some findings of the study provide almost similar findings to those of the local studies, wherein the experiences of the firefighters impact their abilities, such as emotional regulation, adaptability, and resilience, thus rendering effective performance.

Moreover, the firefighters demonstrated multiple factors they perceived as a hindrance to their performance in fire responses. All are composed of both personal and environmental factors; for environmental factors, there are the uncertain number of responses that may recur anytime, deficiency in equipment and manpower, traffic environment, conflict with the engagement and behavior of the communities, especially during fire responses, and perception failure of the higher-ups on the gravity of ground-level challenges, which hinders support from the organization. For personal factors: depletion of stamina and strength, lack of sleep, rest, and meal consumption, stress and pressure, and demoralization due to fatigue. The challenges that the Philippine firefighters often come across are insufficiency in manpower and equipment, physical health (Lagata et al., 2022 & Primo and Collado, 2024), excessive workload placing significant stress (De Castro & Cabarrubias, 2023 & Fianitog, 2024), stressors in the work environment, and the additional stress from the communities' negative comments regarding their response times and sufficiency of resources (Primo & Collado, 2024). The factors that hinder the performance of the firefighters prove to be congruent with the challenges and hindrances of other BFP firefighters in the Philippines.

In contrast, there are also a lot of personal and environmental factors that firefighters perceive as an aid to their performance. In the findings, there was support from their families and colleagues that helped them in processing their emotions, regaining mental balance, reducing stress, and coping with the challenges from their work; there was also support from the organization that takes form in benefits, financial assistance, and recognition efforts that boost the morale and well-being of the firefighters, leading to enhanced performance. Additionally, gratitude and appreciation from the community motivate the firefighters to do their job better. As well as different recreational activities to destress. The firefighters' focus level, quick decision-making, adaptability, optimism, patience, understanding, and physical fitness are all factors that contribute to efficiency as firefighters. Firefighters in the Philippines emphasize the importance of social support from family and colleagues, which alleviates stress and yields better coordination (Amorcillo et al., 2024), along with community support and regulating emotions and maintaining composure (Primo & Collado, 2024). Other factors include activities as coping strategies for the firefighters, which were also evident in the studies of De Castro and Cabarrubias in 2023, Fianitog in 2024, and Primo and Collado in 2024, all of which were factors that contributed to firefighters' efficacy in their occupation.

Drawing from Folkman and Lazarus's Psychological Stress and Coping Theory, it can be inferred that firefighters engage in a cognitive process of evaluating a situation before taking action. When they perceive the situation as stressful or potentially harmful, they assess their internal coping resources such as emotional regulation and self-control, as well as their external resources like peer support and available equipment. Through this appraisal process, firefighters are able to determine the most appropriate and effective way to respond to the demands of the situation while maintaining their performance and composure. Coping Strategies

refer to mechanisms individuals use to manage stress and challenges. In the context of firefighting, coping plays an important role in sustaining performance and psychological balance despite exposure to life-threatening situations and emotionally taxing experiences. Participants' narratives revealed that over time, they have developed personal and collective strategies to lessen the psychological burden of their work. Among the various coping strategies identified, peer and familial support emerged as the primary source of emotional strength. Firefighters expressed that spending time with family during their day offs helps them decompress and recover from stressful experiences. Such interactions allow them to temporarily detach from the intensity of their profession while receiving emotional validation and understanding from important people of their lives. The findings also aligned with the collectivist nature of Filipino culture, where social bonds and interpersonal harmony are central to coping and adaptation (Rilveria, 2018). In the Filipino context, family and peers are not merely sources of companionship but paramount systems of emotional and instrumental support, especially in high-stress occupations.

Moreover, it is noteworthy that institutional support emerged as a critical coping resource for firefighters. For instance, many participants indicated that formal debriefing and evaluation of their experiences after a response operation would significantly help them process their emotional and mental states. This aligns with the view that clear after-action review mechanisms facilitate recovery of the firefighters. Additionally, adequate equipment and functioning logistics were seen as foundational in lessening the burden of firefighting. Majorities of respondents observed that facing workplace challenges becomes easier when they have reliable self-contained breathing apparatus (SCBA) units; such equipment reduces their worry about risk and thus enables clearer thinking during operations. This is consistent with local studies noting the widespread shortage of PPE and SCBA among Bureau of Fire Protection (BFP) personnel, a factor that undermines both safety and morale (Bureau of Fire Protection [BFP], 2022). This echoes findings that fire station strategies and programs are significantly constrained by inadequate budgeting and resource allocation (De Guzman Jose, 2025). Furthermore, participants identified sufficient financial support and morale-booster programmes (e.g., recognition, hazard-pay, rest-and-recreation allowances) as instrumental for sustaining their resilience on the job.

Consequently, the respondents reported employing adaptive coping strategies to manage workplace challenges. They held peer debriefing sessions where they talked about what went wrong during operations and discussed what could be done better next time, this is aligned with problem-focused coping strategies where they address the source of the stress. Similarly, participants engaged in emotion-focused coping through activities that help regulate their emotional responses to stressors, such as nature tripping, long-rides, exercising at the gym, travel and other recreational activities. This cognitive process, involving primary and secondary appraisal, shapes how firefighters regulate their emotions and make decisions under pressure. For instance, when faced with high-risk operations, firefighters who perceive a situation as a challenge rather than a threat are more likely to engage in problem-focused coping, relying on training and teamwork to act decisively. This theoretical framework helps explain why those with stronger emotional regulation and resilience, demonstrate better adaptive behavior and sound decision-making even amid intense psychological strain.

In the present study, participants recount what went through their minds during and after response operations, they were able to vividly narrate recollections of traumatic events. Participants reported enduring feelings of guilt and self-questioning, accompanied by a persistent emotional burden. Some described experiences of helplessness, feeling that their efforts were insufficient, while others reported anxiety and avoidance

behavior triggered by life-threatening encounters. Intrusive recollections and flashbacks were noted in several accounts, often provoking existential reflections regarding survival and the meaning of their existence. These narratives collectively indicate a mental state characterized by emotional distress, internalized guilt, mental exhaustion, and moral fatigue. Evident trauma-related symptoms were prevalent, underscoring the lingering psychological impact of their professional duties.

Empirical evidence supports these observations, a study among first responders demonstrated mild but statistically significant levels of secondary traumatic stress, which correlated with diminished mental health outcomes (Cabujat & Juan, 2025). Persistent feelings of guilt and self-questioning are common, particularly in scenarios where outcomes are uncertain or tragic. Anxiety, avoidance, and intrusive memories are consistent with trauma-related symptomatology observed. As revealed in Sabalosa's (2024) phenomenological study of BFP station chiefs in the Philippines, such personnel contend with both internal psychological pressures and external operational constraints (inadequate resources, public dissatisfaction, leadership complexity) which together heighten cognitive load and demand robust adaptive capacities.

Despite these psychological burdens, the participants' narratives also reflected remarkable strength, adaptability, and mental discipline. The mental state of the participants appeared to influence their decision-making and behavioral responses during operations. The ability to remain composed under pressure, to prioritize logical reasoning over emotional reactions, and to maintain presence of mind during critical moments emerged as key manifestations of their behavior during operations. Many respondents described engaging in reflective practices and learning from previous operations to guide future actions. This finding is consistent with the study of Wu et al. (2024), which demonstrated that firefighters with a clearer self-concept are more capable of regulating their emotions and adapting effectively under high-pressure situations. Similarly, Heydari et al. (2021) emphasized that mental health plays a crucial role in firefighters' occupational resilience and performance, where those who experience anxiety or distress are more prone to emotional or erroneous decisions during emergencies. Their heightened situational awareness and capacity for adaptive cognition under extreme stress illustrate how emotional endurance contributes to effective decision-making and performance in the field. Participants also emphasized the importance of maintaining a positive attitude and professional restraint when interacting with the community, especially during emotionally charged scenarios. While their mental state revealed traces of distress and trauma, it simultaneously highlighted a transformative form of psychological strength in which emotional pain coexists with empathy, discipline, and an enduring commitment to service.

CONCLUSION

This study explored the lived experiences of firefighters during and after emergency response operations, uncovering the complex emotional and psychological states that accompany their work. The findings revealed that firefighters experience traumatic events that they can vividly recall even after a year has passed. The study also showed that their experiences are closely connected to how they perform and make decisions in the field. Their experiences are diverse, and they often turn their adversities into lessons and constant reminders that their profession carries risks to life. The findings revealed that the firefighters experience lingering psychological tolls, experiencing guilt, self-blame, self-questioning, fear, anxiety, and recurring flashbacks, making them more vulnerable to post-traumatic stress (De Castro & Cabarrubias, 2023) and emotional exhaustion (Primo & Collado, 2024). Despite having these negative

experiences that could affect their performance, these same experiences also strengthened their emotional and mental resiliency, manifesting that emotional regulation is a necessary trait for firefighters for effective performance. Their exposure to these firefighting experiences shapes their adaptive thinking, improves their calm under pressure and emotional regulation (De Castro & Cabarrubias, 2023), and most importantly, improves the quality of their service (Maskay & Maskay, 2025). The findings also revealed numerous repeated challenges that impact the quality of their performance as firefighters, which are both personal and environmental. Some of these are insufficient manpower and equipment (Lagata et al., 2022 & Primo and Collado, 2024), excessive workload placing significant stress (De Castro & Cabarrubias, 2023 & Fianitog, 2024), and additional stressors such as communities' negative comments toward them (Primo & Collado, 2024). In contrast with this, there are personal and environmental factors that the firefighters perceived as an aid to their performance. These consist of support from families and colleagues, helping them process their emotions, regain mental balance, reduce stress, and cope with the challenges in work, yielding better coordination (Amorcillo et al., 2024); support from the government in the form of benefits, financial assistance, and recognition efforts, resulting in a morale boost and well-being, which leads to enhanced performance.

Firefighters assess and evaluate their experiences before taking action; perceiving it as stressful or harmful would lead them to use their internal (emotional regulation and self-control) and external coping resources (peer support). Through this process, firefighters determine the most effective way to respond to the demands of their current situation. One of their coping mechanisms revealed the collectivist nature of Filipino culture, wherein social bonds and interpersonal harmony are central to coping and adaptation (Rilveria, 2018). The overall psychological burden of the firefighters built their strength, adaptability, and mental discipline, influencing their decision-making and behavioral responses during fire operations. However, this does not change the fact that firefighters experience a lot of traumas from their fire responses and day-to-day challenges they face that both personally affect them as human beings and influence their work performance.

RECOMMENDATIONS AND LIMITATIONS

As a prerequisite for an effective service by the firefighters, besides the enhancement of procurement of equipment like SCBA and PPEs by the higher officials and improving the services in medical and mental support. There should be at least monthly medical or mental health free services partnered with the local government or NGOs for immediate health monitoring and stress debriefings of firefighters, coordinating with local authorities to ensure clear pathways during emergency responses, and implementing mandatory fire safety education and community awareness programs such as information campaigns in the form of seminars or talks integrated with fire drill exercises, in order for them to be always aware and understanding of the challenges of the firefighters for communities vulnerable to fire incidents. Since stress management workshops and mental health counseling would ensure the welfare of the Philippine firefighters (James & De Guzman, 2025). Additionally, practitioners in the field of psychology could develop mental health interventions specifically structured for firefighters' experiences and challenges. Given that there is a shortage in manpower (De Castro & Cabarrubias, 2023; Fianitog, 2024; Lagata et al., 2022), including practitioners of psychology in the profession of firefighting, they could take this opportunity to collaborate with authorities and officials in providing them mental assistance since there is a limited availability of formal support groups for work-related stress management that could improve mental health support for firefighters (Primo & Collado, 2024). Nevertheless, the study

focused on the general challenges, coping mechanisms, and support and was limited to the specific single point in time, which does not capture long-term challenges, which can be further improved by providing pictures of equipment in the stations for more credibility of statements and focusing more on their mental health and the viable interventions that can be done to reduce trauma and burnout, and possibly conducting longitudinal studies that will allow assessment of the improvement of the support along with its influence on their efficiency.

Another identified limitation of this study is the lack of gender representation, as seen in the participant profile. The majority of the participants were male, reflecting the male-dominated nature of the firefighting profession in the Philippines. As a result, the findings may not fully represent the perspectives, challenges, and coping mechanisms of female firefighters or other gender identities within the field. For instance, female responders may face additional psychosocial pressures, such as gender bias, limited access to leadership opportunities, or differing expectations regarding emotional expression and resilience. Considering gender-based factors in future research would provide a more comprehensive understanding of how mental health, coping, and support systems interact across diverse firefighter populations.

REFERENCES

- Adegboro, O., & Ojoye, S. (2019). Assessment of the Preparedness Level of Fire Disaster in Minna, Niger State, Nigeria
- Alcayna, T., Bollettino, V., Dy, P., & Vinck, P. (2016). Resilience and Disaster Trends in the Philippines: Opportunities for national and local capacity building. *PLoS Currents*. <https://doi.org/10.1371/currents.dis.4a0bc960866e53bd6357ac135d740846>
- Aldrich, R. S., & Cerel, J. (2020). Occupational suicide exposure and impact on mental health: Examining differences across helping professions. *OMEGA-Journal of Death and Dying*, 85(1), 23-37. <https://doi.org/10.1177/0030222820933019>
- Amorcillo, M.C.R., et al. (November 2024) Navigating the Firefighters' Experiences in Responding to Fire Incidents: Through Photovoice *International Journal of Innovative Science and Research Technology* Volume 9, Issue 11 ISSN No:-2456-2165 <https://www.ijisrt.com/assets/upload/files/IJISRT24NOV1238.pdf>
- Ballo, K.P. (2023) Occupational Safety and Health Problems and Issues of Firefighters in the Bureau of Fire Protection Region 4-A CALABARZON *Philippine Journal of Labor and Industrial Relations* | Volume 40 <https://journals.upd.edu.ph/index.php/pjlr/article/download/9407/8319/>
- Bekele, W. B. & Ago, F. Y. (2022) Sample Size for Interview in Qualitative Research in Social Sciences: A Guide to Novice Researchers *Research in Educational Policy and Management* vol. 4 issue 1 pp. 42 - 50 <https://repamjournal.org/index.php/REPAM/article/view/51>
- Booth, W. C., Colomb, G. G., Williams, J. M., Bizup, J., & FitzGerald, W. T. (2016). *The Craft of Research*, Fourth Edition. University of Chicago Press.
- Bureau of Fire Protection (n.d.) <https://www.dbm.gov.ph/wp-content/uploads/OPCCB/OPIF2010/DILG/BFP.pdf> Bureau of Fire Protection. (2022). Annual report 2022. Department of the Interior and Local Government.
- Bureau of Fire Protection BUREAU OF FIRE PROTECTION HIGHLIGHTS OF ACTIVITIES JANUARY-JUNE 2024 <https://bfp.gov.ph/wp-content/uploads/2024/10/1st-Sem-2024-Narrative-Accomplishment-Report-v1.pdf>
- Cabato, L. (2025, March 5). BFP on lower logged fire incidents from Jan.1 to March 4. *INQUIRER.net*. <https://newsinfo.inquirer.net/2040397/bfp-on-logged-fire-incidents-from-jan-1-to-march-4>
- Cabujat, K. J., & Juan, M. V. T. (2025). Prevalence of secondary trauma stress and mental health of first responders. *Excellencia: International Multi-Disciplinary Journal of Education*, 2(12), 766–785. <https://doi.org/10.5281/>
- Cariaso, B. (2023, December 31). BFP records 21.1 percent increase in fires in 2023. *Philstar.com*. <https://www.philstar.com/nation/2024/01/01/2322698/bfp-records-211-percent-increase-fi-res-2023>
- Castillo, J., Dela Cruz, D. (2022) Lived Experiences of Regular Volunteer Emergency First Responders: A Phenomenological Research *International Journal of Innovative Science and Research Technology* Volume 7, Issue 7 [https://ijisrt.com/assets/upload/files/IJISRT22JUL369_\(1\).pdf](https://ijisrt.com/assets/upload/files/IJISRT22JUL369_(1).pdf)
- Chavez, C. (2024, December 30). BFP: 18,217 fire incidents recorded this 2024, up by 11.2%. *Manila Bulletin*. <https://mb.com.ph/30/12/2024/bfp-18-217-fire-incidents-recorded-this-2024-up-by-11-2>
- Chowdhury, M.R. (September 3, 2019) What is Coping Theory? Definition & Worksheets <https://positivepsychology.com/coping-theory/>
- Corpuz, H. M. T., Sabordo, L. S. V., Allanic, N. D. E., & Bulan, P. M. P. (2019). The psychological well-being of emergency response personnel in the province of Cebu. *World Federation of Occupational Therapists Bulletin*, 75(2), 105–111. <https://doi.org/10.1080/14473828.2019.1649350>
- Country Factsheet: The Philippines Migration, Environment and Climate Change (MECC) Key Risks, Policies and Data Sources. (2024). <https://roasiapacific.ion.int/sites/g/files/tmzbd1671/files/documents/2024-12/the-philippines-mecc-factsheet-1.pdf>
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing Among Five Approaches*. Sage Publications, Incorporated.
- De Castro, C.A. & Cabarrubias, C. (September 2023) LIVED EXPERIENCES OF BUREAU OF FIRE PROTECTION OFFICERS OF DAGUPAN CITY EPRA *International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal* Vol. 9 issue 9. <https://doi.org/10.36713/epra14345>
- De Guzman Jose, T. J. (2025). Competencies of Bureau of Fire Protection personnel and the incidence of fire in the national capital region, Philippines: a correlational study. *International Journal of Research and Innovation in Social Science*, IX(VII), 3150–3175. <https://doi.org/10.47772/ijriss.2025.907000257>
- DREF Final Report (2015, September 4) Philippines: Manila Fire Incident *International Federation of Red Cross and Red Crescent Societies* [www.ifrc.org. https://adore.ifrc.org/Download.aspx?FileId=96481](https://adore.ifrc.org/Download.aspx?FileId=96481)
- DSWD (2025) DSWD DROMIC Report #4 on the Fire Incident in Brgy. 650, Tondo, Manila City. <https://dromic.dswd.gov.ph/wp-content/uploads/2025/04/DSWD-DROMIC-Report-4-on-the-Fire-Incident-in-Brgy.-650-Tondo-Manila-City-as-of-01-May-2025-6AM.pdf>
- Ellis, C., & Knight, K. E. (2018). Advancing a model of secondary trauma: Consequences for victim service providers. *Journal of Interpersonal Violence*, 36(7-8), 3557–3583. <https://doi.org/10.1177/0886260518775161>
- Enriquez, V. G. (1992). From Colonial to Liberation Psychology: The Philippine Experience. <https://ci.nii.ac.jp/ncid/BA47923139>
- Fianitog, J.F. (2024) Work Life Balance of Fire Officers in Baguio City *International Journal of Novel Research and Development (IJNRD)* vol 9, issue 5 <https://www.ijnrd.org/papers/IJNRD2405560.pdf>
- Firmin, M.W., DeWitt, K., Ellis, H. M., Smith, L. A., & Tiffan, N., (2018) A Qualitative Study of the Motivations and Affiliation Dynamics

- Involved with a Firefighting Career. *American Journal of Qualitative Research*, 2 (2), 60-73
- Goniewicz, K., Goniewicz, M., Burkle, F. M., & Khorram-Manesh, A. (2021). Cohort research analysis of disaster experience, preparedness, and competency-based training among nurses. *PLoS ONE*, 16(1), e0244488. <https://doi.org/10.1371/journal.pone.0244488>
- Harkey, J. (2014). Experiences of National Governments in Expanding Their Role in Humanitarian Preparedness and Response. Feinstein International Center, Tufts University, MA, USA.
- Heydari, A., Ostadtaghizadeh, A., Ardalan, A., Ebadi, A., Mohammadfam, I., & Khorasani-Zavareh, D. (2021). Exploring the criteria and factors affecting firefighters' resilience: A qualitative study. *Chinese Journal of Traumatology*, 25(2), 107–114. <https://doi.org/10.1016/j.cjtee.2021.06.001>
- Hoey, Iain, (2024) Major Fire in Manila's Islang Putting Bato displaces thousands International Fire Safety & Journal <https://internationalfireandsafetyjournal.com/major-fire-in-manilas-islang-puting-bato-displaces-thousands/>
- iOrbit News Online. (2022, May 9). New PH volunteer fire brigade officers inducted. <https://iorbitnews.com/new-ph-volunteer-fire-brigade-officers-inducted/#:~:text=The%20APVFI%20was%20established%20in,backend%20and%20on%20the%20ground.>
- Isabirye, R. A., Namuli, J. D., & Kinyanda, E. (2022). Prevalence and factors associated with post-traumatic stress disorder among field police patrol officers serving in Kampala Metropolitan region. *BMC Psychiatry*, 22(1), 1-12. <https://doi.org/10.1186/s12888-022-04317-z>
- Israel, M., & Hay, I. (2006). *Research ethics for social scientists*. Pine Forge Press.
- Lagata, L.S., et al. (2022, August 2). Challenges encountered and insights of the Bureau of Fire Protection personnel towards responding fire incident. SlideShare. <https://www.slideshare.net/slideshow/challenges-encountered-and-insights-of-the-bureau-of-fire-protection-personnel-towards-responding-fire-incident/252404814>
- LawPhil Project (2021) Republic Act No. 11589 https://lawphil.net/statutes/repacts/ra2021/ra_11589_2021.html
- Longa, M.N. & Perena, E. S. (2024) Capability of Bureau of Fire Protection Personnel in Responding to Emergencies in the Province of Sorsogon Volume 3 Issue 5 <https://www.mijrd.com/papers/v3/i5/MIJRDV3I50010.pdf>
- Manila Bulletin (2022, March 1). Citizens' volunteerism and civic spirit essential in fire prevention. Manila Bulletin. <https://mb.com.ph/2022/3/2/citizens-volunteerism-and-civic-spirit-essential-in-fire-prevention>
- Morin, V. M., Ahmad, M. M. & Warnitchai, P., 2016. Vulnerability to typhoon hazards in the coastal informal settlements of Metro Manila, the Philippines. *Disasters*, 40(4), pp. 693-719.
- Nicolas, A. (2023, August 29). Thematic Analysis – A Guide with Examples. Research Prospect. <https://www.researchprospect.com/thematic-analysis/#how-to-conduct-a-thematic-analysis>
- Norton, C. (2024). The Relative Strength of Emotion Regulation, Distress Tolerance, and Self-Care in Predicting Resilience Among First Responders (Doctoral dissertation, Walden University).
- ODI, A. P., Contreras, A., Jabar, M., de Guzman, M. T., Era, M., Erasga, D., & Javier Jr, R. (2013). Towards policy-relevant science and scientifically informed policy.
- Ong, G. (2025, April 23). 1,800 families displaced in Manila fires. Philstar.com. <https://www.philstar.com/nation/2025/04/24/2437912/1800-families-displaced-manila-fires/amp/f>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating Theory and Practice*. SAGE Publications.
- Primo, G.T. & Collado, V.F. (December 2024) Lived Experiences of Bureau of Fire Protection Firefighters in Baguio City Fire Station, Philippines DMMMSU RESEARCH AND EXTENSION JOURNAL Issue 8 Pages: 93-106 <https://eprajournals.com/IJMR/article/11329/download>
- 2020 Census of Population and Housing Results (City of Manila) | Philippine Statistics Authority | National Capital Region. (2021, August 16). <https://rsoncr.psa.gov.ph/content/2020-census-population-and-housing-results-city-manila#:~:text=The%20total%20population%20of%20the,as%20of%201%20May%202020.>
- Quezon City Disaster Risk Reduction and Management Office | Quezon City Government. (n.d.). Quezon City Government. <https://quezoncity.gov.ph/departments/quezon-city-disaster-and-risk-reduction-management-office/>
- Regions of the Philippines – PhilAtlas. (n.d.). <https://www.philatlas.com/regions.html#sectionStats>
- Rilveria, J. R. C. (2018). The development of the Filipino Coping Strategies scale. *Asia-Pacific Social Science Review*, 18(1). <https://doi.org/10.59588/2350-8329.1151>
- Sabalosa, C. (2024). Beyond the fire of flames: work experiences of Bureau of Fire Protection (BFP) station chiefs. *International Journal of Law and Politics Studies*, 6(6), 25–48. <https://doi.org/10.32996/ijlps.2024.6.6.2>
- Singh, S., Gupta, B., & Mishra, P. C. (2021). Coping strategies and social support as moderators of occupational stress and mental health link among police personnel. *Industrial Psychiatry Journal*, 30(1), 67. https://doi.org/10.4103/ipj.ipj_207_20
- TDT (2023, December 18). Modernizing firefighting capabilities for 21st-century challenges. <https://tribune.net.ph/2023/12/18/modernizing-firefighting-capabilities-for-21st-century-challenges>
- TXTFIRE PHILIPPINES. (n.d.). <https://txtfire.net/affiliate-brigades/>
- Umeda, M., Chiba, R., Sasaki, M., Agustini, E. N., & Mashino, S. (2020). A Literature Review on Psychosocial Support for Disaster Responders: Qualitative Synthesis with Recommended Actions for Protecting and Promoting the Mental Health of Responders. *International Journal of Environmental Research and Public Health*, 17(6), 2011. <https://doi.org/10.3390/ijerph17062011>
- Villamante, J. (2024, December 30). Fire incidents up by 11.2 percent in 2024. Daily Tribune. <https://tribune.net.ph/2024/12/30/fire-incidents-up-by-11-2-percent-in-2024>
- Wu, P., Liu, T., Li, Q., Yu, X., Liu, Z., & Tian, S. (2024). Maintaining the working state of firefighters by utilizing self-concept clarity as a resource. *BMC Public Health*, 24, 356. <https://doi.org/10.1186/s12889-024-17896-1>
- Whitman, K. (2023) Firefighters' Perceptions and Experiences of Seeking Mental Health Treatment Services Walden University <https://scholarworks.waldenu.edu/cgi/viewcontent?article=15877&context=dissertations>
- Widiyanto, H. & Nasri, S.M. (2024) Factors Affecting Work Fatigue in Firefighters <https://ijsh.ph/index.php/rp/article/view/206/639>



WITTGENSTEIN'S LANGUAGE GAMES IN FIESTA POLITICS: A STUDY ON POLITICAL PATRONAGE IN FIESTA CELEBRATIONS IN SELECT COMMUNITIES IN METRO MANILA

Christian Ashley A. Maliwat¹, Rodrigo Emil Carreon²

¹Political Science Student, College of Education, Liberal Arts and Sciences

²Faculty, College of Education, Liberal Arts and Sciences

*Corresponding author Email: christianashley.maliwat@letran.edu.ph

ABSTRACT

Fiestas are utilized as means of politicians' assertion of their political ambitions through public appearances, sponsorship of activities, and the distribution of goods and monetary aid. This is where the term "fiesta politics" comes in – a phenomenon manifested in varying forms like the reinforcements aligned with patronage politics rampant in the Philippines. This paper sought to shed light into the mechanisms into which politicians leverage on the social binding force of fiestas in select communities in Metro Manila in the form of political patronage. In this deliberate display of polity, politicians intend for the reciprocation of political loyalty from their constituents as it translates into electoral gain. Drawing from Ludwig Wittgenstein's language-games, the study interprets these political gestures as forms of communication whose meanings are shaped and shared by cultural rules and community interpretation. Using a phenomenological approach, data were gathered through semi-structured interviews with select participants aged 30-60 to explore lived experiences and perceptions of political behavior during fiestas. Findings revealed that such acts were often understood as reciprocity grounded in cultural values, yet they also function as political manipulation. The study concludes that fiesta politics persists due to cultural toleration and is morally framed as reciprocity.

Keywords: *Fiesta politics, political patronage, fiesta, Wittgenstein, language games*

INTRODUCTION

Filipinos' strong proclivity to festive celebrations is evident from preparation to celebration as it is a vivid display of social engagement (Chan, 2023). This is largely due to the tricentennial history of subjugation of the Philippines under the Spanish Crown which brought along with it Christian indoctrination (Guillermo, 1990; Roces, 1980). However, despite its cultural and religious position in the social fabric, fiestas have provided an opportunity for political actors to leverage on its social binding force over their constituents (Tatel, 2013; Hau, 2017). Fiesta celebrations are utilized as means of politicians' assertion of their political ambitions through public appearances, sponsorship of festive activities, and the distribution of goods and monetary aid. This is where the term "fiesta politics" comes in – a phenomenon manifested in varying forms like the aforementioned reinforcements which is aligned to patronage politics rampant in the Philippines. In this deliberate display of polity, politicians extend material goods and financial grants, which can be applicable to all levels of social classes, with the intention of their reciprocation of political loyalty (Sidel, 1999).

The conceptual premise of this study encapsulates political patronage which is frequently found synonymous to clientelism. However, there is a thin line distinguishing one from another (Hutchcroft, 2017) and it is the intention of this paper to draw that difference as well. Political patronage is defined by Teehankee (2012) as a patron with access to state resources providing varying benefits and grants in return for the recipient's support. Whereas clientelism is a more direct and personal relations of power wherein a person of higher social standing makes use of his influence and resources, either sourced from the state or privately, in exchange for the services of a client of a lower social class (Scott, 1972).

Often, patronage and clientelism are interchangeably used to illustrate exchanges of political favors given the dyadic transactions which more often than not demonstrates imbalance of power. However, the distinguishing feature lies in the role of the provider and the source of their resources. These two political stratagems are more usually observed at the onset and duration of election season where there is a dire need to appeal to and attract support for a political patron's ambition to gain or remain in power.

One best way to showcase these exchanges in favors is during social celebrations of fiestas which is widespread in the Philippines from its smallest unit of government up to the national level (Nuñez, 2019). Fiestas are opportune avenues for political actors to manifest their influence, power, and ambitions as they make use of the advantageous gathering of the public (Abing, R. J. et al, 2024). Whenever a fiesta is being celebrated within a certain locale, it is inevitable to see banners made of tarpaulin and sackcloth bearing festive greetings alongside the names and portraits of politicians. Gift packs, huge sums of prizes, and other paraphernalia of the likes can be observed being handed out to community members. And in the grand display of it all, the politician or an aspiring one co-mingle with the people, exchanging greetings, reminding them of the projects and benefits they have extended them, and vying for their support thereby reinforcing their power and ambitions (Ayeng, 2025). These exchanges of symbolic interactions and leveraging on religious cultural norms suggest a correspondence to how such performances translate differently from being routine fiesta activities to political capital. As the political personages engage themselves in this highly religious, symbolic, and performative interactions, they display themselves as a patron capable of disposing not only material needs, not

only the governance required of them, but also the cultural and spiritual epitome of a leader.

This opus sought to answer the following:

- (1) In what ways do political actors in Metro Manila use culturally and religiously embedded language and symbols during fiestas to shape voter perceptions;
- (2) How do community members interpret, immediate and retrospective, political performances and symbols during fiestas as part of their lived political experiences?; and
- (3) In what ways are patronage practices sustained through routinized symbolic exchanges during public and religious celebrations of fiestas?

It was the aim of the author to endeavor to illuminate these questions and employed Ludwig Wittgenstein's political interpretation through symbolic exchanges of language through his so-called language games. Albeit said, this paper sought to observe the mechanisms through which politicians leverage on fiesta celebrations for political gains and how it aids in the perception and preference of middle-aged voters in selected communities in Metro Manila. Furthermore, this study provides a buttress in understanding the urban landscape of patronage in the communities which is dissimilar to rural contexts of dyadic relationship between landowner-tenant patronage which is more closely narrated in literature. The outturn of this research will contribute to the extensive discourse on socio-cultural politics, local governance, and democratic accountability in the Philippines.

Literature Review

It can be observed how political figures (Anastacio & Morandarte, 2023), especially those in the local government level, engage in varied practices of political patronage. This is known to be an effective stratagem for political capital for the security of office. Implicitly, the enactment of the controversial and unconstitutional Priority Development Assistance Fund or PDAF (colloquially termed as pork barrel) further legitimized this practice (Candelaria, 2014). Fiesta celebrations, however, categorically a religious affair, are susceptible as well to political intermingling as politicians and the municipal governments involve themselves in the operations and fulfillment of these activities (Antolihao, 2014).

The Patron-Client Historical Context in the Philippines

The Philippines, being largely an agrarian economy, shows comparable relationships of patron-client subscription in the form of high-status landlords and tenants (usually farmers) ties (Scott, 1972). This special dyadic relationship involves substantial instrumental exchanges in which a patron of high economic status manifests his influence and resources to offer protection and other benefits to a client of lower economic level who, in turn, reciprocates it by offering wide-ranging support and services. It comes to no surprise then those politicians, incumbent or aspirant, employ patronage and clientelistic methods to attract political support and loyalty. It has become an effective mode of gaining the buy-in of voters and establishing loyalty by means of selective and deliberate use of public funds and resources that are attractive to the electorate (Lande, 1968; Roniger, 2004; Magno et al, 2024). Such was the incarnation of the controversial and unconstitutional Priority Development Assistance (PDAF) or more commonly known as pork barrel fund which, as Kasuya et al (2009) puts it, "the first major method of providing patronage in the Philippines". The release of this state-sponsored fund to legislators allowed them to make use of the pork barrel into their advantage by organizing supplementary community projects, procurement of technological equipment for schools and government offices, medical assistance programs for indigents, and the like with the

intention and implicit advertisement for reelection (Kawanaka, 1998; Teehankee, 2012; Hutchcroft, 2017).

Political Economy of Fiesta Celebrations

Fiesta celebrations in the Philippines have always been viewed in the lens of socio-cultural realm as events that reinvigorate and bind the people of varying narratives in their religious, cultural, and social collectivism (Wendt, 1998; Mendible, 2002). However, there is much needed attention to dive into its political dimensions as fiestas have also been leveraged by political interests and ambitions of the elites (Roces, 1978). More than their prominent attendance, politicians also get involved in the operations of fiesta celebrations as they take on active roles as sponsors and benefactors, or, as colloquially termed, *hermano mayor* (translation: major sponsor) (Antolihao, 2014). It is common to observe politicians' sponsorship of festive events and activities through funding as fiesta celebrations can be extravagant affairs (Del Monte & Cabaguing, 2024). To some extent, the municipal government takes over fiesta celebrations as a socio-cultural affair for the constituents relying on the Church to facilitate the religious aspects of the celebrations such as the Holy Mass, novenas, processions, and the like. Fiesta-locus patronage operates masked with cultural traditions which presents it as socially acceptable and hides the scrutiny of electoral malpractice. This display of polity serves a duality in purpose: to reinforce their visibility within the community and to informally refortify their network of support that would then convert to political capital (Hau, 2017). On the other hand, with the continued practice of involving political figures in fiesta celebrations for sponsorship, there is an implied reliance of ecclesial affairs on contributions from political personages given their renowned elite position in the locale (Tamayo, 2022).

Politicizing Philippine Cultural Norms

It has long been acknowledged how culturally derived social norms play a significant role in shaping political behavior and, for that reason, it is often strategically exploited by political figures to their advantage (Montiel, 2002; Touseef et al, 2023; Groenendyk, Kimbrough, & Pickup, 2025). Certain Filipino values and norms are heavily capitalized for political gains such as *utang na loob* (debt of gratitude), *pakikipagkapwa* (strong interpersonal connection), and *pakikisama* (solidarity) among others. These aforementioned values are deeply embedded in Filipino culture that politicians leverage on them to justify their unideal political agenda asserting that their intentions are helpful contributions to the community, forming an *ayuda* culture, despite conspicuously ill-intended (Benitez, 2022). This *ayuda* culture (literal translation: aid), is a political strategy for underprivileged constituents to depend on politicians for financial and material assistance (Palatino, 2025). It is without doubt that this stratagem makes use of government funds that are intended for the poor but is a convenient tool for patronage programs not only for the constituent beneficiaries, but, as well as a form of reward to incumbent political allies. Consequently, as political personages increasingly justify these practices that are masked as community improvement programs and received as beneficial by the constituents, it has become an ambiguous political stratagem that is socially accepted due to Filipino's moral value of *delicadeza* (politeness) (Roces, 1999).

Exploitation of Religion as a Social Institution

The Philippines boasts of being the only Catholic nation in Southeast Asia that possesses strong religious culture with a predominant subscription to Christianity (Zaide, 1978; Cartagenas, 2010). With this, religion and polity inevitably intertwine in the Philippine political arena. Despite being enshrined in the fundamental law of the land, secularism rests on frail cultural grounds not only due to most of the religious affiliation, but even more so due to historical civic involvement and movements attributed to religious doctrine (Dagdag, 1998; Choo et al, 2020; Rivera, 2022). Rivera, SJ (2010) borrowed a term from sociologist Christian Smith (1996) to call Catholicism in the Philippines as a

“disruptive religion” which was introduced in the sociology lexicon to denote that religious faith additionally is an agent of social mobilization as it operates to produce meaning systems of duality transcending from divine realities unto earthly situations. Furthermore, Smith posits that while devotion to the belief of the divine compels believers to hold conservative principles, it is also inevitable for religion to manifest a call to social action that emanates “disruptive collective activism”. This is the very postulation that the church holds in its staunch pronouncements and stance in influencing politics and for this reason, as well, political figures associate themselves to religious institutions to make a brand of advocating their ideals and result to electorate preference (Perterra, 1988; Inductivo, 2012). There have been multiple occasions wherein the interplay of the church and the state have raised concerns of excessive entanglement (Shirley, 2003). Most notable was the case of seven Filipino bishops receiving donations in the form of SUVs (Sports Utility Vehicles) from the Philippine Charity and Sweepstakes Office (PCSO), the country’s primary government agency mandated to raise funds for charity programs of national character (Crescini & Fabros, 2011). This controversy gained national traction and was convened in a quasi-judicial Senate hearing compelling the involved ecclesiastical personages to return the vehicles extended to them. Several senators expressed support to the episcopates involved. The late Senator Miriam Defensor-Santiago (2011) provided lumination on the matter and that the bishops were not to be incriminated based on the threefold lemon test (from a U.S. Supreme Court decision in the 1971 *Lemon v. Kurtzman* case on the First Amendment) determining the (1) purpose- Does it have a secular purpose?; (2) effect- Does the law (act) have the primary effect of advancing or inhibiting religion?; and (3) entanglement- Does the law (act) create an excessive entanglement between religion and government? There is clearly a violation of the establishment clause as the vehicle donations from PCSO only benefited Catholic bishops and no similar donations were extended to other non-Catholic religious ministers.

The Church and Patronage Politics

Religious institutions, having substantial influence on its followers, are coveted allies to secure endorsement or similar gestures of support, implicit and explicit, by politicians in an effort to leverage on their huge count of following to raise their electoral chances thereby converting it into political capital (Brillantes, Lorenzo, & Wang Sin, 2021; Sarkodie-Addo, S. & Opoku, J. 2023). This is a practice apparent in the Philippines, especially to a particular religious organization of Philippine origin with a particular notoriety on bloc voting, the Iglesia ni Cristo (abbreviated to INC) (Reyes, 2016). This practice extends to other religious groups, as well. Founder of the Jesus is Lord Movement and former presidential aspirant, Eduardo Villanueva, lost but had his son, Senator Joel Villanueva, elected as Congressman then as Senator; the El Shaddai Movement with its Spiritual Director Bro. Mike Velarde openly endorsed fourteen senatorial candidates with majority springing from former President Duterte’s slate; the Catholic Church, though firmly lobbies against several government policies, remained impartial on endorsing specific electoral candidates last 2019 elections, however, some members of the clergy openly supported opposition candidates (Castro, 2019). Returning to the prominent religious group known for bloc voting, INC has lobbied for and made use of the “padrino” system, where appointive government positions are extended by the Executive to loyal supporters, and this has led to numerous successful political appointments of the sect’s members in exchange of their support (Cornelio, 2017; Villamejor-Mendoza, 2023). Notable of these advantageous appointments were from the short-lived Estrada administration, during Arroyo’s term and, most recently, of Duterte’s administration.

Theoretical Framework

In this study of fiesta politics, the author applied a frame of reference from Ludwig Wittgenstein’s magnum opus on political philosophy,

Philosophical Investigations, in order to provide a framework for analysis on the discursive, performative, and symbolic dimensions of political patronage and its place in the utilization of fiesta celebrations as a platform for political engagement and attract voter buy-in. His work on *Philosophical Investigations* (1953) provided a language-centered approach to interpreting politics with discourse on how language, in the form of language-games derive varying meanings, interpretations, and significance rooted on the context, use, and shared linguistic norms of any given community.

Ludwig Wittgenstein’s Philosophical Investigations

Wittgenstein’s work on the *Philosophical Investigations* posits that political personages make use of symbolic languages termed as language games or, as he calls it in German, ‘*spiel*’ (*shpel*), that cross a complex junction of similarities and differences in interpretation. He also makes mention of this in his work on *Tractatus* of how one and the same symbols may have different meanings on different occasions (Johnston, 2007). Religion is renowned by political actors as a compelling agent of political socialization due in large part to its influence in dictating and shaping the public’s beliefs, values, and moral compass with its customs, symbols, and doctrines (Sherkat, 2003). As politicians involve themselves in the symbolic and dramatic ceremonies of religious institutions as active participants and benefactors, they manifest the *spiel* as their performative partaking and is decoded with diverse translations by the public recipients (Das & Neog, 2020).

To further place into fiestas within the frame of interpretation from Wittgenstein, the following principles will align language games in the events of religious fiesta celebrations:

Meaning is Contextual and Social in Use

In §43 of *Philosophical Investigations*, Wittgenstein posits that the meaning of a word is determined by its use in a specific context apart from its standard meaning. Similar to political concepts of justice, democracy, and governance, these do not have singular and static definitions but are shaped by the means of which people encounter and use them in certain social contexts thereby challenging essentialist approaches to political meaning. In fiesta politics, political language in the form of campaign slogans, promises, endorsements, and public addresses gains its meaning through its context and usage during fiesta celebrations. For their public pronouncements, active participation, and sponsorship acts during cultural festivities is a strategic positioning and aligning of their identity to cultural, religious, and symbolic attributes (Rocamora, 2008).

Language-games: Rules of Discourse Govern Political Life

The term language-games was coined to describe the multiple ways words function in various forms in life. And as games, there are rules attached to it that are only understood when partaking in its practice. Words and gestures obtain meaning only within shared frameworks as language is a public domain. The language-games that political actors practice are in the forms of governance, campaign strategies, civic identity, and symbolic power that are, in itself, regulated with rules. By performing these practices and aligning them with their identity, they aid in shaping not the objective logic but the conventions and expectations of political meanings (Pitkin, 1973; Tusalem, 2019). Similarly in fiesta activities, their performative involvement in providing financial and material donations through their sponsorship are tacit follow-through on the operations of fiesta celebrations. This further reinforces patron-client relationships not only due to the economic and legal facet but by the politician’s strategic role within the fiesta’s communicative system and leveraging on unspoken rules of reciprocity or the Filipino trait of repaying debts of gratitude.

Forms of Life and Cultural Norms

Wittgenstein describes “form of life” as a correspondence to the cultural and social framework that gives language and behavior their sense in §19 of *Philosophical Investigations*. Language is intelligible only within socially lived and shared domains. *Fiestas* are deeply intertwined with the identity, piety, and interpersonal obligations of the community such as *utang na loob* or debt of gratitude, *barkadahan* or friendships, and familialism (Medina, 2001). The involvement of politicians is not merely strategic participation but cooperators in a shared cultural norm, embedding themselves in it through their performative acts. As they immerse themselves in these “forms of life” in fiestas, they assume these identities forming a bond or solidarity among their constituents.

Rule-Following Paradox

In §185-242 of *Philosophical Investigations*, Wittgenstein laid out how that understanding and participating in any linguistic or social practices involve following community norms, unspoken rules that are informal and not explicit. He raises the question of how we can ascertain that we are following a rule correctly. His response was not in the interpretation of the rule but in the consensus and socially enforced structure of practices. Political norms obtain authority by the social agreement and habituated practice of the public and not solely through interpretations of legal abstracts. This is where symbolic power and institutional legitimacy is derived from (Kerr, 2004). Fiesta-locus patronage practices operate within informal yet implanted rules of who sponsors and what parts to sponsor, when and how to provide, and what kind of public performative gestures are expected. These reiterate Wittgenstein’s interpretation of public norms that are upheld through communal practice and not strict codification. If politicians fail to work within this framework, they risk public disapproval and failure to profit from electoral gain.

METHODOLOGY

This opus employed a qualitative approach with the aid of phenomenology methods to ascertain lived experiences of the citizenry. In that way we can obtain a comprehensive exploration, study, and interpretation of the socio-political perspectives of fiesta celebrations as a vehicle for political patronage in selected communities in Metropolitan Manila. These communities are situated in the Cities of Manila and San Juan and the Municipality of Pateros, as they have prominent fiesta celebrations in honor of their respective venerated religious figures. The questions will comprise a series of queries that will be designed to uncover how political patronage practices in fiesta celebrations are received, interpreted, and translated to electoral preferences.

Through the lived experiences and observations of the constituents within the communities, it will allow for a greater analysis that will supply convincing answers to the objectives of this study.

Research Design

The author applied phenomenological design to ascertain the lived experiences of middle-aged citizenry (aged between 30-60 years old) to garner distinct perspectives on the practice of political patronage where the politician is the patron and the constituents the clients.

In a study performed by Touseef et al (2023) they made use of extensive phenomenological methods, which the author likewise employed. Their use of the method provided illumination on the workings of translating cultural beliefs, values, and norms into an individual’s political ideologies, policy preferences, party affiliations, and voting behavior.

The use of this design was aptly suited to the objectives of this research as it shed personal light and brought character into the political norms in

local governments especially in the urban locale which has a distinct form of patronage practices and discourse from that of rural setting which is more narrated in literature. This method was utilized to uncover how community norms and values are derived based on the political culture that they were introduced to and encountered daily.

Sampling Technique

In order to deliberate the selection of participants with the relevant knowledge and experiences related to the phenomenon being studied, the author applied purposive sampling technique. In qualitative and phenomenological research, the objective is not to generalize statistics but to produce rich, in-depth insights from individuals with direct familiarity with the subject of inquiry which provides justification for the use of this technique for this study (Noor et al, 2024).

As this study investigates the lived experiences of community members involved in fiesta celebrations and their perceptions of political patronage, purposive sampling ensures that participants selected are the most capable of conveying detailed and contextually grounded accounts of fiesta politics within their communities. The participants were selected according to the recommendations of the community based on the age criteria between thirty (30) to sixty (60) years of age, of indigent residence in the Cities of Manila, San Juan, and the municipality of Pateros in Metro Manila, with involvement to service in a ministry in the Church and had historically exercised their suffrage rights in the local elections.

Based on the criteria and the cooperation of community members, the following accounts for the number of selected recommended participants: five (5) from San Juan City, four (4) from the Municipality of Pateros, and six (6) from the district of Tondo, Manila. Despite the individual contributions of the participants, their dispersed knowledge and experience is in fact shared. Considering Wittgensteinian philosophy, this can be attributed to the principle of *forms of life* which allows for embedded perceptions, traditions, and differing values to be integrated in the community and followed by rule-following precepts (Fayard, 2017).

Research Locale

The selection of a few local government units in Metropolitan Manila was a deliberate attempt to understand the urban setting of political patronage practices and mechanisms since existing and available literature are more inclined to discuss rural landowner-tenant “padrino” practices (Scott, 1972). The location of this study will materialize the following local communities: (1) Tondo, Manila City; (2) Poblacion, Pateros; and (3) Corazon de Jesus, San Juan City. These metropolitan cities and municipality have prominent *fiesta* celebrations widely celebrated and attributed to the cultural heritage and religious significance to their municipal locale.

The historic walls of Intramuros in Manila recently held its first *Fiesta de Intramuros* last September 7, 2024, in honor of *Nuestra Señora de la Consolacion y Correa*, patroness of the walled city. It was a community celebration with a series of religious and cultural activities, with participation of Manila Mayor Honey Lacuna-Pangan and his vice mayor, as *hermana* and *hermano mayores*, or benefactors of the festivities (GMA Integrated News, 2024). Similarly in the district of Tondo, Manila, the feast of the Holy Child, colloquially known as *Santo Niño*, is widely celebrated both by community residents and a huge following from nearby cities every January. Commission on Elections Commissioner George Garcia in January of 2025 called out politicians who leveraged on the religious and social gathering of the said *fiesta* to woo voters and advance their political ambitions in the nearing elections (Ayeng, 2025).

Furthermore, the selection of Manila, San Juan, and Pateros give credit to their population density and voter count which creates ideal conditions for studying fiesta politics. Manila’s extremely dense population and high

voter base amplify the visibility and political impact of symbolic acts during fiestas. San Juan’s compact but dense electorate makes patronage networks more intimate and traceable within tightly-knit communities. Meanwhile, Pateros, being Metro Manila’s smallest but highly dense municipality, allows direct observation of face-to-face political exchanges where generosity quickly translates into electoral impressions. (Commission on Elections, 2022; Philippine Statistics Authority, 2025)

Table 1. Population Density and Voter Base

Locality	Population (2020)	Land Area (km²)	Population Density (persons/km²)	Registered Voters (2022)
Manila City	1,846,513	24.98	≈ 73,920	≈ 1,133,706
San Juan City	126,347	5.94	≈ 21,274	≈ 109,410
Pateros Municipality	65,227	1.76	≈ 37,045	≈ 33,952

Analytical Procedures

In conducting this study and to put skin on the methods, the author engaged with community leaders (official or de-facto) and sought recommendations on the participants within the locale to identify a minimum of ten (10) but not more than fifteen (15) representative participants to shed light on the questions pertinent to this research. There was prior communication with the identified participants to briefly educate them on the objectives of this paper, obtain their consent, and inform them of their role in this study. Once consent and agreements on the nature of the study had been granted, participants were visited individually to facilitate semi-structured interviews with prepared

questions but with room for spontaneous inquiries. In this manner, the participants and the author were able to gather unvarnished and informed expressions of their experiences.

The line of questioning was investigatory in nature to uncover how local residents, organizations, and political actors experience and interpret the political meanings, patronage practices, and symbolic gestures embedded in fiesta celebrations. The interview questions were aligned with Wittgensteinian principles on language games to investigate how words, actions, and symbols function and are translated within religious and politically meaningful contexts. Questions also contained retrospective inquiry to faithfully recall prior experiences that are more recent to allow a better grasp of understanding on the setting of fiesta politics.

In analyzing the interview data, the author contextualized Wittgenstein’s language-games framework to interpret how participants assigned meaning to political gestures during fiestas. Codes and themes were examined in relation to the communities’ shared *form of life*, allowing the researcher to see how terms like *tulong*, *ayuda*, *utang na loob*, *serbisyo*, and more normalized patronage as moral reciprocity. Attention was also given to how gestures such as donations and participation in the operation of religious activities like processions were understood through culturally embedded rules. Variations in interpretation, especially near elections, were analyzed to capture how repeated practices became ritualized and politically meaningful within local *fiesta* contexts. These were major indicators that were aimed to be observed or gathered but are not limited to such to allow deeper understanding of fiesta politics from community members themselves.

Table 2. Operationalization of Language-Games in Fiesta Politics

Wittgensteinian Language-Games	Popular Fiesta Patronage Terms	Operational Meaning in Fiesta Politics
Form of Life	tradisyon natin, kasama namin, panata	Politicians align themselves with long-standing religious-cultural rituals to appear naturally embedded in the community.
Language-Game	stage greetings, " <i>Viva</i> , (<i>mention patron saint's name</i>), sponsorship messages	Acts like giving, speaking, or appearing in processions gain meaning from the fiesta’s cultural rulebook.
Rule-Following	ayuda, donations, dole outs	Communities expect leaders to show generosity; failure to do so may be seen as neglect or lack of care.
Symbolic Acts	leading processions, church attendance	These acts communicate humility, religiosity, and moral worth.
Public Performance	onstage appearances, public blessings	Being seen giving or participating transforms gestures into political capital.
Use Determines Meaning	<i>tulong</i> , <i>pagkalinga</i> , <i>suporta</i>	Patronage is labeled “help,” not “vote-buying,” making it morally acceptable.
Shared Understandings	<i>“malaking tulong,” “nakakataba ng puso,” “malasakit”</i>	Community narratives reinforce politicians’ reputations as caring leaders.
Contextual Cues	noticeable increase in donations near elections	Increased generosity before elections signals strategic intent.
Repetition & Ritual	annual sponsorships, yearly appearances	Regular participation normalizes patronage and creates long-term loyalty.
Interpretive Flexibility	‘sincere’ vs. ‘pamumulitika’	Different members interpret the same act differently based on experiences.

Similar to Touseef et al’s (2023) application of qualitative methods, through intensive one-on-one interviews the author prayed to derive a nuanced understanding of the interrelationship of political patronage practices and fiesta celebrations and how this translates to electoral gain. Additionally, an extensive content analysis was conducted to examine a diverse array of textual references including but not limited to popular magazines, social media platforms, published journal articles, and national newspapers. This allowed systematically identifying and coding themes related to political cultural norms in the form of political patronage mechanisms and its intertwining with fiesta celebrations.

By combining both these qualitative methods, the study aimed to gain a holistic understanding of the deliberate placement of patronage politics in cultural and religious celebrations at both the individual and societal

levels, ushering a comprehensive analysis of how and to what extent are cultural norms leveraged on for political capital and its translation to political gain.

Table 3. Demography of Participants

Code	Age	Domicile	Remarks
P1	63 years old	San Juan City	Voter; church server
P2	57 years old	San Juan City	Voter; church server
P3	61 years old	San Juan City	Voter; church server
P4	48 years old	San Juan City	Voter; church server
P5	51 years old	San Juan City	Voter; church server
P6	31 years old	Pateros	Voter; church server
P7	30 years old	Pateros	Voter; church server
P8	37 years old	Pateros	Voter; church server
P9	34 years old	Pateros	Voter; church server
P10	32 years old	Tondo, Manila City	Voter; church server
P11	33 years old	Tondo, Manila City	Voter; church server
P12	32 years old	Tondo, Manila City	Voter; church server
P13	30 years old	Tondo, Manila City	Voter; church server
P14	29 years old	Tondo, Manila City	Voter; church server
P15	30 years old	Tondo, Manila City	Voter; church server

FINDINGS

Material Exchange and Patronage Practices

As an opportune stage for patronage practices, it can be observed how fiestas provide the ideal opportunity to distribute goods, donations, and logistical support. Such exchanges become a language of politics. Politicians' presence in fiestas is heightened in manifestations of tangible contributions that personify care and connection to the community. These actions are linguistic gestures within the so-called game of fiesta politics. Donations take on a purposive expression of solidarity, although not verbalized but through socially recognized acts. The act of giving thus communicates belonging and commitment.

Considering this, P2 from San Juan City described below the extent of support that they received from their mayor. Such demonstration of charity masked by political patronage helps sustain this practice:

"They gave us financial assistance amounting to Php 3,000.00 each. We used it to buy what we wore last fiesta from the dress, accessories, and even footwear. Where else would you get that? We got everything completely. Importantly, on top of that, the food they gave was also really delicious. We heard it was from Mayor Zamora and we were sure it was great."

Participants further provided how local government officials take on a visibly frequent role as sponsors or donors providing meals, prizes, monetary donations, and the like. This cements their role as providers in the community. They ensure to make it known and visible that it leaves an impression of reciprocity. P2 even goes on to mention how he perceives their mayor and other local government leaders as the father of the city bound with the responsibility to look after the people. Additionally, this reflects Hicken's (2011) concept of patronal exchange where political support is mediated by reciprocal obligations. Below, P6 from Pateros and P4 from San Juan elaborated on the expected reciprocity brought about by patronage politics:

"Most of the people also vote for the candidate whom they are close or related to. And in turn, they expect that they will receive assistance when their candidate gets elected like they can get jobs in the municipal hall, they will be prioritized in welfare assistance. They expect that since they supported the candidate, they expect that they will get something in return, like the politicians owe a debt of gratitude to the people for their support."

"When they are present here, they mention pledges of support and ask what else can they do to support the church, they ask what they can donate and then the people are informed that these parts are donated by this politician, that these meals are provided by that politician."

As described by the P2, P7 and P8 from Pateros, and P11 from Tondo, Manila, the act of giving is perceptibly demonstrated through public acknowledgement, mention in programs, and the use of welcome banners; this publicization converts personal charity into political capital. The presence and engagement of politicians are treated as a favor since it provides the people accessibility to their leaders who they do not get to interact with in a usual manner. Such perception follows a "rule" domesticated that a good act is made more meaningful when substantiated publicly. Through shared conventions, it helps identify and define what constitutes a meaningful participation in the realm of fiesta politics.

Electoral Strategy and strategic timing

P3, P4, and P5 from San Juan, P9 from Pateros, P13, P14 and P15 from Tondo, made mention of the strategic temporality of political involvement in fiestas, especially with how politicians calibrate visibility, generosity, and messaging that coincides with the interval between the fiesta and elections. Presenting as advantageous, one cannot simply resist the tempting opportunity that a fiesta presents: the collective force of a gathering for a celebration and the opportune time to distribute goods without the need to brand it as campaign strategies. Timing functions as a communicative rule within the language-game of fiesta. Here, P1 from San Juan shared how this is made manifest when the fiesta celebration is within the interval of the elections:

"It's very obvious. Especially that they get to roam around the city during the procession. They don't explicitly say it but we notice it. They get the most exposure especially when elections are coming up..."

"...fiesta and religious activities have a deep spiritual and cultural value for everyone. When these politicians contribute through donations, sponsorships etc., people see them as supportive and respectful of the community's tradition. This has a big impact on how we view them during the elections."

Such patterns embody the term pragmatic patronage wherein elected officials aptly time community engagement with fiestas to maintain symbolic relations and at the same time displaying a reputation of political readiness.

This demonstrates how communities interpret timed political patronage through moral evaluation, distinguishing genuine commitment from performative and strategic service. This provides further substantiation to how fiesta celebrations provide a semiotic arena for patronage practices and appropriate timing. This is further sustained by recurring language-games of shared community perception which shapes the idea that patronage politics is heavily associated with elections.

Cultural Frames and Language Games

This study has endeavored to understand how religious symbols, moral vocabulary, and shared community values frame political actions as ethical and cultural aspects of Philippine society rather than merely strategic. As political patronage penetrates the religious and cultural nature of fiesta celebrations, it invites the community members to form and exchange ideas that leave significant impressions that may or may not be beneficial to the politicians. P3 described how their city government aims to incorporate their religious celebration into the city's cultural heritage, and this same view is shared also by P1, P2 and P4 of the same locale:

"The tourism office of the city coordinated with the parish office as the mayor wanted to collaborate with the cultural and historical celebration of the parish. They mentioned their intention to support the church's cultural plans by funding a new set of costumes for next year's caracol celebration."

Despite the use of terms that are inclined towards charity, it still describes political acts that are relational, and therefore reciprocal. Terms such as "help", "collaborate", "partnership" as used by P1 and P2 below:

"We need their help and much in the same way, they need the church's collaboration."

"It's a reciprocal thing. We also need their support during the fiesta activities, and they also need our support."

"It's a give-and-take relationship. When they need the church, we're cooperative,"

These descriptions show that the fiesta's language-game fuses beyond the pragmatic patronage that permeates religious celebrations of fiestas and goes on further to cement a marriage between the political obligation of elected officials and the spiritual role of the church to the locale. This is supplementally embedded as the community shares and shapes ideas into their culture. P15 described how cultural values such as *'hiya'* and *'utang na loob'* plays a consequential role in the community's engagement with their leaders:

"... 'hiya' and 'utang na loob' are big in our culture. When a politician helps, we feel shy not to show appreciation or support later on. It's like an emotional tie that's hard to ignore, especially when the help feels personal."

However, findings also reveal inconsistencies among participants within the same community regarding how they describe their local leaders' support during fiestas. Some viewed their leaders as *very supportive*, noting their presence in fiesta events and sponsorship of activities. Meanwhile, other participants described them as *less involved or selective*. Here, P2 and P3 from the same city and same local government leaders share contrasting views:

"They're really supportive. Even after the election, we can always ask for their support. Mayor is always present in our celebrations. They were even treated as VIPs, seated at the front of the church."

Furthermore, as the participants reflected and hinted at suspected political motives behind a facade of service and responsibility, cynicism takes effect when not tempered by emotional resonance. P10 and P12 encapsulates this in their response when asked if they perceive their local government leaders' participation in fiesta activities as their fulfillment of their duties:

"...you will know who a true public servant is and who is not. Politicians who only appear during fiestas are present just for appearance's sake, unlike genuine leaders who are present and approachable even on normal days. That's how you know who's trustworthy and helpful to the community."

"I would say before, there was a wall. They're not really reaching out to the church... We have fiesta celebrations in our communities and we invite them, but they're not very participative."

"It's part of their responsibilities as local leaders to join the community fiesta. It is a demonstration of respect and appreciation to their people. However, they use it as a way to attract attention, appeal to people's trust by showing off as religious or God-fearing. I see it as a mix of their responsibility and personal interest."

These discrepancies in perceptions stem from power imbalances and varying social ties, where influence and loyalty shape both political

participation and public opinion. Shared community values and affiliations appear to steer the interpretation of fiesta politics where some view it as genuine service while others view it as performative displays.

This duality in emotional perception emphasizes the sophistication of the people as constitutionally endowed with suffrage. They take cognizance of how meaning lies in how people use and interpret actions and not in abstract definitions. Thus, fiestas sustain political trust through shared cultural interpretation while, on the other hand, also cautions to prevent the abuse of emotional resonance that political patronage aims to leverage on in order to remain.

DISCUSSION

The study explored the lived experiences and interpretations of the marriage of fiesta celebrations and patronage politics in selected communities in Metro Manila. It dwelt on how political actors in the person of elected officials utilize religious and culturally embedded language, symbols, and practices in fiestas in order to shape voter perceptions, how community members interpret these performances as part of their political experience, and how it is sustained through normalized exchanges of symbols and meanings. Employing Ludwig Wittgenstein's concept of language-games as a theoretical frame, the findings revealed that fiestas are not only religious and cultural gatherings but also as social arenas where political meaning is created, exchanged, and to some extent, weaponized. Consequentially, political patronage practices during fiestas are not merely transactional but deeply embedded in social norms, cultural traditions, and shared linguistic meanings that constitute a distinct form of life in Filipino fiesta politics (Rasiński et al, 2025).

Fiesta Politics as a Culturally Tolerated Reciprocity

A central finding in this study is that many fiesta-locus acts of giving, and participation are culturally embedded and socially legitimized. Donations, sponsorships, participation in Masses and processions, and carefully worded speeches have become part of a shared form of life. Such acts are intelligible as gestures of solidarity, mutual aid, and community belonging. This epistemology of fiesta politics aligns with Zarębski's (2023) analysis of Wittgensteinian philosophy on language-games where it is an embodiment of social relationships and contexts rather than abstract propositions. As these acts move in a language-game, their meaning is shaped by regular patterns of use and the social norms (rules) that make those uses intelligible to participants. This same cultural intelligibility sustains patronage practices, as gratitude and obligation make it difficult to distinctively isolate strategic patronage from genuine service (Hicken, Aspinall, & Weiss, 2019). The effect is that patronage becomes synonymous with reciprocity rather than cynical exchange.

The study buttresses the view that meaning is pragmatically grounded as political behavior becomes comprehensible (Rasiński et al, 2025) through ordinary acts of giving and belonging. Thus, fiesta politics emerges not only as a mechanism for political conditioning but as culturally legible discourse on solidarity which displays a communicative system where generosity and presence are publicly intelligible signs of leadership.

Fiesta Politics as a Tool for Manipulation

The findings further aided in discovering that despite its communal function fiesta politics operates as a strategic political mechanism. Politicians exploit the opportune timing and visibility to reinforce loyalty and influence over voter perception (Saguin, 2025). In place of perceiving, it as coercive, some of the participants described them as mutually beneficial exchanges; acts that sustain relational trust and

harmony—this then answered the question on how patronage practices are routinized and sustained in religious celebrations of fiestas.

In a study by Saguin (2025), he contends that effective policy and governance in the Philippines must consider the deep embeddedness of reciprocity within the purview of Filipino social relations. Similarly, Sadat and Basir (2025) supports this argument that patron-client relations persist not solely due to coercion or corrupt practices, which is usually found in the rural setting of clientelism, but they are pragmatically embedded in the everyday life, this then derives tangible and affective benefits for both parties.

This study asserts the language-game observed in its findings that the fiesta creates a context where generosity, obligation, and reciprocity form part of a normative grammar of politics. The participants' responses lauded politicians who are always present or assists in the physical aspects of fiestas. This goes on to demonstrate that political trust is established through ritualized consistency. Thus, visibility and active engagement are not neutral acts but essential linguistic expressions of trustworthiness within the local political form of life.

CONCLUSION

This phenomenological inquiry into fiesta politics in Metro Manila illustrates how political meaning is generated and sustained through language, ritual, and shared cultural practices. Guided by the frame of Wittgenstein philosophy of language, the study demonstrates that domestic politics in the Philippine context is not purely transactional but involves linguistic and symbolic exchanges that must be within the purview of the shared cognizance of such symbols or gestures.

Fiesta politics operates in a language-game of determination of meaning. Through socially accepted acts of giving, attending, and serving, then is political meaning intelligibly produced. These acts inherit a purpose as speech within the political grammar of respect and belonging, which then sustains informal yet legitimate political relationships. Patronage politics persists through trust and cultural intelligibility. It is not perceived solely as a corrupt practice but as a moral economy that takes its root from cultural values such as debt of gratitude and solidarity. It is by following the cultural rules of the Filipino values that trust emerges and with it comes the expectation and responsibility of reciprocation.

As a theoretical contribution, Wittgenstein's political philosophy in his *Philosophical Investigations* (1953) offers a grammar of everyday politics. Applying Wittgenstein's philosophy to Philippine political culture brings forth how shared forms of life produce stable political meanings. Fiesta politics is a communicative practice where meaning and legitimacy are established through shared values and collective interpretation. Understanding fiesta politics in the Wittgensteinian lens deepened the narrative on cultural logic of patronage politics and the symbolic dimensions of democracy in the Philippines. It has broadened the grammar of politics as patronage politics permeated into the religious and cultural nature of fiesta celebrations which is an organic part of Filipinos.

While fiestas foster community cohesion and religious solidarity, it also provides a mechanism for political manipulation and soft corruption. This cultural tolerance of political patronage masks deeper political distortions that undermine democratic ethics and reinforce dependency. Such attempts to blur the boundaries of patronage and genuine service solidifies the pursuit to pose the corrupt nature of patronage and open it to moral ambiguity and ambivalence.

LIMITATIONS OF THE STUDY

This study acknowledges the several limitations related to its scope and methodological design. First, the research locale focused on selected urban communities in Metro Manila namely, Manila, San Juan, and Pateros. By focusing on these cities, it may not fully capture the dynamics of fiesta politics manifested in other urban locations and settings where socio-political structures and cultural practices may differ. Second, the participant pool primarily consisted of middle-aged community members and church volunteers which may limit the representation of perspectives from younger or older cohorts and those who are not involved in Church ministries. Third, the interviews were facilitated in a religious environment, and responses may have been influenced by ecclesiastical doctrines and the social desirability to align to them. Finally, the study does not aim for statistical generalizability; rather, it seeks analytic transferability, offering interpretative insights that may inform similar socio-cultural contexts where political patronage intersects with communal cultural traditions but not limited to fiesta celebrations.

REFERENCES

- Abing, J. R. et al. (2024). Fiesta in the Philippines. MAPM.
- Anastacio, A. & Morandarte, N. (2023). Political Patronage in Philippine Local Politics. Retrieved from: <https://ssrn.com/abstract=4362736>. <http://dx.doi.org/10.2139/ssrn.4362736>.
- Antolihao, L. (2014). From Fiesta to Festival: Tourism and Cultural Politics in the Philippines. *Kyoto Review of Southeast Asia*, Vol. 1, 15, pp. 380-384.
- Ayeng, R. (2025). Stop politicking during fiestas, Comelec urges bets. *Daily Tribune*. <https://tribune.net.ph/2025/01/18/stop-politicking-during-fiestas-comelec-urges-bets>
- Benitez, J. L. (2022). An Inquiry into the Problems Concerning Filipino Values and Norms. *Recoletos Multidisciplinary Research Journal*, Vol.10(1), pp.39–50. <https://doi.org/10.32871/rmrj2210.01.03>
- Brillantes, A., Lorenzo, M., & Wang Sin, A. (2021). An alternate state of faith: the rise of militant Christians in the Philippines. In M. Mathew & M. Tay (Eds.), *Religion and identity politics: global trends and local realities* (pp. 37–74). https://doi.org/10.1142/9789811235504_0003.
- Calimbahin, C. A. & Teehankee, J. C. Patronage Democracy in the Philippines: Clans, Clients, and Competition in Local Elections. (2022). *Philippines: Bughaw*. ISBN: 9786214481644, 6214481641.
- Candelaria, S. (2014). Testing constitutional waters IV :The power of the purse in light of the Belgica and Araullo ruling. *Ateneo Law Journal*, 59(317), 2-30.
- Cartagenas, A. (2010). Religion and Politics in the Philippines: The Public Role of the Roman Catholic Church in the Democratization of the Filipino Polity. *Political Theology*. 10.1558/poth.v11i6.846.
- Castro, N. (2019). The Interface between Religion and Politics in The Philippines Based on Data from Recent Philippine Elections. *International Journal of Interreligious and Intercultural Studies*. 2. 100-107. 10.32795/ijis.vol2.iss2.2019.454.
- Chan, B. (2023, December Philstar). Christmas Economics. <https://qa.philstar.com/business/2023/12/22/2320521/christmas-economics>
- Choo, J., Goh, D. P. & Tan, E. (2020). Christian Megachurches and Politics in the Philippines. *ISEAS – YUSOF ISHAK INSTITUTE* 2020 (62). ISSN 2335-6677.
- Commission on Elections. (2022, August 05). Number and Turn-Out of Registered Voters and Voters Who Actually Voted by City/Municipality. Commission on Elections. <https://comelec.gov.ph/?r=2022NLE/Statistics/2022RVVAVmco> cfinal

- Cornelio, J. (2017). Religion and civic engagement: the case of Iglesia ni Cristo in the Philippines. *Religion, State and Society*. 45. 1-16. 10.1080/09637494.2016.1272894.
- Crescini, N. L., & Fabros, C. M. (2011). The constitutionality of the Action of the PCSO: Donation of vehicles to certain catholic bishops. Retrieved from https://animorepository.dlsu.edu.ph/etd_bachelors/17794.
- Dagdag, E. E. (1998). The Politicization of the Philippine Catholic Church. *Asian Studies*, vol. 34, centennial issue, pp. 50-77.
- Das, D. & Neog, R. (2020). Language Game: Ludwig Wittgenstein. *International Journal of Management*, Vol.11, 12, pp. 143-148. 10.34218/IJM.11.12.2020.016.
- Defensor-Santiago, M. (2011). Public Funds and Incidental Religious Benefit: The Constitutional Issue. Senate of the Philippines. Retrieved from: http://web.senate.gov.ph/press_release/2011/0713_santiago1.asp.
- Del Monte, D. & Cabaguing, A. (2024). Socio-cultural Perspective of Fiesta Celebration. *International Journal For Multidisciplinary Research* Vol.6. 10.36948/ijfmr.2024.v06i01.12707.
- Fayard, A.-L. (2017). Language games: A conceptual lens for studying the co-production of materiality, practice, and discourse. *Communication Research and Practice*, 3(3), 265–281. doi: 10.1007/s10643-022-01415-1.
- GMA Integrated News. (2024, September 8). Intramuros celebrates first-ever fiesta in honor of Our Lady of La Consolacion Y Correa. GMA Network. Retrieved May 10, 2025, from <https://www.gmanetwork.com/news/lifestyle/content/919742/intramuros-fiesta-our-lady-of-la-consolacion-y-correa/story/>
- Groenendyk, E., Kimbrough, E. O., & Pickup, M. (2025). "2: Social norms and political psychology". *Handbook of Innovations in Political Psychology*. Cheltenham, UK: Edward Elgar Publishing. <https://doi.org/10.4337/9781803924830.00009>.
- Guillermo, A. G. (1990). Fiestas: A Reevaluation. *Aghamtao 1990: Journal of the Ugnayang Pang-Aghamtao Inc*, 200(7), 97-104. <http://116.50.242.171/PSSC/index.php/agt01/issue/view/200>
- Hau, C. S. (2017). *Elites and Ilustrados in Philippine Culture*. Ateneo de Manila University Press.
- Hicken, A., Aspinall, E., & Weiss, M. (2019). Electoral Dynamics in the Philippines: Money Politics, Patronage and Clientelism at the Grassroots. (1st ed.) NUS Press. 10.1355/sj35-2n.
- Hutchcroft, P. D. (2017). Hutchcroft, P. (2014). Linking Capital and Countryside: Patronage and Clientelism in Japan, Thailand, and the Philippines. D. A. B. . L. D. (Ed.), *Clientelism, Social Policy, and the Quality of Democracy* (1st ed., Vol. 1) 174-203. Johns Hopkins University Press.
- Johnston, Colin. (2007). Symbols in Wittgenstein's Tractatus. *European Journal of Philosophy*. <https://doi.org/15.10.1111/j.1468-0378.2007.00253.x>.
- Kasuya, Y., Quimpo, N. Gilbert, Thompson, M. R, Rocamora, J., Teehankee, J. C., Calimbahin, C., Kimura, M., Tadem, T. S. Encarnacion, Co, E. Estifania A., Quilop, R. Jose G., Pinches, M., Kreuzer, P., Pertierra, R., Kusaka, W., Abinales, P. N., & Hutchcroft, P. D. (2010). *The politics of change in the Philippines*. Manila: Anvil.
- Kawanaka, T. (1998). The Robredo Style: Philippine Local Politics in Transition. *Social Forces and Communities in Southeast Asia* Vol.13, No.3, pp.5-36. University of the Philippines.
- Kerr, F. (2004). *Theology after Wittgenstein* (2nd edition). SPCK Publishing. ISBN-13: 9780281050635.
- Lande, C. H. (1968). Parties and Politics in the Philippines. *Asian Survey*, 8(9), 725–747. <https://doi.org/10.2307/2642641>
- Magno, F., Borja, A., Custodio, J. (2024). Vertical Accountability: Reforming Representation in the Philippines (Interim Report). Asian Democracy Research Network.
- Mendible, M. (2002). The Politics and Poetics of Festival in Ninotchka Rosca's State of War. *International Fiction Review* Vol. 29 (1-2), 30-39. University of New Brunswick.
- Montiel, C. J. (2002). Philippine Philippine Political Culture: View from Inside the Halls of Power.. *Philippines: Philippine Governance Forum*. 9789719257745.
- Ng, L.T., & Rivera, J.P. (2023). Explicating the influence of religion in forming corporate governance: Insights from the Philippines. *DLSU Business & Economics Review*, 32(3), pp. 133-144.
- Noor, S. , Tajik, O. and Golzar, J. (2024). Purposive Sampling. *International Journal of Education & Language Studies*, 2(2), p.7. doi: 10.22034/ijels.2025.490681.1029.
- Núñez, J. (2019). The Benefits of Fiesta in the Philippines. 10.5281/zenodo.6865491.
- Palatino, M. (2025). The Politics of 'Ayuda' in the Philippines. The Diplomat. <https://thediplomat.com/2025/01/the-politics-of-ayuda-in-the-philippines/>
- Pangalangan, R. (2008). Transplanted Constitutionalism: the Philippine Ebate on the Secular State and the Rule of Law. *Philippine Law Journal*, Vol. 82 (3).
- Pertierra, R. (1988). *Religion, Politics, and Rationality in a Philippine Community*. Philippines: Ateneo De Manila University Press. ISBN: 971-550-162-1.
- Philippine Statistics Authority. (2025, July 17). 2024 Census of Population (POPCEEN) Population Counts Declared Official by the President. Philippine Statistics Authority. <https://psa.gov.ph/content/2024-census-population-popcen-population-counts-declared-official-president>
- Pitkin, H. F. (1973). Wittgenstein and Justice: On the Significance of Ludwig Wittgenstein for Social and Political Thought. United Kingdom: University of California Press. ISBN:9780520023291, 0520023293.
- Querubin, P. (2012). Political Reform and Elite Persistence: Term Limits and Political Dynasties in the Philippines. APSA 2012 Annual Meeting Paper, Available at SSRN: <https://ssrn.com/abstract=2108036>.
- Rasiński, L., Biletzki, A., Koczanowicz, L., Pichler, A., & Wallgren, T. (Eds.). (2024). *Wittgenstein and Democratic Politics: Language, Dialogue and Political Forms of Life* (1st ed.). Routledge. <https://doi.org/10.4324/9781003485254>
- Reyes, A.C. (2017). Probing the Iglesia Vote: Religious Endorsement and Iglesia Support in the 2004 and 2010 Senatorial Elections. *Philippine Social Sciences Review*, Vol.68 (2), pp.23-46.
- Rivera, R. E. N. (2010). Philippine Catholicism as Disruptive Public Religion: A Sociological Analysis of Philippine Catholic Bishops' Statements, 1946 to 2000. *Philippine Sociological Review*, Vol. 58, pp.75–96. <http://www.jstor.org/stable/43486333>
- Rivera, G. R. (2022). The Impact of the Catholic Church on Mass Mobilization: A Comparison between the Church and protests in Chile and the Philippines. Fordham University.
- Rocamora, J. (2008). Politics and Governance. Introduction to Public Administration in the Philippines: A Reader, pp. 171-187. UP National College of Public Administration and Governance.
- Roces, A. R. (1980). *Fiesta*. Vera-Reyes Publishing.
- Roces, M. (1999). Compadrazco and Delicadeza in Philippine Political Culture. *Moussons*, Vol.99, pp.29-52. <https://doi.org/10.4000/moussons.9094>
- Roniger, L. (2004). Political Clientelism, Democracy, and Market Economy [Review of Le clientélisme politique dans les sociétés contemporaines; Poor People's Politics: Peronist Survival Networks and the Legacy of Evita; Clientelism, Interests, and Democratic Representation: The European Experience in Historical and Comparative Perspective, by J.-L. Briquet, F. Sawicki, J. Auyero, & S.

- Piattoni]. *Comparative Politics*, 36(3), 353–375. <https://doi.org/10.2307/4150135>.
- Sadat, Anwar & Basir, Muh. (2025). Clientelism, coalitions, and concessions: pragmatism in local elections and its democratic costs. *Frontiers in Political Science*. 7. 10.3389/fpos.2025.1664786.
- Saguin, Kidjie. (2025). Bypassing clientelism through policy design: generating intelligence for effective social policies. *Policy and Society*. 44. 10.1093/polsoc/puaf015.
- Sagut, J. C. (2022). The Separation of Church and State in the Current Philippine Context. *Politics and Religion Journal*, 16(2), 217–237. <https://doi.org/10.54561/prj1602217s>.
- Sarkodie-Addo, S. & Opoku, J. (2023). Trading-off Church Participation for Political Engagement: A Necessity for Political Effectiveness and Influence? *E-Journal of Religious and Theological Studies*, Vol.9, pp. 368-384. DOI: 10.38159/erats.2023982.
- Scott, J. C. (1972). Patron-Client and Political Change in Southeast Asia. *The American Political Science Review* Vol. 66, No. 1, 91-113. <https://doi.org/10.2307/1959280>.
- Sherkat, D. E. (2003). Religious Socialization: Sources of Influence and Influences of Agency. In M. Dillon (Ed.), *Handbook of the Sociology of Religion* (pp. 151–163). Chapter, Cambridge: Cambridge University Press.
- Shirley, S. B. (2003). "Guided by God: The Catholic Church and Political Legitimacy in the Philippines. *International Studies, Old Dominion University*. DOI: 10.25777/j2zg-4z36.
- Sidel, J.T. (1999). *Capital, Coercion, and Crime: Bossism in the Philippines*. Stanford University Press.
- Smith, C. (1996). *Disruptive Religion: The Force of Faith in Social-movement Activism*. (1996). United Kingdom: Routledge. ISBN: 9780415914055.
- Tatel, C. P., Jr. (2013). Hala bira! Halalan! Cultural Lessons from Philippine Elections. <https://anthro.upd.edu.ph/hala-bira-halalan-cultural-lessons-from-philippine-elections/>
- Tamayo, J. A. L. (2022). Hermano mayor: fiesta sponsorship in the contemporary Philippines. *International Journal of Intangible Heritage*, Vol. 17, No. 1, pp. 100-113. 10.35638/ijih.2022.17.006.
- Teehankee, J. C. (2012). *Clientelism and Party Politics in the Philippines. Clientelism and Electoral Competition in Indonesia, Thailand and the Philippines* (pp.186-214). Routledge. 10.1057/9781137277206_11.
- Touseef, M., Khan, B., Ali, S., Abbas, H., Raza, A. (2023). The Influence of Cultural Values and Norms on Political Attitudes and Behavior: A Sociological Study. *Advanced Qualitative Research*. Vol. 1(2), pp. 40-50. 10.31098/aqr.v1i2.1744.
- Villamejor-Mendoza, M. F. (2023). Patronage Appointments in the Philippine Public Service. In B. G. Peters, C. Knox, & B. S. Kim (Eds.), *Political Patronage in Asian Bureaucracies* (pp. 199–228). Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781009208055.011>
- Wendt, R. (1998). Philippine Fiesta and Colonial Culture. *Philippine Studies*, Vol. 46 (1), 3–23. <http://www.jstor.org/stable/42633620>
- Wittgenstein, L. (1953). *Philosophical Investigations*. United Kingdom: Macmillan.
- Zaide, G. (1978). *The Philippine History and Government*. Manila: The Modern Book Company.
- Zarębski, Tomasz. (2023). Fictitious Language Games, Otherness, and Philosophy of Education: A View on the Later Wittgenstein. *Studies in Philosophy and Education*. 42. 10.1007/s11217-022-09867-z.

RESILIENCE AND REBIRTH: THE IMPACTS OF POST-DISASTER RECOVERY, COMMUNITY INVOLVEMENT, AND SUSTAINABLE PRACTICES ON TOURISM RESILIENCE

Cielo Laren B. Fetizanan¹, Naomi Dennise A. Flores¹,

Irene G. Manalo¹, Ashbey Elloise S. Molo¹, Jinky Batiduan²

¹Tourism Management Student, College of Business Administration and Accountancy

²Faculty, College of Business Administration and Accountancy

*Corresponding author Email: naomidennisealfonso.flores@letran.edu.ph

ABSTRACT

Natural disasters can significantly damage tourism, but with resilience and strategic recovery efforts, affected destinations can emerge stronger and more sustainable. This study examined the strategies employed to revive the tourism industry in Batangas, with a focus on post-disaster recovery, community engagement, and sustainable practices. The research aimed to supplement existing recovery plans by identifying new ideas and activities that could improve government initiatives following a disaster. The respondents were 381 residents who had lived in Talisay, Batangas, for 5 to 10 years, a community directly affected by these disasters. Respondents were selected through purposive sampling to ensure the data came from individuals who had first-hand experience with the impact of a disaster and the recovery process. Data was collected using questionnaires to gather insights on community participation, perceptions of recovery activity effectiveness, and sustainable tourism strategies. Descriptive and inferential analyses were used to analyze the data and identify key findings. Results showed that all three factors significantly influenced tourism resilience, with regression analysis revealing strong predictive relationships: post-recovery strategies ($R^2 = 0.520$), community involvement ($R^2 = 0.456$), and sustainable practices ($R^2 = 0.505$), all with p -values $< .001$. Environmental initiatives were rated more effective than economic recovery efforts, and community participation emerged as a key driver of adaptive capacity. These findings underscore the importance of integrated, community-driven, and sustainability-oriented approaches in post-disaster tourism recovery. These findings provide policymakers and tourism stakeholders with actionable insights to design inclusive, sustainability-driven recovery frameworks that enhance resilience and support long-term industry revitalization in Batangas.

Keywords: *Community involvement, Disaster recovery, Sustainable practices, Natural disasters, Tourism Resilience*

INTRODUCTION

Natural disasters are a global phenomenon, with their frequency and intensity increasing over time (Loayza et al., 2012; Rouhanizadeh et al., 2020). For tourism-dependent destinations, hazards such as earthquakes, floods, typhoons, and volcanic eruptions disrupt infrastructure, damage attractions, and weaken visitor confidence (Ganoe, Roslida & Sihotang, 2023). These impacts extend beyond physical destruction, often resulting in financial losses, employment displacement, and prolonged declines in tourist arrivals (Ichinosawa, 2006; Rosselló et al., 2020). As tourism systems are highly interconnected, disturbances in transportation, utilities, and hospitality services can disrupt the entire destination economy.

However, disasters do not entirely represent disruption; they also present opportunities for systemic transformation. Drawing on the Disaster Resilience Framework and principles of the Community-Based Disaster Risk Reduction, resilience is understood as the capacity of a system to absorb shocks, adapt to changing conditions, and reorganize while maintaining its core functions. Within tourism research, resilience emphasizes adaptive capacity, stakeholder collaboration, and sustainable reconstruction. Rather than viewing recovery as a return to pre-disaster conditions, contemporary literature frames it as a process of strengthening governance structures, infrastructure systems, and community networks to better withstand future disturbances.

Existing studies consistently highlight three interrelated drivers of tourism, which are effective post-disaster recovery strategies, active community involvement, and sustainable development practices. Post-disaster recovery involves restoring critical services and infrastructure while simultaneously enhancing long-term preparedness. Community participation, meanwhile, strengthens local ownership, improves decision-making, and reinforces social capital factors that are central to adaptive capacity. Sustainability principles further ensure that economic revitalization does not compromise environmental integrity or community well-being. Taken together, these strands of literature suggest that tourism resilience is multidimensional and dependent on coordinated institutional, environmental, and social responses.

Despite these insights, prior research has largely examined these elements independently or through qualitative case analyses. Limited studies have quantitatively tested how post-disaster recovery efforts, community involvement, and sustainable practices collectively predict tourism resilience, particularly in highly disaster-prone developing regions. This lack of empirical validation constrains theoretical advancement and policy formulation, as resilience frameworks require measurable indicators to inform evidence-based planning.

The Philippines, frequently identified as one of the world's most disaster-prone countries (Doroteo, 2015), provides a critical context for resilience research. Provinces such as Batangas in Region IV-A experience

recurrent typhoons and volcanic activity, which significantly affect tourism operations. While national-level studies have explored disaster recovery and sustainable tourism strategies, there remains limited region-specific quantitative research examining how recovery initiatives, community engagement, and sustainability practices interact to influence tourism resilience in this locality. Therefore, a clear empirical gap exists in understanding the predictive relationships among these factors within Region IV-A. Although sustainability is widely conceptualized as encompassing economic, environmental, and socio-cultural dimensions, the present study focuses on economic, environmental, and community-based aspects. The socio-cultural dimension, while critically important, often requires qualitative methodologies to effectively capture identity restoration, heritage preservation, and cultural meaning making processes (Monteil et al., 2019). Given the quantitative design of this study and its objective to statistically examine predictive relationships, including socio-cultural variables would have required methodological approaches beyond the scope of this research. Future investigations employing mixed or qualitative methods are encouraged to explore this dimension in greater depth.

Guided by the Disaster Resilience Framework and Community-Based Disaster Risk Reduction principles, this study quantitatively tests the individual predictive influence of three key factors on tourism resilience in Batangas, Region IV-A. Specifically, the study examines whether post-disaster recovery strategies, community involvement, and sustainable practices significantly explain variations in tourism resilience at the 0.05 level of significance. The findings demonstrate that all three factors have statistically significant effects on tourism resilience ($p = .000$). Post-disaster recovery strategies exhibit the strongest explanatory power ($R^2 = .520$), accounting for 52% of the variance in tourism resilience. Sustainable practices follow closely ($R^2 = .505$), explaining 50.5% of the variance, while community involvement also shows a substantial contribution ($R^2 = .456$), accounting for 45.6% of the variance. In each case, the null hypothesis is rejected, confirming that these variables significantly influence tourism resilience in the study area.

In summary, this study provides empirical evidence that post-disaster recovery strategies, sustainable practices, and community involvement each significantly predict tourism resilience in Batangas, Region IV-A. By statistically validating these relationships, the research strengthens theoretical applications of resilience frameworks and offers evidence-based guidance for disaster recovery planning and tourism policy development in disaster-prone destinations.

Theoretical Framework

This research is grounded in Holling's classic resilience theory (1973), a concept that has been applied to tourism systems by Cochrane (2010). Holling initially defined resilience as "the ability of ecosystems to absorb changes of state variables, driving variables, and parameters, and persist" (1973). This theory posits that a system's resilience is not just its capacity to withstand shocks but also its ability to adapt and transform over time. The concept has become a central focus in disaster risk reduction, informing discussions on how societies, communities, and various systems respond, recover, and evolve after crises (Miller et al., 2010). In this context, Holling's resilience theory states the ability of the ecosystem to absorb changes and still function. A natural disaster that we cannot predict (earthquake, flood, volcanic eruption, etc.)—in Holling's theory, communities and tourism destinations can still function after a catastrophic event that happened. Community involvement strengthens the recovery efforts—involving communities in the decision-making process, planning, preserving the ecosystem, providing their own needs, and implementation leads to stronger communities and long-term resilience because they are adjusting and reorganizing and it is still going without breaking down.

Holling's Classic Resilience Theory (1973) focuses on the core function of resilience, which is to recover, adapt, and transform—which can be applied to communities, tourism destinations and post-disaster recovery. It shows how a community can bounce back to their normal life after facing disturbances. It highlights the importance of detailed plans and readiness, creating systems that can change and recover from major threats like natural disasters and climate change. It is not just about survival; it is about learning from adversity to build a foundation for long-term success and development. This is especially pertinent to the human, societal, and systemic response to events like typhoons, earthquakes, floods, and volcanic eruptions that have impacted Batangas, Philippines. The study uses this theory as its foundation because it explains the remarkable resilience of Batangas City, which has consistently adapted, recovered, and transformed in the face of natural disasters.

This study uses Holling's theory to explain how the systems in Batangas City have undergone linked cycles of progress, downfall, and restoration. Batangas resilience is non-linear because Batangas is still in the process of bouncing back from all of the natural disasters that happened in their area. Batangas is experiencing a series of disasters, like a volcanic eruption, and after that progress on bouncing back, there will be an earthquake; after the earthquake, there will be a typhoon. It supports the "progress, downfall, and restoration" of Batangas because Batangas has a repetition cycle of resilience. The Taal Volcano in Batangas City erupted in the year 2020; people in Talisay, Batangas, are still gradually recovering from that trauma caused by the disaster, and after 4 years, they experienced a new natural disaster (typhoon) that buried everything and after the recovery of the people from the eruption that happened, the typhoon occurred that destroyed what they started after the eruption.

The theory also acknowledges the complex dynamics within a system. Tourism contains both benefits, like job creation, and vulnerabilities, such as depletion and cultural decline (Nkemngu, 2015; Zaei & Zaei, 2013). Because it contains both benefits and vulnerabilities, resilience theory helps explain how communities adapt when tourism pressures intensify, guaranteeing that undesirable consequences are controlled while the entire system continues to operate.

Ultimately, this study uses Holling's theory to explain how the systems in Batangas City have undergone linked cycles of progress, downfall, and restoration. It emphasizes that resilience is not simply about returning to the pre-disaster state but about the capacity for transformation and adaptation in response to change, which is central to the province's successful tourism regeneration. Holling's framework guides the hypothesis by anticipating that the tourism communities will adapt, recover, and transform after the disturbances. The results on the hypotheses show that Holling's theory links to post-disaster recovery, community involvement, and sustainable practices.

Conceptual Framework

Drawing upon Holling's Theory of Resilience, this study utilizes a conceptual framework to explain the interconnected relationship between post-disaster recovery (H1), community involvement (H2), and sustainable practices (H3) in achieving tourism resilience. Holling's adaptive cycle theory is foundational to this framework, depicting how systems endure disturbances through phases of release, reorganization, adaptation, and renewal. Specifically, post-disaster recovery reflects reorganization by rehabilitating infrastructure and response systems post-crisis, community involvement embodies adaptation through local participation in rebuilding, and sustainable practices promote renewal through economic viability and environmental quality for long-term viability.

Post-disaster recovery strategies initiate the reorganization phase by restoring infrastructure, revitalizing economies, and addressing

psychosocial needs, directly supporting tourism resilience through rapid adaptation (Holling, 1973).

Community involvement strengthens this process by promoting shared decision-making, equitable distribution of resources, and enhancing social cohesion, in which collectively facilitate recovery, align plans with local needs, and build adaptive capacity for future disturbances (Cruz, 2019). According to Tuhkanen (2023), community participation is essential and widely recognized as a key factor in achieving sustainable disaster recovery as it enables affected communities to actively engage in the planning, implementation, and monitoring of recovery initiatives.

Sustainable practices are equally important. It enhances long-term resilience by integrating eco-friendly infrastructure and preventive measures, ensuring resource efficiency, environmental conservation, and economic viability to sustain the conservation phase (Holling, 1973). These efforts mitigate the risks while optimizing resources for enduring adaptability.

The synthesis of these interconnected variables leads to tourism resilience. This enables destinations to not only recover from disasters but also to thrive when confronted with future challenges. This resilience fosters long-term sustainability, local empowerment, and an industry that is better equipped to withstand and rebound from crises. Together, these constructs enable tourism systems to endure disturbances, reorganize effectively, and adapt for sustained rebirth, as visualized in the conceptual model.

Figure 1 illustrates the directional interrelationships among the independent variables (post-disaster recovery, community involvement, sustainable practices) and the dependent variable (tourism resilience), reflecting Holling's adaptive cycle principles.

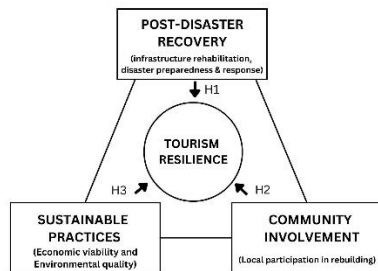


Figure 1. Conceptual Framework

Statement of the Problem

The tourism industry in Batangas faces persistent vulnerability to natural disasters, yet limited empirical evidence exists on how post-disaster recovery efforts, community involvement, and sustainable practices combine to enhance resilience and industry rebirth. Despite growing disaster recovery research, no studies have quantitatively examined their joint predictive effects on tourism destinations' rebound capacity in this context. This study addresses that gap through descriptive profiles and inferential analysis of their impacts.

Specifically, the study seeks to answer the following research questions, which include both descriptive components (profile of variables) and inferential components (impact analysis) to align with the methods approach:

1. What post-disaster recovery strategies have been implemented to support the tourism industry in Batangas?
2. What is the extent of local community involvement in the planning and decision-making processes for post-disaster tourism recovery efforts?

3. What is the extent of adoption of sustainable practices in post-disaster recovery efforts in Batangas, specifically in terms of:
 - a. Economic Viability?
 - b. Environmental Quality?

To determine the influence of these factors on tourism resilience, the study also seeks to answer:

1. Do post-disaster recovery strategies have a significant impact on tourism resilience in Batangas?
2. Does community involvement have a significant impact on tourism resilience in Batangas?
3. Do sustainable practices have a significant impact on tourism resilience in Batangas?
4. Based on the findings, what actionable insights can be recommended to strengthen resilience and promote the rebirth of the tourism industry in Batangas?

Collectively, these questions assess both the current conditions of the key variables and their predictive effects on tourism resilience.

Literature Review

Resilience

This series of natural disasters serves as a constant reminder that climate change has become a pressing challenge for humanity, and that addressing the risks posed by climate change should be a shared responsibility for all of us (Sim et al., 2018). Infrastructure and the livelihoods of people affected are seriously damaged by floods. In Tanzania floods are one the frequent calamities, typically brought on by severe rainfall and causing catastrophic harm to houses, farms, and infrastructure. In resilience it is developed through the process of linking organisational resources and capabilities to restore organizations' efficacy and support their competencies for further growth (Burnard & Bhamra, 2011, as cited in Sarker et al., 2020). It means "bounce back" and focuses on a process of bouncing back to the previous condition after facing any disturbance caused by hazards. The ability to grow and adapt to changes in order to become stronger is always possible after a calamity, resilience can help communities effectively utilise the scarce resources available at their disposal in implementing disaster mitigation measures that make their communities less vulnerable and more resilient. By ensuring that all voices and needs of the community are heard and addressed, it strengthens the ability to recover and face future calamities.

This highlights the adaptability and flexibility in responding to natural disasters. According to Steffen et al. (2018, the Earth is shifting into a "Hothouse Earth" from the Holocene climate, when the Earth was in a stable state and accessible to humans to grow. The concept of "Hothouse Earth" connects to the shifting of climate change from stable to unstable in Batangas Tourism. The extreme disruptions caused by climate change brought natural disasters that were felt in Batangas.

Post-disaster Recovery

Post-disaster recovery is a multifaceted process aimed at restoring and improving livelihoods, public health, economic stability, physical infrastructure, social systems, cultural heritage, and environmental resources in communities affected by disasters (Bannon & Irving, 2020). Beyond immediate response, recovery emphasizes long-term redevelopment through the "build back better" principle, which promotes stronger, safer, and more resilient infrastructure while encouraging learning-based adaptation (Dube, 2020). For tourism destinations, this approach is particularly important because infrastructure quality, accessibility, and safety directly influence tourist confidence and destination competitiveness.

From an infrastructure and economic standpoint, recovery requires strategic planning that integrates risk reduction with sustainable development (Zhang & Sarker, 2024). Damage to transportation systems, utilities, and communication networks can significantly disrupt tourism flows, affecting hotels, attractions, and related services. In rural areas, where tourism often depends on natural and cultural assets, limited financial and technical resources pose additional rehabilitation challenges (Jerolleman, 2020). Thus, infrastructure restoration is not only a physical process but also a key phase in reactivating tourism activities and restoring local income sources.

In addition to physical reconstruction, social and community recovery plays a vital role. Rebuilding social networks and community relationships strengthens local support systems that enhance collective resilience and adaptive capacity (Bakic & Ajdukovic, 2021). For tourism destinations, strong community cohesion supports local tourism operators, preserves cultural identity, and strengthens collaboration in recovery initiatives. Community empowerment and stakeholder participation are therefore essential components of disaster risk reduction in tourism, as local residents possess valuable contextual knowledge about environmental risks and destination vulnerabilities (Nurjanah et al., 2024). Effective disaster communication systems further reinforce sustainable tourism development in hazard prone areas.

From an economic perspective, micro, small, and medium-sized enterprises (MSMEs) are central to tourism recovery. Many tourism related businesses such as accommodations, restaurants, tour services, and souvenir shops fall within the MSME sector. Strengthening business continuity planning, financial preparedness, and access to external assistance significantly improves their recovery capacity and supports broader local economic revitalization (Aparecio & Torrejas, 2024). Similarly, efficient supply chain management ensures the availability of goods and services necessary for tourism operations, while coordinated governance structures facilitate resource allocation and timely rehabilitation (Moroney et al., 2020). Improved governance, communication, and inter-agency coordination enable communities to rebuild more sustainably and advance recovery efforts (Rouhanizadeh et al., 2020).

Together, these studies demonstrate that effective post-disaster recovery requires integrated coordination across infrastructure rehabilitation, community engagement, economic revitalization, and governance mechanisms. Rather than functioning independently, these elements interact to determine how efficiently and sustainably tourism destinations can recover stability and competitiveness.

Specifically for tourism development, recovery can be understood as a three-phase process that includes assessment, collaboration, and implementation (Alcoriza & Policarpio, 2023). The assessment phase involves evaluating the extent of damage to tourism assets, infrastructure, and community resources. The collaboration phase emphasizes partnerships among government agencies, private sector stakeholders, local communities, and tourism organizations to design responsive recovery strategies. Finally, the implementation phase focuses on executing rehabilitation plans, restoring tourism services, marketing the destination, and strengthening resilience measures to reduce future risks. The effectiveness of these phases is influenced by factors such as the scale of damage, financial capacity, governance quality, private sector participation, and public awareness (Moshakova, 2021).

In the Philippine context, where destinations are frequently exposed to natural hazards such as typhoons and volcanic eruptions, structured and tourism sensitive recovery planning is essential to recover visitor confidence and protect local livelihoods. Overall, the reviewed literature justifies the integration of post-disaster recovery as a critical variable in

tourism resilience studies, as it directly shapes the speed, sustainability, and long-term stability of tourism destinations. This conceptual grounding also provides a basis for examining how recovery strategies contribute to strengthened community involvement and enhanced tourism resilience in the succeeding sections of the study.

Community Involvement

Community involvement is widely recognized as a key factor in sustainable post disaster recovery and long-term resilience. When policymakers empower citizens and actively include them in planning and decision making, recovery initiatives become more responsive, inclusive, and aligned with local needs (Tuchi and Mutter, 2020; Ngulube, 2024). Affected communities are now viewed as active partners that contribute their own knowledge, objectives, and solutions to catastrophe recovery efforts, rather than as passive victims. Collectively, existing studies show that community involvement strengthens recovery outcomes by improving trust, enhancing social cohesion, and increasing the relevance of implemented programs (Islam et al., 2020; Harahap, 2020; Tuhkanen, 2023).

Community participation and empowerment are essential to this process. When residents are trusted and given meaningful roles in decision making, cooperation and collective capacity increase, leading to more effective recovery (Aldrich and Meyer, 2015; Li and Tan, 2019). A bottom-up approach further strengthens local leadership and reduces dependency on external assistance (Pandey, 2018). In tourism destinations, this form of participation supports the reopening of tourism enterprises, restoration of attractions, and rebuilding of destination image in ways that reflect local conditions and priorities.

Beyond participation, stakeholder engagement also plays an important role in recovery. Effective coordination among local communities, government agencies, private sector actors, and civil society improves transparency and accountability while ensuring that programs respond to actual needs (Marsh et al., 2017; Hamideh, 2020; Van Onselen et al. 2025). Capacity building initiatives that enhance leadership, communication, and collaborative planning further contribute to sustainable recovery (Crow and Albright, 2021). In the context of tourism, coordinated stakeholder efforts are essential for restoring operations, ensuring visitor safety, and managing environmental and cultural resources during the recovery phase.

Moreover, Cultural and social structures further shape how communities engage in recovery. Socio cultural factors influence how people organize, share information, and participate in rebuilding efforts (Rahmani et al., 2022; Abid et al., 2025; Senimoli et al., 2020). Shared values and strong social networks enhance cooperation and collective action, which improve recovery outcomes (Sobhaninia, 2023; Kaniasty, 2019). Practices such as mutual cooperation traditions like *gotong royong* demonstrate how cultural norms can support collective rebuilding (Koopman, 2021). Similar cooperative traditions are present in many Philippine communities and contribute to local rebuilding efforts and tourism related activities. In this study, socio-cultural factors provide theoretical context for understanding community dynamics but are not included as measured variables.

In addition to formal participation and governance structures, collective community action supports both physical recovery and social well-being (Saul, 2021b; Kaniasty, 2019). Community cooperation may also encourage volunteer initiatives and voluntourism, where volunteers assist in rehabilitation efforts while engaging with host communities (Wearing et al., 2020). When aligned with local priorities, these efforts can contribute to tourism recovery by supporting site rehabilitation and small tourism enterprises.

Overall, the study indicates that community involvement plays a significant role in post-disaster recovery expressed through participation, empowerment, stakeholder coordination, and collective action. It strengthens trust, aligns recovery strategies with community needs, and enhances local capacity. In tourism destinations, active community engagement contributes to business recovery, restoration of attractions, and long-term tourism resilience. Socio cultural factors provide contextual support for understanding these processes, reinforcing the role of community involvement in tourism recovery.

Sustainable Practices

Sustainable development refers to the actions and strategies that seek to address current needs without compromising the ability of subsequent generations in meeting and providing their own needs. These practices include environmental governance, social responsibility, and economic viability to ensure long-term sustainability (Brundtland Commission, 1987, as cited in Hajian & Jangchi, 2021). Moreover, it aligns with Holling's adaptive cycle by reducing vulnerability during exploitation or conservation phases, stabilizing systems amid crisis-induced release, and enabling renewal rather than mere restoration (Holling, 1973). In tourism, sustainability is reflected in practical and visible initiatives such as eco-friendly infrastructure (e.g., solar-powered resorts), effective waste management systems, energy-efficient hotels, community-based ecotourism initiatives, and climate-adaptive planning (UNWTO, 2018). Studies in the Philippines further demonstrate how these strategies are applied locally. In Batangas, for instance, the post-eruption recovery plans for Calatagan placed strong emphasis on mangrove protection and building a more resilient coastal tourism sector (Gonzales, 2025). Similarly, in Lipa, Batangas, highlights how strong community participation, well-maintained infrastructure and services, and consistent support from both the local government and non-government organizations (NGOs) can significantly strengthen a community's capacity for disaster preparedness and resilience (Fronza et al., 2025).

Collectively, sustainable practices helps transform short-term recovery efforts into long-term adaptive capacity. By balancing environmental protection (such as resource conservation and pollution reduction), economic stability (including viable growth and job creation), and social benefits (like improved community health through cleaner air and water) (GSTC, 2021), it fosters resilient systems that are better equipped to withstand and recover from shocks.

Economic Viability. Economic viability refers to the efficient utilization of resources to promote economic growth and development. It emphasizes preserving natural resources and establishing systems that generate employment, foster innovation, and minimize environmental harm (Kumar et al., 2024). In disaster-prone destinations such as Batangas, economic viability helps local economies recover through diversified income streams, reducing dependence on seasonal tourism fluctuations.

In the context of post-disaster tourism recovery, restoring economic viability becomes a primary objective. This involves rebuilding resilient infrastructure such as hotels and transportation networks while revitalizing small and medium enterprises (SMEs) in lodging, dining, tour operations, and guiding services, which are vital to community livelihoods (Liu et al., 2024). Moreover, promoting economic diversification further reduces dependence on a single industry, helping destinations avoid collapse and attract reinvestment and returning visitors during recovery. Its key mechanisms include disaster risk financing to enable rapid SME recovery and policies designed to broaden local income streams. However, in the Philippine setting, persistent budget constraints and bureaucratic delays within local governments often hinder tourism

reconstruction efforts, slowing the revival of the hospitality sector (Villacin, 2017; DOT, 2023).

While rebuilding efforts are essential, the manner in which recovery is pursued also matters. Mushtaha (2024) warns that hasty recovery often triggers overbuilding of resorts and neglect of green spaces, eroding the scenic appeal essential for tourism competitiveness. Although short-term strategies may briefly stimulate economic activity, they can damage the scenic and environmental qualities that sustain tourism competitiveness. As environmental quality declines particularly in nature-based destinations the long-term adaptive capacity is reduced. Additionally, integrating economic viability with environmental stewardship prevents these risks, ensuring development protects destination appeal. Sustainable planning safeguards ecological assets while supporting economic resilience, highlighting environmental quality as essential to recovery.

Collectively, these studies show that strengthening local enterprises, improving financial preparedness, and integrating environmental safeguards are all essential for long-term tourism sustainability in disaster-prone regions.

Environmental Quality. Environmental quality encompasses clean air and water, abundant green spaces, and the absence of harmful pollutants both preventing environmental degradation and providing ecological assets that support human and ecosystem health (Ghanem, 2018; Rasool et al., 2024). Taken together, these definitions emphasize its dual role eliminating environmental threats while cultivating restorative elements like vegetation that strengthen resilience against environmental stressors. In tourism, environmental quality directly drives competitiveness. Pristine landscapes, unpolluted water bodies, and scenic vistas generate visitor satisfaction and destination appeal, whereas degradation deters travel and erodes market share (Wang et al., 2020; Trang et al., 2019). Clean environments sustain hospitality operations and accelerate post-disaster visitor confidence.

In disaster-prone destinations like Batangas, environmental recovery deploys green infrastructure, mangroves for coastal protection, watershed restoration for water purification as natural buffers that rehabilitate tourism assets (Baloch et al., 2022). Taal eruption recovery demonstrates how air and water quality restoration rebuilt visitor trust and operational capacity. Beyond ecological gains, environmental rehabilitation delivers social benefits such as cleaner air improves community health, green spaces enhance well-being, and pollution controls preserve biodiversity vital for ecotourism (Emmanuel et al., 2024). These improvements create reinforcing cycles where healthier ecosystems sustain both residents and tourism economies.

Environmental quality is a key ecological foundation for tourism resilience, helping maintain destination appeal and operational viability during and after disasters both essential for attracting returning visitors and supporting economic recovery. As part of sustainable practices, it complements economic viability by protecting the natural assets that drive tourism competitiveness and enabling ecosystem-based adaptation in line with renewal phase. In this study, environmental quality (H3b) is treated as a critical predictor variable, measuring its direct impact on tourism resilience in Batangas and linking theoretical resilience concepts with empirical indicators such as air, water, and landscape restoration.

Hypotheses development

Tourism Resilience. Resilience is defined as adapting to a situation to overcome challenges. Climate change is having a negative impact on individuals. Heavy rainfalls greatly affect the livelihoods, agriculture, and homes of residents, causing widespread damage to the environment

(United Nations Office for Disaster Risk Reduction, 2019). Natural disasters in recent years serve as warning signs of climate change, and it should be considered a worldwide responsibility to address climate-related risks (Sim et al., 2018). Resilience is described as the ability to “bounce back” by connecting the resources and capabilities to restore its efficacy. Despite encountering environmental challenges, resilience will successfully bounce back and regain its effectiveness (Burnard & Bhamra, 2011, as cited in Sarker et al., 2020). Resilience adapts to how to measure all the limited resources to all the communities that were affected by the disaster by allocating an equal distribution of resources (Almutairi et al., 2020). In community resilience, individuals affected by disasters can sustain, recover, and adjust their communication. Suppose each individual communicates effectively during tough times. In that case, people will be able to share important information, stay connected, and stay updated, which enables the community to work together efficiently (Rachmad, 2022).

Post-disaster Recovery. This section presents the hypotheses derived from the reviewed literature and aligned with the study’s conceptual framework. Based on previous findings, post-disaster recovery is expected to influence tourism resilience. The following discussion explains the theoretical and empirical basis for this relationship and clarifies why post-disaster recovery is hypothesized to significantly affect tourism resilience. Post-disaster recovery refers to structured efforts aimed at restoring infrastructure, livelihoods, governance systems, and social structures following a disaster. Central to this process is the “build back better” principle, which promotes safer, stronger, and more inclusive reconstruction to reduce future risks (Bannon & Irving, 2020). In tourism destinations, infrastructure quality, accessibility, and safety directly influence visitor confidence and operational continuity. Thus, recovery strategies that integrate sustainability and risk reduction contribute not only to physical rebuilding but also to strengthening tourism systems. Moreover, recovery approaches that emphasize building back faster and more inclusively help minimize prolonged disruptions in tourism activities (Dube, 2020). Rapid yet strategic reconstruction supports the timely reopening of tourism facilities, transportation networks, and supporting services. Inclusive recovery ensures that all affected stakeholders including local tourism operators and vulnerable groups are supported, thus enhancing adaptive capacity within the tourism sector. Community resource development further strengthens resilience by improving collective well-being and social support systems (Bakic & Ajdukovic, 2021). In tourism-dependent communities, strong social networks facilitate coordinated recovery efforts and sustain destination image and service quality. Additionally, incorporating intelligence and monitoring mechanisms in recovery planning enhances the ability of destinations to adapt to evolving risks and changing environmental conditions (McClelland et al., 2021). Effective monitoring and evaluation systems ensure that reconstructed structures and tourism facilities meet sustainability and resilience standards over time (Serter & Gumusburun, 2024). Collectively, these studies indicate that post-disaster recovery enhances adaptive capacity, supports system restoration, and strengthens long-term transformation within tourism destinations. As tourism resilience reflects a destination’s ability to recover, adapt, and sustain operations after disruptions, it is theoretically and empirically reasonable to expect that effective post-disaster recovery positively influences tourism resilience.

Ho1. Post-disaster recovery has a significant impact on tourism resilience

Community Involvement. Community involvement is a key factor in strengthening tourism resilience, which refers to the ability of a destination to recover from disasters, adapt to change, and sustain tourism activities. Active community participation improves decision making and ensures that recovery strategies reflect local needs and priorities (Tuchi and Mutter, 2020; Ngulube, 2024). When communities

are empowered through a bottom-up approach, they are better able to rebuild and maintain tourism facilities, protect tourism assets, and accelerate the reopening of tourism sites (Pandey, 2018; Ngulube et al., 2023). This empowerment enhances the adaptive capacity of the destination.

Stakeholder engagement also supports tourism resilience. Collaboration among local communities, government, and tourism stakeholders improves coordination, strengthens governance, and promotes destination safety and preparedness (Hamideh, 2020; Van Onselen et al., 2025). Such collaboration allows tourism recovery to be more organized and effective.

Social cohesion further contributes to resilience. Strong community relationships encourage collective action, trust, and mutual support during rebuilding processes (Saul, 2021b; Kaniasty, 2019). Coordinated efforts contribute to the restoration of tourism services and the maintenance of local tourism.

Lastly, community driven initiatives such as voluntourism can also help in rehabilitation efforts (Wearing et al., 2020). When aligned with local priorities, these initiatives support small tourism enterprises and strengthen community ownership of recovery programs.

Given that community involvement enhances adaptive capacity, improves coordination, strengthens social cohesion, and supports tourism recovery efforts, it is reasonable to expect that community involvement significantly contributes to tourism resilience.

Ho2. Community involvement has a significant impact on tourism resilience

Sustainable Practices. Sustainable tourism destinations gain a competitive advantage through traveler recognition and loyalty, as sustainability signals long-term viability (Espiner et al., 2017). Holladay’s (2018) integrated model combines Butler’s (1980) destination life cycle with Holling’s (1986) adaptive cycle, framing sustainable practices as resilience strategies applicable across all destination phases especially during crisis-induced reorganization and renewal. Sustainable practices enhance tourism resilience in multiple ways. Resource-efficient infrastructure withstands shocks and reduces recovery costs, ecosystem preservation maintains visitor appeal after disasters, and adaptive management transforms vulnerabilities into opportunities (Folke et al., 2010; Marchese et al., 2018). Collectively, these practices protect natural and cultural assets while mitigating economic losses and social disruptions (UNWTO, 2018). In disaster contexts, sustainable practices accelerate tourism recovery by preserving the environmental conditions necessary for operations. Intact landscapes sustain scenic attractiveness for returning visitors, resilient green infrastructure allows rapid site reopening, and diversified economic activities reduce dependence on sectors affected by damage. Local communities also benefit through sustained livelihoods in eco-tourism and conservation-related employment. Given this evidence, sustainable practices clearly enhance adaptive capacity, preserve destination competitiveness, and support transformation beyond mere restoration. Accordingly, H₃ states: Sustainable practices have a significant positive impact on tourism resilience in Batangas. With sustainable practices established as predictor H₃, the framework now turns to community involvement (H₂) and its complementary role in social adaptation and coordinated recovery efforts.

Ho3. Sustainable practices have a significant impact on tourism resilience

METHODOLOGY

Research Design

This study utilized a quantitative descriptive-correlational research design. This approach suited the objectives by quantifying the profiles of post-disaster recovery, community involvement, and sustainable practices while testing their significant relationships with tourism resilience through regression analysis (Creswell, 2017). Unlike a purely descriptive design, it measured variable associations and generated statistical evidence to answer both descriptive (RQ1–3) and inferential (RQ4–6) questions. This design focused on answering the research questions rather than exploring causal relationships. The method involved collecting quantitative data in a numerical format, which enabled the researchers to describe the characteristics of the population and the phenomena under investigation—specifically, "what, where, and when" the events happened (Ghanad, 2023). This design allowed the study to quantify the relationships between the independent variables and tourism resilience.

Research Locale

The study was conducted in Talisay, Batangas, Philippines. Batangas is a well-known tourist destination renowned for its natural beauty and accessibility to Metro Manila (Vizconde & Felicen, 2012; Ylagan & Laguador, 2014). Talisay was chosen as the specific locale because it was one of the municipalities most severely affected by recent natural disasters. As a community situated near Taal Lake, a critical tourism area, its experiences and recovery strategies provided valuable insights that can serve as adaptable models for other municipalities and inform provincial-level disaster recovery policies. Figure 1 presents the map of Batangas.



Figure 2. Map of Batangas

Respondents of the Study

The respondents for this study were residents of Talisay, Batangas. According to data from the Philippine Statistics Authority (2021), 46,238 people were living in the municipality as of the 2020 Census of Population and Housing. The Raosoft sample size calculator was used to determine the sample size, which provided a minimum of 381 respondents with a 50% response distribution, a 95% confidence level, and a 5% margin of error. A 95% confidence level and a 5% margin of error were selected because these parameters provide adequate statistical precision and are commonly used standards in social science research. A 50% response distribution was applied as it is the conventional assumption when the actual population proportion is unknown, ensuring a more conservative and reliable sample size estimation.

Purposive sampling was used in this study to ensure that participants met specific inclusion criteria relevant to the research objectives. This sampling method was appropriate because the study required respondents who had sufficient experience with local natural disasters

and tourism conditions. To ensure the relevance and quality of the data collected, participants were screened based on age, length of residency, and language proficiency.

Participants were required to be at least eighteen years old. Adults were selected because their cognitive maturity and life experience enable them to provide informed and reflective responses to the survey questions (Khawar et al., 2013; Salthouse et al., 2003). The inclusion of middle aged and older individuals further strengthened the quality of insights, as they tend to have stronger community ties and greater awareness of disaster recovery processes and changes in local tourism conditions (Gowan et al., 2014; Liao and Hu, 2023).

The respondents must have been residing in Talisay, Batangas for at least 5 to 10 years. This ensured that the respondents were able to be directly exposed to the impacts of natural disasters in the area, such as the eruption of Taal Volcano and the impacts of the recent typhoons that hit the area. A minimum of several years of residency increased the likelihood that respondents had observed both disaster impacts and recovery efforts affecting tourism and community conditions. Respondents were also required to be conversant in English and Filipino to ensure clear understanding of the survey questions and accurate responses.

Excluded from the study were non-residents, tourists, individuals below 18 years old, and residents who had lived in Talisay for less than five years. These criteria ensured that participants had adequate exposure to disaster impacts and local tourism conditions, thereby providing reliable data for assessing tourism resilience and recovery.

Instrumentation

The primary data collection instrument was a structured questionnaire designed to evaluate residents' perspectives on post-disaster recovery factors in Talisay. It consisted of two main parts. The first part collected the demographic profile of the respondents. The second part consisted of survey questions measuring the four main variables—post-disaster recovery, community involvement, sustainable practices, and tourism resilience—using 10 items per variable (40 items total). The sample statements include "The rebuilding efforts have been well-coordinated and efficient" and "Involving the community in decision-making helps to speed up the tourism recovery process". A 5-point Likert scale was used to measure the respondents' level of agreement with statements for post-disaster recovery and tourism resilience (1 = Strong Disagree; 5 = strongly agree), and a 5-point effectiveness scale for community involvement and sustainable practices (1 = not effective; 5 = highly effective). A researcher-developed instrument tailored to the objectives of the study. To test the instrument's reliability, the validation process underwent content and face validity. The instrument underwent pilot testing to evaluate its reliability. Internal consistency was measured using Cronbach's Alpha. The pilot test included the 30 respondents from Talisay residents which yielded Cronbach's $\alpha = 0.966$, indicating a very high level of internal consistency among the survey items.

Data Collection

The researchers collected data through face-to-face surveys to facilitate direct interaction with respondents and ensure clear communication. A researcher-developed instrument, designed to the objectives of the study, was used. The questionnaire comprised 40 items distributed across four variables, each measured using a 5-point Likert scale. Ethical considerations, including informed consent and confidentiality, were strictly observed throughout the process to protect respondents' rights and maintain data integrity. Demographic information was recorded to provide contextual insights into the respondents. Frequencies and percentages were calculated for variables such as age, gender, educational attainment, and length of residency. The age distribution indicated a

balanced representation across different age groups, while educational levels and years of residency reflected a mix of experiences within the community. Overall, the sample consisted of long-term residents with varied ages and educational backgrounds, providing diverse perspectives on post-disaster tourism resilience in Talisay, Batangas.

Data Analysis

The data collected from the survey were analyzed using both descriptive and inferential statistical methods. Descriptive statistics were employed to summarize and describe the characteristics of the variables, providing a clear overview of the data. To examine the significant relationships among variables, inferential statistics were applied. Prior to regression analysis, the assumptions of normality and linearity were tested to ensure the appropriateness of the method. A multiple linear regression model was used to test the influence of the independent variables (post-disaster strategies, community involvement, and sustainable practices) on the dependent variable (tourism resilience). This approach allowed for simultaneous assessment of all predictors in the method.

Ethical Considerations and Data Protection Plan

The researchers were committed to upholding the highest ethical standards throughout this study, ensuring the respectful and responsible treatment of all participants. Participation in the study was completely voluntary. All participants were provided with a consent form that clearly outlined the study's purpose, procedures, and their right to withdraw at any time without negative consequences. The privacy of all participants was protected. The data collected did not include personally identifiable information unless explicitly requested and consented to in the signed informed consent form. The researchers prioritized the anonymity and confidentiality of all respondents. The researchers ensured the study's reliability and credibility by thoroughly and transparently examining all data, methods, and findings to maintain academic integrity.

In compliance with Republic Act No. 10173, also known as the Data Privacy Act of 2012, this plan outlined the measures that were taken to ensure the confidentiality, security, and proper handling of all collected data. Data were collected through face-to-face surveys. The researchers manually encoded responses. Participants were fully informed about the study's purpose and procedures before participation. All collected data was stored securely and treated with strict confidentiality. Hard copies of the completed survey forms were kept safely and locked, accessible only to members of the research team. Access to the raw data was strictly limited to the research team. No unauthorized individuals had access to any raw data at any point during the research process. Data was retained for a maximum of three years after the study's completion. Following this period, all data, including hard copies, were securely discarded through shredding. In the event of a data breach (e.g., loss, theft, or unauthorized access to physical survey forms), the research team immediately assessed the situation and notified affected participants and appropriate data protection authorities. Urgent action was taken to secure the breach and prevent further access. Participants were informed of their rights as data subjects, including their right to be informed about the study, the handling of their data, and their right to withdraw from the study at any time without penalty.

RESULTS AND DISCUSSION

Respondent's Profile

Table 1 presents the demographic breakdown of the 381 respondents selected through purposive sampling.

Table 1. Profile of respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	143	37.5%
	Female	238	62.47%
Age	18 to 26 years old	116	30.45%
	27 to 35 years old	76	19.95%
	35 years old and above	189	49.61%
Civil Status	Single	171	44.88%
	Married	179	46.98%
	Widowed	31	8.14%
Educational Attainment	Primary school	10	2.62%
	Secondary school	26	6.82%
	High School	198	51.97%
	College	147	38.58%
Number of years lived in Talisay, Batangas	5 to 15 years	74	19.42%
	16 to 25 years	121	31.76%
	26 to 35 years	67	17.58%
	36 years and above	119	31.23%
Total		381	100%

The findings show that the majority of respondents were female (62.47%), while male respondents comprised a smaller portion of the sample. This distribution indicates that women represent a significant segment of the surveyed community and may offer perspectives shaped by their roles within households and community activities. In terms of age, 49.61% of respondents were 35 years old and above. This suggests that a considerable portion of the sample consists of adults who may have accumulated life experiences related to disaster events and community recovery efforts. Regarding civil status, 46.98% of respondents were married. This reflects that many participants belong to family households, which may influence how they perceive disaster preparedness, recovery, and community support systems. For educational attainment, 51.97% of respondents had completed high school education. This indicates that most participants possess foundational educational backgrounds that may shape their understanding of disaster-related issues and tourism recovery initiatives. Lastly, in terms of residency, 31.76% of respondents had lived in Talisay, Batangas for 16–25 years. The presence of long-term residents in the sample suggests familiarity with the local environment, past disaster experiences, and community development patterns. Overall, the demographic profile shows that the sample is composed of predominantly female, middle-aged, married, and long-term residents with secondary-level education, providing varied perspectives on post-disaster tourism resilience in Talisay, Batangas.

Post-disaster recovery strategies were implemented to support the tourism industry in Batangas

Table 2 presents the perceptions of stakeholders regarding the effectiveness of recovery efforts following a disaster in Batangas.

The stakeholder perceptions of post-disaster recovery strategies implemented to support the tourism industry in Batangas yielded an overall weighted mean of 4.21 (SD = 0.76), indicating that the strategies were generally perceived as highly effective, which suggests strong institutional performance in managing recovery efforts. This aligns with the broader literature emphasizing the importance of coordinated governance and community engagement in disaster contexts (Ryan et al., 2020).

Key indicators such as emergency relief provision (Statement 4, M = 4.22), infrastructure restoration (Statement 6, M = 4.24), and

government-community communication (Statement 8, $M = 4.25$) received high ratings, reflecting timely and well-coordinated interventions. These findings support the strategic role of local authorities and inter-agency collaboration in facilitating recovery and enhancing institutional readiness (Sab et al., 2025; LPU-Batangas: PDRRMO, 2025).

Table 2. Post-disaster Recovery

Statement	Mean	SD	Interpretation
1. Assistance from local authorities was timely and adequate.	4.15	0.77	Effective
2. The recovery process has been well-managed by local authorities.	4.22	0.73	Highly Effective
3. The rebuilding efforts have been well-coordinated and efficient.	4.28	0.70	Highly Effective
4. Emergency relief was sufficient to meet the immediate needs of affected individuals.	4.22	0.72	Highly Effective
5. Infrastructure such as roads, bridges, and utilities was restored within approximately two to four weeks after the disruption.	3.91	0.94	Effective
6. Infrastructure such as roads, bridges, and utilities were restored within approximately two to four weeks after the disruption.	4.24	0.74	Highly Effective
7. Infrastructure such as roads, bridges, and utilities was restored within approximately two to four weeks after the disruption.	4.21	0.76	Highly Effective
8. There has been sufficient communication between the government and the community regarding recovery efforts.	4.25	0.76	Highly Effective
9. The post-disaster recovery process has helped to rebuild a stronger and more resilient community.	4.29	0.75	Highly Effective
10. The recovery efforts have led to improved disaster preparedness for future events.	4.34	0.71	Highly Effective
Weighted Mean	4.21	0.76	Highly Effective

Notably, the highest-rated item, which states that “The recovery efforts have led to improved disaster preparedness for future events” (Statement 10, $M = 4.34$), underscores the long-term impact of recovery initiatives on resilience-building. This suggests that, beyond immediate relief, the recovery process contributed to adaptive capacity and institutional learning within the tourism sector. Sab et al. (2025) emphasize the value of systems thinking and multi-hazard planning in tourism-dependent regions, advocating for integrated frameworks that promote both preparedness and sustainability.

However, two items received relatively lower scores: Statement 1 (“Assistance from local authorities was timely and adequate”, $M = 4.15$) and Statement 5 (“Infrastructure was restored within approximately two to four weeks”, $M = 3.91$). While both were still interpreted as “Effective,” the lower ratings suggest areas for improvement, particularly infrastructure restoration and timely assistance. Specifically, delays in infrastructure restoration may hinder overall recovery and affect community well-being. This concern is echoed by Hallegatte et al. (2019), who argue that infrastructure recovery is often the slowest component of post-disaster response due to procurement bottlenecks, contractor delays, and coordination challenges. Ranghieri (2014) similarly notes that infrastructure interdependencies can impede recovery, especially when administrative systems are fragmented.

The relatively low score for Statement 5 also supports Aparecio and Torrejas’ (2024) findings, which call for enhanced planning and resource allocation among MSMEs and local stakeholders. Their study highlights

the need for institutional control, preparedness, and external support to strengthen business resilience in post-disaster contexts.

Contrastingly, Medway et al. (2020) caution that improvements in disaster preparedness may be superficial unless formally institutionalized and regularly updated. They argue that many preparedness strategies remain unimplemented at the community level, limiting their practical impact. This highlights the importance of translating policy into action and ensuring that preparedness measures are integrated into local governance structures.

Level of local community involvement in the planning and decision-making processes

Table 3 shows the respondents' assessment of the level of local community involvement in the planning and decision-making processes for post-disaster tourism recovery efforts.

Table 3. Community Involvement

Statement	Mean	SD	Interpretation
1. Involving the community in decision-making helps to speed up the tourism recovery process.	4.37	0.70	Highly Effective
2. Giving residents an active role in restoring tourism makes recovery more successful.	4.38	0.68	Highly Effective
3. When calamity happens, working together as a community may help everyone overcome and rebuild their lives.	4.48	0.61	Highly Effective
4. Throughout the recovery period, tourism volunteers benefit both the tourism sector and the community.	4.36	0.66	Highly Effective
5. When communities take part in rebuilding, officials pay more attention to their needs.	4.32	0.77	Highly Effective
6. Engaging the community in tourism planning will result in a more sustainable recovery.	4.40	0.68	Highly Effective
7. Treating the community as partners in rebuilding, rather than victims, results in a more successful long-term tourist recovery.	4.37	0.73	Highly Effective
8. When residents work together, they build their bonds with one another and benefit the entire community.	4.45	0.70	Highly Effective
9. Government-community collaboration enhances disaster reconstruction and rebuilding of tourism.	4.38	0.67	Highly Effective
10. Tourism initiatives that include local people and focus on caring for nature are effective in protecting areas from disasters.	4.38	0.67	Highly Effective
Weighted Mean	4.39	0.69	Highly Effective

The overall weighted mean of 4.39 ($SD = 0.69$) in the table indicates that community participation was perceived as highly effective across all indicators. This highlights the crucial role of community engagement in promoting inclusive, resilient, and sustainable recovery outcomes.

Among the ten statements, the highest-rated item was Statement 3: “When calamity happens, working together as a community may help everyone overcome and rebuild their lives” ($M = 4.48$), emphasizing the importance of social cohesion and collective action. This finding aligns with Lin et al. (2021), who argue that social cohesion enhances community resilience by strengthening interpersonal bonds and enabling coordinated recovery efforts. It also reflects the broader principle that disaster recovery must be rooted in community solidarity and shared responsibility. While statement 6 (“Engaging the community in tourism

planning will result in a more sustainable recovery”, $M = 4.40$) further reinforces the value of local knowledge and participatory governance. According to Pyke et al. (2018), stakeholder engagement, especially in nature-based tourism destinations, enhances adaptive capacity and reduces vulnerability. This supports the idea that recovery planning should not only rebuild but also transform tourism systems toward sustainability.

In addition, statements 1, 2, 7, and 9, each scoring above 4.37, demonstrate strong support for inclusive decision-making, volunteerism, and government-community collaboration. These results align with those of Fatini and Herwangi (2022), who emphasize that community participation fosters stakeholder alignment and ensures that recovery efforts are context-sensitive and equitable.

On the other hand, statement 5 (“When communities take part in rebuilding, officials pay more attention to their needs”, $M = 4.32$) received the lowest rating, albeit still within the “Highly Effective” range. This suggests a perceived gap between community engagement and government responsiveness. Su and Dé (2020) found similar tensions in Tacloban post-Haiyan, where residents viewed recovery as a return to normalcy, while authorities promoted “building back better”—often without sufficient consultation. This disconnect points to the need for trust-building mechanisms and transparent feedback loops between communities and institutions.

Moreover, Sanderson et al. (2024) caution that while community-centered recovery is widely endorsed, it is rarely implemented effectively. Their study reveals that command-and-control approaches, short recovery timelines, and centralized decision-making often undermine genuine community involvement. Owen (2018) adds that disaster recovery is inherently complex, requiring governments to acknowledge limitations, engage diverse voices, and support vulnerable groups. These insights suggest that while community participation is critical, its impact depends on institutional willingness to share power and co-create solutions.

Adoption of sustainable practices in post-disaster recovery efforts in Batangas

Table 4 shows how sustainable practices have been adopted in Batangas' post-disaster recovery, specifically focusing on economic viability and environmental quality. The table indicates the overall weighted mean for both dimensions, highlighting the general impact of sustainable recovery practices in the community.

The table's overall weighted mean of 4.22 ($SD = 0.69$) indicates that sustainability-driven recovery efforts were perceived as highly effective, affirming their strategic value in enhancing resilience and long-term community well-being. However, environmental quality received the higher mean score of 4.31, interpreted as “Highly Effective,” as compared to the dimension of economic viability, which received a slightly lower mean score of 4.13, interpreted as “Effective.”

The finding generated by environmental quality suggests that respondents viewed environmental initiatives—such as proper waste disposal (Statement 6, $M = 4.45$), sustainable tourism (Statement 7, $M = 4.34$), and tree planting (Statement 8, $M = 4.20$)—as impactful components of recovery. These practices not only mitigated ecological risks but also promoted community-wide awareness and stewardship (Statement 9, $M = 4.31$). This aligns with Acuzar (2021), who emphasized that environmental interventions—particularly those rooted in community engagement—play a vital role in reducing vulnerability and enhancing adaptive capacity. Similarly, Mushtaha and Alaloul (2025) argue that sustainability frameworks must integrate environmental, social, and institutional dimensions to ensure holistic recovery outcomes.

Table 4. Sustainable Practices

Statement	Mean	SD	Interpretation
Economic Viability	4.13		Effective
1. There's financial assistance for the local residents after the disaster.	4.13	0.68	Effective
2. The adoption of sustainable practices has helped preserve the natural environment of Talisay, Batangas and long-term cost savings.	4.20	0.59	Highly Effective
3. The financial investment in reconstructing the infrastructure after the calamity was enough.	4.05	0.75	Effective
4. Livelihood training helped affected individuals regain jobs after the disaster.	4.12	0.66	Effective
5. The sustainable practices are economically viable in the long term.	4.15	0.66	Effective
Environmental Quality	4.31		Highly Effective
6. Proper disposal of waste has helped the community prevent pollution.	4.45	0.70	Highly Effective
7. After the disaster, sustainable tourism practices have helped to improve the quality of life for locals.	4.34	0.71	Highly Effective
8. The barangay has an initiative of tree planting to reduce air pollution, risk of flood and landslide as part of the recovery.	4.20	0.78	Highly Effective
9. Implementing sustainable recovery strategies has led to an environmental awareness to the local community.	4.31	0.65	Highly Effective
10. The local stakeholders of Batangas actively promote sustainable initiatives like the conservation of resources (e.g water, energy, waste reduction and recycling, etc).	4.25	0.69	Highly Effective
Weighted Mean	4.22	0.69	Highly Effective

On the other hand, the economic viability dimension was rated moderately low, especially the indicators such as financial assistance (Statement 1, $M = 4.13$), livelihood training (Statement 4, $M = 4.12$), and long-term viability of practices (Statement 5, $M = 4.15$), compared to environmental efforts. This implies that economic recovery remains a more fragile and complex component of post-disaster resilience. This disparity suggests that economic recovery, though progressing, faces challenges related to resource limitations, infrastructure investment (Statement 3, $M = 4.05$), and inclusive access. Rouhanizadeh et al. (2020) support this view, noting that post-disaster recovery often demands simultaneous restoration of services, infrastructure, and livelihoods—requiring substantial financial and logistical capacity. Yu et al. (2015) further emphasize that economic viability is a core metric of resilience, as it reflects the system's ability to rebound and sustain productivity.

The difference in interpretation indicates that most of the local community perceives environmental quality as more prominent in recovery efforts compared to economic viability. This preference stems from the tangible and visible impact environmental quality has on the destination, as it directly affects the foundational resources and resilience capacity upon which tourism and local communities rely for sustainable recovery (Estevão & Costa, 2020). In contrast, while economic viability remains crucial, it tends to be less visible and more abstract. Financial flows, business reconstruction, and job restoration are important components, yet these factors may not immediately enhance tourism appeal if the natural environment remains degraded. Furthermore, economic recovery often requires time-consuming processes such as financial transactions, policy reforms, and business adjustments that do not emit observable signs of progress (World Bank, 2020).

Despite the variation in scores, the overall interpretation remains “Highly Effective,” reinforcing the idea that sustainability is a foundational principle in post-disaster recovery. As Mushtaha and Alaloul (2025) suggest, integrating economic and environmental strategies fosters systemic resilience and reduces long-term vulnerabilities. However, Vivien (2023) cautions that overemphasis on one dimension—such as environmental quality—without equal attention to economic viability may result in imbalanced recovery outcomes. Sustainable recovery must therefore be multi-dimensional, ensuring that ecological preservation is matched by inclusive economic revitalization.

Post-recovery strategies have a significant impact on tourism resilience in Batangas

The regression results in Table 5 provide compelling empirical evidence that post-disaster recovery strategies have a significant influence on tourism resilience in Batangas. With an R-squared value of 0.520, the model explains 52% of the variance in tourism resilience, indicating a strong predictive relationship. The computed F-value of 20.25 and a p-value of .000 (significant at $\alpha = .05$) lead to the rejection of the null hypothesis, affirming that post-recovery strategies are not only relevant but statistically impactful.

Table 5. Post-disaster Strategies impacted Tourism Resilience

Variables	Post- recovery Strategies Tourism Resilience
R-squared	0.520
Computed	20.25
P-value	0.000
Decision	Reject Ho
Conclusion	Significant

An R^2 of 0.520 suggests that more than half of the changes in tourism resilience can be attributed to the effectiveness, scope, and implementation of post-disaster strategies. This level of explanatory power is substantial in social science research, where multifactorial influences are common. It implies that strategic recovery planning—such as infrastructure restoration, community engagement, and sustainable tourism practices—plays a central role in shaping a destination’s ability to withstand and rebound from disruptions.

This finding aligns with Foster’s (2012) definition of resilience as a region’s capacity to anticipate, respond to, and recover from disturbances. In the context of tourism, resilience is not merely about bouncing back—it involves transformative recovery, where systems are rebuilt stronger, more adaptive, and more inclusive (Ritchie, 2009). Similarly, OECD (2015) expands this view by framing resilience as the ability to absorb shocks while maintaining growth. In Batangas, post-recovery strategies, including livelihood restoration, environmental rehabilitation, and stakeholder coordination, contribute to achieving this dual goal: reducing vulnerability while promoting sustainable tourism development. The significance of post-recovery strategies is further supported by the multidimensional nature of tourism resilience, as outlined in the literature, including community-centered recovery, which was highlighted in earlier tables. Community involvement enhances social cohesion and local ownership of recovery efforts, which are critical for long-term resilience (Fatini & Herwangi, 2022; Lin et al., 2021). The environmental sustainability practices of waste management, tree planting, and eco-tourism initiatives not only restore ecological balance but also attract responsible tourism, reinforcing resilience (Mushtaha & Alaloul, 2025). Meanwhile, economic rehabilitation: Although economic viability was rated slightly lower, its integration into recovery strategies—through financial assistance and livelihood training—remains essential for

restoring tourism-dependent economies (Yu et al., 2015; Rouhanizadeh et al., 2020).

The Classic Resilience Theory by Holling (1973) aligns with the results in post-disaster recovery in tourism resilience in Batangas. Holling’s theory defined resilience as the ability of ecosystems to absorb changes. It describes resilience as the capacity to handle any disturbances and still continue to function. In table 5, this theoretical approach is empirically supported by the regression results, which indicate that post-recovery measures explain 52% of the variance in tourism resilience ($R^2 = 0.520$, $F = 20.25$, $p = .000$) states that post-disaster recovery strategies have a significant influence on tourism resilience in Batangas and it emphasizes that successfully recovery efforts help the tourism sector to adjust to changes and continue to operate even after experiencing disruptions. Also, the R-squared of “post-disaster recovery” is the highest among “community involvement” and “sustainable practices.” The results in post-disaster recovery show that 52% of the variance in tourism resilience is due to the successful recovery measures. It means that the post-disaster recovery explains more than half of Batangas’ tourism recovery, which comes from post-disaster recovery initiatives.

Community involvement has a significant impact on tourism resilience in Batangas

Table 6 shows the regression analysis, which reveals a statistically significant relationship between community involvement and tourism resilience in Batangas. With an R-squared value of 0.456, the model explains 45.6% of the variance in tourism resilience, and the p-value of .000 (significant at $\alpha = .05$) confirms the strength of this relationship. The null hypothesis is rejected, validating the assertion that community involvement plays a critical role in shaping tourism resilience.

Table 6. Community Involvement Impacted Tourism Resilience

Variables	Community Involvement Tourism Resilience
R-squared	0.456
Computed	17.84
P-value	0.000
Decision	Reject Ho
Conclusion	Significant

An R^2 of 0.456 indicates that nearly half of the changes in tourism resilience can be attributed to the degree of community involvement in post-disaster recovery. This is a substantial contribution, especially in complex systems like tourism, where multiple social, economic, and environmental factors influence resilience. The results suggest that engaged communities are not passive recipients of aid, but rather active agents in rebuilding and strengthening tourism systems. This finding aligns with Norris et al. (2008), who define community resilience as the ability of a community to leverage its resources, networks, and competencies to respond to and recover from adversity. In tourism contexts, this means that local participation in planning, decision-making, and implementation enhances adaptive capacity and fosters long-term sustainability. Moreover, Fatini and Herwangi (2022) emphasize that community involvement promotes stakeholder alignment, ensures that recovery efforts reflect local priorities, and builds trust among actors. Their study found that inclusive recovery processes lead to more resilient tourism destinations, especially in disaster-prone areas.

Lin et al. (2021) further argue that social cohesion and collective action are key drivers of resilience. When communities work together—through volunteerism, shared decision-making, and environmental stewardship—they not only rebuild infrastructure but also strengthen social capital, which is essential for enduring future shocks.

While the statistical result is strong, the literature also cautions against assuming that community involvement is always effective. Sanderson et al. (2024) note that top-down recovery models often limit genuine participation, and Owen (2018) argues that governments must be transparent about constraints and actively support diverse community voices. These insights suggest that community involvement must be meaningful, not symbolic, and supported by institutional frameworks that enable shared decision-making.

The findings that Batangas City tourism resilience is greatly impacted by community involvement align with Holling's (1973) theory of resilience, which defines resilience as a system's capacity to withstand shocks, adjust, and carry on in the face of difficulties. In Table 6, the result shows that R-squared has a value of 0.456, the model explains 45.6% of the variance in tourism resilience, and the p-value is .000. Table 5 results emphasize that community involvement has a significant impact on tourism resilience, where the results emphasized how the system's ability to adapt is strengthened by the involvement of the community. The tourism industry can absorb and adapt to the disruptions if they have a strong community involvement in planning, decision-making, and recovery efforts. Also, the community involvement has a lesser statistical impact compared to "post-disaster recovery" and "sustainable practices." Community involvement has an R-squared of 45.6%, but this does not mean that it no longer has an impact on the tourism resilience of Batangas City. 45.6% of community involvement in Batangas City is still resilient, or they will be able to recover from disruptions. Involving the community in restoring a tourism industry can help everyone to make it easier to adapt and recover after catastrophic events by planning, decision-making, and faster response when a disaster occurs.

Sustainable practices have a significant impact on tourism resilience in Batangas

The regression analysis in Table 7 confirms a statistically significant relationship between sustainable practices and tourism resilience in Batangas. With an R-squared value of 0.505, the model explains 50.5% of the variance in tourism resilience, and the p-value of .000 (significant at $\alpha = .05$) leads to the rejection of the null hypothesis. This provides strong empirical support for the claim that sustainable practices are a key driver of resilience in tourism systems.

Table 7. Sustainable Practices impacted Tourism resilience

Variables	Sustainable Practices Tourism Resilience
R-squared	0.505
Computed	19.67
P-value	0.000
Decision	Reject Ho
Conclusion	Significant

An R^2 of 0.505 indicates that over half of the variation in tourism resilience can be attributed to the adoption and implementation of sustainable practices. This is a robust finding, suggesting that environmental stewardship, resource conservation, and long-term planning are not peripheral but central to recovery and resilience. This finding aligns with the broader literature on sustainability and resilience. Mushtaha and Alaloul (2025) argue that sustainability in post-disaster contexts must encompass environmental, economic, and social dimensions to ensure long-term viability. In Batangas, practices such as proper waste management, tree planting, and sustainable tourism initiatives likely contributed to both ecological restoration and community empowerment.

Correspondingly, Yu et al. (2015) emphasize that resilience is not only about bouncing back but also about building forward better—a concept that sustainable practices inherently support. By reducing environmental

degradation and promoting responsible tourism, these practices enhance the system's ability to absorb shocks and adapt to future risks.

Moreover, Acuzar (2021) highlights that community-led environmental initiatives—such as pollution control and conservation—foster local ownership and strengthen the social fabric, which are essential components of resilience. While environmental quality was rated highly in previous tables, economic viability showed moderate scores. Vivien (2023) cautions that overemphasis on environmental sustainability without addressing economic recovery can lead to imbalanced outcomes. Therefore, sustainable practices must be holistic, ensuring that ecological gains are matched by inclusive economic revitalization and social equity.

The results from Table 7 align with Holling's (1973) classic resilience theory. The regression analysis in Table 6 confirms a statistically significant relationship between sustainable practices and tourism resilience in Batangas with an R-squared value of 0.505; the model explains 50.5% of the variance in tourism resilience, and the p-value of .000 supports the theory that a system's ability to bounce back from disruptions with the help of sustainable practices, like community-based projects (tree planting) and waste management. Also, the "Sustainable Practices" has an R-squared of 50.5% of the variance in tourism resilience. It can be explained by implementing environmentally and socially sustainable actions like the initiatives of their barangays and LGU, like tree planting, promoting conservation of resources, and proper waste disposal. These kinds of practices or initiatives can help the environment withstand the shocks of the catastrophes, and they can reduce vulnerability. Sustainable practices contribute to making tourism more resilient, stable, and prepared for upcoming difficulties.

Actionable Insights for Strengthening Tourism Resilience in Batangas

Based on the findings of this study, post-disaster recovery, community involvement, and sustainable practices all have a significant impact on the tourism resilience in Talisay, Batangas. However, the findings also identified areas that can be improved, which received the lowest rates of the results, particularly in the timeliness and adequacy of local assistance, the level of community participation in rebuilding, and the integration of economic and environmental support into recovery efforts.

For these gaps to be addressed, it is important to provide actionable recommendations that can guide in strengthening their capacity to withstand and recover from disasters. The following recommendations are intended to complement the existing initiatives within Talisay while offering practical measures that promote faster recovery, greater community involvement, and more sustainable practices in developing a resilient tourism industry.

Table 8. Recommendations to Complement Existing Initiatives

Strategy/Action	Stakeholders involved	Implementation approach	Expected impact/benefits
Eco-Tourism Income Diversification (Restoration Tours)	Local Communities (Tour Operators, Guides, Fishermen), LGU,	By developing tour packages that involve tourists in ecosystem restoration activities such as tree planting, mangrove planting, etc. A portion of the tour fee will go to disaster risk reduction (DRR) fund and community recovery programs.	This initiative addresses the relative challenges associated with the economic viability aspect ($M = 4.13$) of sustainable practices. It can provide a new source of income to be used for disaster recoveries. Moreover, it can strengthen natural defense by doing sustainable initiatives that help the environment. Lastly, it will educate and encourage tourists about resilience and sustainability.
Pre-disaster Infrastructure Mapping & Prioritization	LGU of Talisay, DPWH, Barangay officials	This approach involves identifying and categorizing important routes that link tourist destinations, medical facilities, and evacuation points; evaluating possible disaster-prone areas; and mapping these roads at the barangay or Geographic Information System (GIS) level. The priority list should be evaluated through annual drills with repair teams and incorporated into local tourism masterplans and disaster risk reduction management (DRRM).	This focuses on addressing the post-disaster recovery statement that received the lowest rating, which is the slow rebuilding of roads/infrastructure ($M = 3.91$) in a short period of two to four weeks. This promotes faster access and business recovery; the strategy makes sure that important routes are fixed immediately. This helps businesses to recover more quickly, and tourist destinations re-open faster. This reduces financial losses and promotes Talisay, Batangas as a safe and well-prepared travel destination.
Participatory Rebuilding Planning Meetings	Residents (spokesperson), Barangay Councils, LGU Tourism & Planning Office	This includes conducting meetings where residents identify their priority needs after disasters, and LGU integrates these into official recovery plans.	This initiative seeks to address the perception gap in community involvement, that even if residents participated, officials pay less attention to their needs ($M = 4.32$). The recommended actionable insight aims to amplify community voices and make authorities more responsive through these meetings among residents, the barangay, and the LGU, thereby facilitating faster recovery as authorities become more responsive to what the community really needs.
Transparent Tracking & Feedback Mechanism for Assistance	LGU, Barangays, Civil Society Groups	In line with the Participatory Rebuilding planning workshops, the LGU can post lists on barangay bulletin boards or an online page showing who already received assistance and what type of aid was given. They can also allow people to give feedback or complaints.	This strategy aims to improve the low rating for Statement 1 of the post-disaster recovery strategies: Assistance from local authorities was timely and adequate ($M = 4.15$). This promotes fairness and accountability and reduces perceptions of favoritism or delay to those affected by the disaster. This also builds trust to strengthen collaboration through stakeholders.
Maintaining Equipment & Infrastructure Security	LGU, MDRRMO	Establish a program to keep all Early Warning Systems equipment functional and secure. This includes keeping regular inspections for EWS equipment such as sirens, sensors, communication tools. Installing backup power such as solars or generators can also help to ensure operation continues during blackouts. This maintenance and security program ensures all sirens, signage, sensors, and routes are always working and protected in preparations for disasters.	This initiative does not address a low-rated statement but strengthens the high-rated Statement 10: "The recovery efforts have led to improved disaster preparedness for future events" ($M = 4.34$). It ensures the EWS equipment works reliably during disasters, reducing downtime and failures. This builds trust in the warning system and improves disaster response. It also strengthens tourism resilience by showing tourists that Talisay is a safe and well-prepared destination.
Develop Standardized Metrics for Tourism Resilience	LGU, Tourism Office, Academic Institutions, Disaster Risk Reduction and Management Office, Community	By developing a local resilience index that uses clear indicators such as safety, environmental sustainability, business continuity, and recovery capacity which will be aligned with international frameworks like the UNWTO and Sendai Framework, this initiative will strengthen existing disaster management. Data will be gathered through surveys and community workshops, where stakeholders can contribute their perspectives. Results will be consolidated and published annually in a Tourism Resilience Report Card to continuously monitor progress and guide future actions.	This approach seeks to establish a mechanism for ongoing improvement rather than concentrating on low-rated statements. This strategy offers a clear and measurable way to track progress and guide future actions. By combining technical data with community input, it ensures accuracy while promoting cooperation and accountability among stakeholders while improving Talisay's reputation as a safe and resilient tourism destination.

CONCLUSION

This study examined the contributions of post-disaster recovery strategies, community involvement, and sustainable practices to tourism resilience in Batangas, a region frequently affected by volcanic eruptions, earthquakes, and typhoons. Based on responses from 381 residents of Talisay, the quantitative results indicated that post-disaster recovery strategies ($R^2 = 0.520$), community involvement ($R^2 = 0.456$), and

sustainable practices ($R^2 = 0.505$) each had a statistically significant impact on tourism resilience ($p < 0.01$). Among these, environmental initiatives within sustainable practices showed the strongest effect, while active community participation played a key role in strengthening adaptive capacity and shaping overall resilience outcomes.

The study's implications are twofold:

Theoretical Implications. This study provides a theoretical advancement by presenting tourism resilience as relationships in which community involvement serves as the intermediary process that integrates sustainable practices and recovery efforts into long-term adaptability. The findings examined how tourism destinations recover after a disruption, how post-disaster recovery, community involvement, and sustainable practices helps the Batangas to recover from the natural disasters. The results support the applicability of Holling's Resilience Theory which is the ability of the ecosystem to adapt and absorb changes. The theory emphasis on long-term adaptability and sustainability in tourism recovery by engaging locals. Additionally, the study contributes to the existing discussion by presenting community involvement as a source for resilience and a result of sustainable recovery, focusing on the significance of collaboration and shared responsibility rather than managerial actions as the means by which resilience in tourism develops. The study thus strengthens resilience and sustainability theory by providing a combined framework useful for disaster-prone destinations for tourism seeking long-term transformation rather than short-term recovery.

Practical Implications. The findings reinforce the applicability of resilience theory in understanding tourism recovery and the role of community engagement in disaster-affected areas. From a practical standpoint, local government units, tourism offices, and community organizations may strengthen tourism resilience by enhancing environmental initiatives such as waste management and ecological conservation, promoting participatory planning and stakeholder engagement, and implementing structured economic and social recovery programs after disasters. Despite its contributions, this study has limitations. Its scope was confined to Talisay, Batangas, and the respondents were limited to local residents, excluding broader tourism stakeholders such as policymakers, business owners, and NGOs. Additionally, the purely quantitative approach limits the ability to capture community emotions, cultural meanings, and lived experiences, which are essential to a deeper understanding of resilience.

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Future research may expand the geographical scope to include multiple municipalities for comparative analysis and involve a wider range of tourism stakeholders to provide a more comprehensive perspective. Incorporating mixed method approaches that combine surveys with interviews or focus group discussions could deepen understanding by capturing community narratives and local ecological knowledge. Longitudinal studies may also be conducted to examine how tourism resilience evolves over time and in response to recurring climate-related risks.

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REFERENCES

- Abid, S. K., Sulaiman, N., Samman, B., Al-Wathinani, A. M., & Goniewicz, K. (2025). Cultural dynamics in Disaster Management: Exploring sociocultural influences on disaster response in Malaysia. *Disaster Medicine and Public Health Preparedness*, 19. <https://doi.org/10.1017/dmp.2025.68>
- Acuzar, A. M. (2021). Disaster Waste Management and its Benefits for Post-Disaster Recovery. *Auckland.ac.nz*. <https://researchspace.auckland.ac.nz/items/28076bde-d4ad-45ec-9001-120d8e49035d>
- Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience.
- Aparecio, D. E., & Torrejas, I. E. (2024). Post-Disaster Recovery: Evaluating business resilience in MSMeS in Monkayo, Davao de Oro. *International Journal of Research and Scientific Innovation*, 11(9), 331–337. <https://doi.org/10.51244/ijrsi.2024.1109029>
- Bakic, H., & Ajdukovic, D. (2021). Resilience after natural disasters: the process of harnessing resources in communities differentially exposed to a flood. *European Journal of Psychotraumatology*, 12(1). <https://doi.org/10.1080/20008198.2021.1891733>
- Baloch, Q. B., Shah, S. N., Iqbal, N., Sheeraz, M., Asadullah, M., Mahar, S., & Khan, A.U. (2022). Impact of Tourism Development upon Environmental sustainability: a Suggested Framework for Sustainable Ecotourism. *Environmental Science and Pollution Research*, 30(3), 5917–5930. NCB. <https://doi.org/10.1007/s11356-022-22496-w>
- Bannon, V., & Irving, H. (2020). LITERATURE REVIEW ON LAW AND DISASTER RECOVERY AND RECONSTRUCTION. IFRC. https://www.ifrc.org/sites/default/files/Final_Literature-Review-on-Law-and-Recovery.pdf
- Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.
- Crow, D. A., & Albright, E. A. (2021). Community disaster recovery. <https://doi.org/10.1017/9781009053457>
- Cruz, R. (2019). Sustainable tourism (1st ed.). Philippines: Rex Publishing Inc.
- Fu, Y. K. (2020). The impact and recovering strategies of the COVID-19 pandemic: Lessons from Taiwan's hospitality industry. *Cogent Social Sciences*, 6(1). <https://doi.org/10.1080/23311886.2020.1829806>
- Doroteo, H. J. (2015). Philippines: disaster risk profile and disaster risk reduction (DDR) framework: natural calamities. University of Oviedo, Asturias, Spain, 1-46. DOI:10.13140/RG.2.1.4656.3922
- Dube, E. (2020). The build-back-better concept as a disaster risk reduction strategy for positive reconstruction and sustainable development in Zimbabwe: A literature study. *International Journal of Disaster Risk Reduction*, 43, 101401. <https://doi.org/10.1016/j.ijdrr.2019.101401>
- Emmanuel Adikwu Ukpoju, Adedayo Adefemi, Abimbola Oluwatoyin Adegbite, Obe Destiny Balogun, Bartholomew Obekioye Obaedo, & Ayodeji Abatan. (2024). A review of sustainable environmental practices and their impact on U. S. economic sustainability. *World Journal of Advanced Research and Reviews*, 21(1), 384–392. <https://doi.org/10.30574/wjarr.2024.21.1.2717>
- Enago. (2020). Ethical Considerations in Research. Retrieved from <https://www.enago.com/academy/2022-nutshell-reminiscing-year-opportunities-achievements/?form=MG0AV3>
- Espiner, S., Orchiston, C., & Higham, J. (2017). Resilience and sustainability: a complementary relationship? Towards a practical conceptual model for the sustainability–resilience nexus in tourism.

- Journal of Sustainable Tourism, 25(10), 1385–1400. <https://doi.org/10.1080/09669582.2017.1281929>
- Estevão, C., & Costa, C. (2020). Natural disaster management in tourist destinations: a systematic literature review. *European Journal of Tourism Research*, 25, 2502. <https://doi.org/10.54055/ejtr.v25i.417>
- Fatini, M. A., & Herwangi, Y. (2022). Factors that Influence Tourism Recovery, Post Disaster Earthquake in Sembalun Sub-District, East Lombok Regency. *Built Environment Studies*, 3(1), 27–40. <https://doi.org/10.22146/best.v3i1.1871>
- Fran H. Norris; Susan P. Stevens; Betty Pfefferbaum; Karen F. Wyche; Rose L. Pfefferbaum. (2008). Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. , 41(1-2), 127–150. doi:10.1007/s10464-007-9156-6
- Fronza, L. F., Umali, J. D., Salve Deinne E. Balantac, Mac, A., & Abel, J. V. (2025). Community-Driven Disaster Risk Reduction: Investigating Capacities and Vulnerabilities of Selected Barangay in Lipa, Batangas, Philippines. 2025 IEEE International Humanitarian Technology Conference (IHTC), 7–14. <https://doi.org/10.1109/IHTC65087.2025.11216321>
- Ganoe, M., Roslida, J., & Sihotang, T. (2023). The impact of volunteerism on community resilience in disaster management. *Jurnal Ilmu Pendidikan Dan Humaniora*, 12(3), 199–213. <https://doi.org/10.35335/jiph.v12i3.11>
- Ghanad, A. (2023). An Overview of Quantitative Research Methods. *Research Gate*; Everant Journals.https://www.researchgate.net/publication/373370007_An_Overview_of_Quantitative_Research_Methods
- Ghanem, Samar Khairy. (2018). The Relationship between Population and the Environment and Its Impact on Sustainable Development in Egypt Using a Multi-Equation Model. *Environment, Development and Sustainability*, 20: 305-342
- Gonzales, G. A. (2025). Comprehensive Sustainable Tourism Plan for Calatagan. *Scribd*. <https://www.scribd.com/document/957868396/Comprehensive-Sustainable-Tourism-Plan-for-Calatagan>
- Gowan, M. E., Kirk, R. C., & Sloan, J. A. (2014). Building resiliency: a cross-sectional study examining relationships among health-related quality of life, well-being, and disaster preparedness. *Health and Quality of Life Outcomes*, 12(1), 85. <https://doi.org/10.1186/1477-7525-12-85>
- GSTC. (2021). What Is Sustainable Tourism? Global Sustainable Tourism Council (GSTC). <https://www.gstccouncil.org/what-is-sustainable-tourism/>
- Hajian, M., & Jangchi Kashani, S. (2021). Evolution of the concept of sustainability. From Brundtland Report to sustainable development goals. *Sustainable Resource Management*, 1–24. <https://doi.org/10.1016/b978-0-12-824342-8.00018-3>
- Hallegatte, S., Rentschler, J., & Rozenberg, J. (2019). Lifelines: The resilient infrastructure opportunity. *World Bank Publications*. <https://hdl.handle.net/10986/31805>
- Hamideh, S. (2020). Opportunities and Challenges of Public Participation in Post-Disaster Recovery Planning: Lessons from Galveston, TX. *Natural Hazards Review*, 21(4). [https://doi.org/10.1061/\(asce\)nh.1527-6996.0000399](https://doi.org/10.1061/(asce)nh.1527-6996.0000399)
- Hamideh, S., Loos, S., Rivera, J., Jerolleman, A., Champeau, H., & Wu, H. (2023). IJMED special issue: Longitudinal recovery. *International Journal of Mass Emergencies & Disasters*, 41(1), 4–8. <https://doi.org/10.1177/02807270231184213>
- Harahap, G. Y. (2020). Instilling Participatory Planning in Disaster Resilience Measures: Recovery of Tsunami-affected Communities in Banda Aceh, Indonesia. *Budapest International Research in Exact Sciences (BirEx) Journal*, 2(3), 394-404. DOI: <https://doi.org/10.33258/birex.v2i3.1085>
- Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, 4(1), 1–23. <https://doi.org/10.1146/annurev.es.04.110173.000245>
- Ichinosawa, J. (2006). Reputational disaster in Phuket: the secondary impact of the tsunami on inbound tourism. *Disaster Prevention and Management an International Journal*, 15(1), 111–123. <https://doi.org/10.1108/09653560610654275>
- Iuchi, K., & Mutter, J. (2020). Governing community relocation after major disasters: An analysis of three different approaches and its outcomes in Asia. *Progress in Disaster Science*, 6, 100071. <https://doi.org/10.1016/j.pdisas.2020.100071>
- Islam, E., Wahab, H. A., & Benson, O. G. (2020). Structural and operational factors as determinants of meaningful community participation in sustainable disaster recovery programs: The case of Bangladesh. *International Journal of Disaster Risk Reduction*, 50, 101710. <https://doi.org/10.1016/j.ijdr.2020.101710>
- Jerolleman, A. (2020). Challenges of Post-Disaster Recovery in Rural Areas. In: Laska, S. (eds) *Louisiana's Response to Extreme Weather. Extreme Weather and Society*. Springer, Cham. https://doi.org/10.1007/978-3-030-27205-0_11
- Kaniasty, K. (2019). Social support, interpersonal, and community dynamics following disasters caused by natural hazards. *Current Opinion in Psychology*, 32, 105–109. <https://doi.org/10.1016/j.copsyc.2019.07.026>
- Khawar, R., Malik, F., Maqsood, S., Yasmin, T., & Habib, S. (2013). Age and gender differences in emotion recognition ability and intellectual functioning. *Journal of behavioral sciences*, 23(3), 53-71.
- Kim, J. H. (2019). Multicollinearity and misleading statistical results. *Korean Journal of Anesthesiology*, 72(6), 558–569. <https://doi.org/10.4097/kja.19087>
- Koopman, J. (2021). The restoration of gotong royong as a form of post-disaster solidarity in Lombok, Indonesia. *South East Asia Research*, 29(3), 279–296. <https://doi.org/10.1080/0967828X.2021.1966318>
- Kumar, P., Sharma, L., & Nikhilesh Chandra Sharma. (2024). Sustainable Development Balancing Economic Viability, Environmental Protection, and Social Equity. *Advances in Logistics, Operations, and Management Science Book Series*, 212–234. <https://doi.org/10.4018/979-8-3693-2197-3.ch012>
- Liao, K., & Hu, Y. (2025). Factors influencing disaster preparedness behaviors of older adults. *PLoS ONE*, 20(2), e0315617. <https://doi.org/10.1371/journal.pone.0315617>
- Lin, Y., Kelemen, M., & Tresidder, R. (2018). Post-disaster tourism: building resilience through community-led approaches in the aftermath of the 2011 disasters in Japan. *Journal of Sustainable Tourism*, 1–18. <https://doi.org/10.1080/09669582.2018.1511720>
- Lin, Y., Kelemen, M., & Kiyomiya, T. (2021). Bridging community resilience and sustainable tourism development via post-disaster education tourism in rural Japan. *The Journal of Organization and Discourse*, 2(1), 32–44. https://doi.org/10.36605/jscos.2.1_32
- Liu, L.-W., Pahrudin Pahrudin, Tsai, C.-Y., & Hao, L. (2024). Disaster, risk and crises in tourism and hospitality field: A pathway toward tourism and hospitality management framework for resilience and recovery process. *Natural Hazards Research*, 4(4). <https://doi.org/10.1016/j.nhres.2024.06.001>
- Loayza, N. V., Olaberria, E., Rigolini, J., & Christiaensen, L. (2012). Natural Disasters and Growth: Going beyond the averages. *World Development*, 40(7), 1317–1336. <https://doi.org/10.1016/j.worlddev.2012.03.002>
- Marsh, G., Ahmed, K. I., Mulligan, M., Donovan, J., & Barton, S. (Eds.). (2017). *Community engagement in post-disaster recovery*. Taylor & Francis. <https://doi.org/10.4324/9781315534213>

- McClelland, A. G., Shaw, D., O'Grady, N., & Fattoum, A. (2022). Recovery for Development: A Multi-Dimensional, Practice-Oriented Framework for Transformative Change Post-Disaster. *The Journal of Development Studies*, 59(1), 1–20. <https://doi.org/10.1080/00220388.2022.2130055>
- Medway, P., Barrena, I., & Gonzalez, L. (2020, September). Six Country Evaluation of Oxfam America's Strengthening Community Preparedness, Rapid Response and Recovery in Asia/Pacific Islands and Central America. OXFAM. https://webassets.oxfamamerica.org/media/documents/APLIFT_ATECA_Final_Evaluation_COMPLETED_NpRr2J3.pdf
- Monteil, C., Simmons, P., & Hicks, A. (2019). Post-disaster recovery and sociocultural change: Rethinking social capital development for the new social fabric. *International Journal of Disaster Risk Reduction*, 42, 101356. <https://doi.org/10.1016/j.ijdrr.2019.101356>
- Moroney, J. D. P., Schear, J. A., Acosta, J. D., Garber, C., Heintz, S., Hornung, J. W.,
- Moshakova, E. (2021). The recovery of a tourist destination after a natural disaster. Auckland University of Technology, TUWHERA.
- Mushtaha, A. W., & Alaloul, W. S. (2025). Sustainability Factors Influencing Post-Disaster Reconstruction Projects: Critical Review and Bibliometric Analysis. *Sustainable Futures*, 100930. <https://doi.org/10.1016/j.sfr.2025.100930>
- Ngulube, N. K. (2024). Building Back Better Together: Exploring Community Engagement in Post-Disaster Recovery Efforts - a review. *Journal of Multidisciplinary Research Advancements*, 2(2), 138–149. <https://doi.org/10.3126/jomra.v2i2.73082>
- Ngulube, N. K., Tatano, H., & Samaddar, S. (2023). Community Insights: Citizen Participation in Kamaishi Unosumai Decade-Long Recovery from the Great East Japan Earthquake. *International Journal of Disaster Risk Science*, 14(6), 886–897. <https://doi.org/10.1007/s13753-023-00527-5>
- Ngulube, N. K., Tatano, H., & Samaddar, S. (2024). Factors impacting participatory Post-Disaster relocation and housing reconstruction: the case of Tsholotsho District, Zimbabwe. *International Journal of Disaster Risk Science*, 15(1), 58–72. <https://doi.org/10.1007/s13753-024-00536-y>
- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1–2), 127–150. <https://doi.org/10.1007/s10464-007-9156-6>
- Nurjanah, A., Mutiarin, D., Apriliani, R., Manaf, H. A., & Jovita, H. (2024). Community as Stakeholders of Disaster Mitigation at Objects with Tourist Attractions in Sleman Regency in realizing Sustainable Tourism. *E3S Web of Conferences*, 594, 01006. <https://doi.org/10.1051/e3sconf/202459401006>
- OECD. (2015). The resilience of economies to disasters. Organisation for Economic Co-operation and Development. <https://www.oecd.org/economy/resilience>
- Owen, C. (2018). How can governments enable and support community-led disaster recovery? *The Australian Journal of Emergency Management*, 33(1), 66–69. <https://search.informit.org/doi/10.3316/informit.456370123062555>
- Pandey, R., Kumar, P., Archie, K. M., Gupta, A. K., Joshi, P. K., Valente, D., & Petrosillo, I. (2018). Climate change adaptation in the western-Himalayas: Household level perspectives on impacts and barriers. *Ecological Indicators*, 84, 27–37. <https://doi.org/10.1016/j.ecolind.2017.08.021>
- Pyke, J., Law, A., Jiang, M., & De Lacy, T. (2018). Learning from the locals: the role of stakeholder engagement in building tourism and community resilience. *Journal of Ecotourism*, 17(3), 206–219. <https://doi.org/10.1080/14724049.2018.1505586>
- Rachmad, Yoesoep Edhie. 2022. Communication Resilience Theory. Santarém Gótico Publicações Internacionais, Edição Especial 2022. <https://doi.org/10.17605/osf.io/m687a>
- Rahmani, M., Muzwagi, A. & Pumariega, A.J. Cultural Factors in Disaster Response Among Diverse Children and Youth Around the World. *Curr Psychiatry Rep* 24, 481–491 (2022). <https://doi.org/10.1007/s11920-022-01356-x>
- Ranghieri, F., & Ishiwatari, M. (2014). Learning from Megadisasters: Lessons from the Great East Japan Earthquake. Global Facility for Disaster Reduction and Recovery (GFDRR). <https://www.gfdr.org/sites/default/files/publication/Learning%20from%20Megadisasters%20%20Lessons%20from%20the%20Great%20East%20Japan%20Earthquake.pdf>
- Rasool, Yasir, Jianguo Du, and Kishwar Ali. (2024). Exploring the Linkage between Globalization and Environmental Degradation: A Disaggregate Analysis of Indonesia. *Environment Development and Sustainability*, 26: 16887–16915.
- Roselló, J., Becken, S., & Santana-Gallego, M. (2020). The effects of natural disasters on international tourism: A global analysis. *Tourism Management*, 79, 104080. <https://doi.org/10.1016/j.tourman.2020.104080>
- Rouhanizadeh, B., Kermanshachi, S., & Nipa, T. J. (2020). Exploratory analysis of barriers to effective post-disaster recovery. *International Journal of Disaster Risk Reduction*, 50, 101735. <https://doi.org/10.1016/j.ijdrr.2020.101735>
- Ryan, B., Johnston, K. A., Taylor, M., & McAndrew, R. (2020). Community engagement for disaster preparedness: A systematic literature review. *International Journal of Disaster Risk Reduction*, 49, 101655. <https://doi.org/10.1016/j.ijdrr.2020.101655>
- Sab, C., Dotong, C. I., & Calayan, A. (2025). Systems thinking in disaster risk reduction: A strategic framework for tourism resilience in Batangas. Lyceum of the Philippines University – Batangas.
- Salthouse, T. A., Atkinson, T. M., & Berish, D. E. (2003). Executive functioning as a potential mediator of Age-Related cognitive decline in normal adults. *Journal of Experimental Psychology General*, 132(4), 566–594. <https://doi.org/10.1037/0096-3445.132.4.566>
- Sanderson, D., Heffernan, T., DeSisto, M., & Shearing, C. (2024). Community-centred disaster recovery: A call to change the narrative. *Disasters*. <https://doi.org/10.1111/disa.12655>
- Sarker, M. N. I., Peng, Y., Yiran, C., & Shouse, R. C. (2020). Disaster resilience through big data: Way to environmental sustainability. *International Journal of Disaster Risk Reduction*, 51, 101769. <https://doi.org/10.1016/j.ijdrr.2020.101769>
- Saul, J. (2021b). Collective trauma, collective healing. <https://doi.org/10.4324/9781003231448>
- Senimoli, A., Tabe, T., & Combes, H. J. D. (2020). Influence of Socio-Cultural factors on community disaster response during TC Winston: a case study of Burenitu Village, Fiji. *International Journal of Safety and Security Engineering*, 10(3), 343–350. <https://doi.org/10.18280/ijss.100305>
- Serter, M., & Gumusburun Ayalp, G. (2024). A Holistic Analysis on Risks of Post-Disaster Reconstruction Using RStudio Bibliometrix. *Sustainability*, 16(21), 9463. <https://doi.org/10.3390/su16219463>
- Sobhaninia, S. (2023). Does social cohesion accelerate the recovery rate in communities impacted by environmental disasters in Puerto Rico? An analysis of a community survey. *Environmental Advances*, 13, 100400. <https://doi.org/10.1016/j.envadv.2023.100400>
- Spicka, J., Hlavsa, T., Soukupova, K., & Stollbova, M. (2019). Approaches to estimation the farm-level economic viability and sustainability in agriculture: A literature review. *Agricultural Economics (Zemědělská Ekonomika)*, 65(No. 6), 289–297. <https://doi.org/10.17221/269/2018-agricecon>
- future directions. *Tourism Review International*, 25(2), 79–88.

- Tuhkanen, H. (2023). Shifting power through participation in post-disaster recovery: A scoping review. *International Journal of Disaster Risk Reduction*, 97, 104041. <https://doi.org/10.1016/j.ijdr.2023.104041>
- Van Onselen, V., Ota, M., Pratiwi, E., Lin, W., & Lin, T. (2025). Community involvement in ecosystem-based disaster risk reduction: a scoping review to guide assessment metrics. *IOP Conference Series Earth and Environmental Science*, 1443(1), 012010. <https://doi.org/10.1088/1755-1315/1443/1/012010>
- Villacin, D. T. (2017). A review of Philippine government disaster financing for recovery and reconstruction. *Www.econstor.eu*. <https://www.econstor.eu/handle/10419/173598>
- Vivien, S. (2023). Sustainable Development: Balancing Economic Prosperity and Environmental Concerns. *Journal of Economics and Economic Education Research*, 24 (4), 1–3. <https://www.abacademies.org/articles/sustainable-development-balancing-economic-prosperity-and-environmental-concerns-16224.html>
- Vizconde, A. M. L., & Felicen, S. S. (2012). Tourism Industry of Batangas Province, Philippines: Basis for Improved Tourism Program. *International Association of Multidisciplinary Research Journal*, 3(1), 317-334.
- Wang, S., Wang, J., Li, J., & Yang, F. (2020). Do motivations contribute to local residents' engagement in pro-environmental behaviors? Resident-destination relationship and pro-environmental climate perspective. *Journal of Sustainable Tourism*, 28(6), 834–852. <https://doi.org/10.1080/09669582.2019.1707215>
- Wearing, S., Beirman, D., & Grabowski, S. (2020). Engaging volunteer tourism in post-disaster recovery in Nepal. *Annals of Tourism Research*, 80, 102802. <https://doi.org/10.1016/j.annals.2019.102802>
- World Bank. (2020). *Resilient Tourism: Competitiveness in the Face of Disasters*. Washington, DC: World Bank. [tps://openknowledge.worldbank.org/server/api/core/bitstreams/7b1611f4-df2e-5226-979a-891e3149b811/content](https://openknowledge.worldbank.org/server/api/core/bitstreams/7b1611f4-df2e-5226-979a-891e3149b811/content)
- Yang, E., Kim, J., Pennington-Gray, L., & Ash, K. (2021). Does tourism matter in measuring community resilience? *Annals of Tourism Research*, 89, 103222. <https://doi.org/10.1016/j.annals.2021.103222>
- Ylagan, A. P., & Laguador, J. M. (2014). Tourism Studies in the Province of Batangas, Philippines: A. *International Journal of Management*, 4(10), 421-428.
- Yu, S., Kim, S.-W., Oh, C.-W., An, H., & Kim, J.-M. (2015). Quantitative assessment of disaster resilience: An empirical study on the importance of post-disaster recovery costs. *Reliability Engineering & System Safety*, 137, 6–17. <https://doi.org/10.1016/j.ress.2014.12.007>
- Zhang, F., Lv, Y., & Sarker, M. N. I. (2024). Resilience and recovery: A systematic review of tourism governance strategies in disaster-affected regions. *International Journal of Disaster Risk Reduction*, 103, 104350. <https://doi.org/10.1016/j.ijdr.2024.104350>

Guide to Contributors

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1. Manuscripts should be endorsed by their respective research advisers together with the consent from the student researchers.
2. Authors should submit two versions of the manuscript. One file (“file not for review”) should include the names of the authors (adviser and student/s), their contact information (e-mail addresses), and current affiliation (program/area and college). The other file (“file for review”) should remove any information that would identify the authors.
3. The paper should include keywords and an abstract of 100 – 200 words.
4. The article should contain approximately 6000 – 7000 words (including abstract, tables/figures, and references) and should be typed in a 12-point font, Garamond, double-spaced, with one-inch margin on all sides.
5. Tables/figures and references should follow the APA format style. Table titles are placed above while figure titles are placed below.
6. Reference should follow the APA format style.
7. The editors prefer to have the file in Microsoft Office Word 97-2003 Document (.doc) format and should be sent to antorcha.research@lettran.edu.ph.
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All communications should be addressed to:

The Editor

Antorcha

Colegio de San Juan de Letran

151 Muralla St., Intramuros, Manila, Philippines

8527-7693 to 97 loc. 122

e-mail: antorcha@lettran.edu.ph

