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Coping Strategies and Learned Helplessness Among Older Filipino Women in Flood-Prone Communities in Bacoor, Cavite

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Mackenzi C. Longno[1]
Chasity R. Ronan[1]
Zxeira Kae P. Serillano[1]
Joanna C. Pineda[2]
Reynald Alfred G. Sy[3], ORCID No. 0009-0007-9522-4603

[1]Student, Psychology Department, Far Eastern College, MetroGate Silang Estates, Silang, Cavite, Philippines
[2]Faculty Member, Psychology Department, Far Eastern College, MetroGate Silang Estates, Silang, Cavite, Philippines
[3]Professor IV, Teacher Education and Lifelong Learning Department, Far Eastern College, Silang, Cavite, Philippines

Abstract

This quantitative study addresses a gap in the existing literature by examining the coping strategies and learned helplessness levels among Filipino women in late adulthood living in high flood-prone communities in Bacoor, Cavite. Using a convenience sampling technique, 116 participants were assessed with the Learned Helplessness Scale and the Filipino Coping Strategy Scales. The study explored the relationship between coping strategies and learned helplessness, aiming to understand their impact on mental health. The results revealed that participants mainly used religiosity (*pagkarelihiyoso*) as a coping strategy (M = 3.63) and displayed a high level of learned helplessness (M = 46.19). A positive correlation was found between tolerance (*pagtitiis*) and learned helplessness (r = 0.223, p = 0.016), while a negative correlation was observed between cognitive reappraisal (*pagsusuri*) and learned helplessness (r = -0.212, p = 0.022). The present study contributes to the existing body of knowledge by providing empirical evidence on the coping strategies and psychological impacts in flood-prone areas, highlighting the need for tailored interventions for older adults in such communities. Based on the findings, psychoeducational workshop or seminar, localized peer support groups, and collaboration with religious or faith-based organizations are proposed as an intervention to enhance cognitive reappraisal and reduce reliance on passive coping strategies like tolerance, with the goal of reducing psychological distress and promoting resilience in the face of recurring floods.

Keywords: coping strategies; learned helplessness; older Filipino women; flood-prone communities (Bacoor, Cavite); religiosity (pagkarelihiyoso)

INTRODUCTION

The Philippines is among the world's most disaster-prone nations, with about 20 tropical cyclones (TCs) entering the Philippine Area of Responsibility (PAR) annually, eight to nine of which make landfall (Santos, 2021). Nearly 70% occur between July and October, the peak typhoon season. PAGASA reports confirm that the country experiences more tropical cyclones than any other place globally, with heavy rains and strong winds causing severe flooding, especially in coastal and low-lying areas (Williams et al., 2020).

In Cavite, seven municipalities—Bacoor, General Trias, Imus, Kawit, Noveleta, Rosario, and Tanza—are highly susceptible to flooding (Inocencio, 2024). Cavite's urbanization, reaching 74%, surpasses the national average of 54%, placing it 4th among provinces exceeding the national urbanization level (PSA, 2020; Pew Research Center 2008; Sander 2011, as cited in Palanca-Tan, 2021). Urban density increases vulnerability, and with Bacoor's coastal location and high population, flooding poses significant environmental threats (Son et al., 2023). Changes in land use have intensified flooding in Bacoor, generating social, economic, and psychological burdens, particularly for older adults, especially women aged 65 and above, who face age-related physical decline that complicates evacuation and recovery (Dizon et al., 2023; Fotini & Sotiris, 2024). Social

isolation further increases their risk of mental health issues such as anxiety and depression (Önder, 2024).

Coping strategies vary by individual and gender. Women often employ emotion-focused strategies, such as seeking social support and engaging in religious activities, whereas men typically use problem-focused approaches (Ibañez, 2021). Rilveria (2018) identified nine coping strategies in the Filipino Coping Strategies Scale: cognitive reappraisal (*pagsusuri*), social support (*paghingi ng tulong*), problem-solving (*pagtugon*), religiosity (*pagkarelihiyoso*), tolerance (*pagtitiis*), emotional release (*paglabas ng saloobin*), overactivity (*pagmamalabis*), relaxation/recreation (*paglilibang*), and substance use (*pagbibisyo*). These include adaptive and maladaptive strategies consistent with prior Filipino coping research (Ladrido-Ignacio & Perlas, 1995; Tan, 2006).

Despite extensive research on flooding's physical and economic effects, its psychological impact on older adults in the Philippines remains underexplored. Learned helplessness occurs when individuals repeatedly face uncontrollable negative events and feel powerless to influence outcomes, even when change is possible (Nickerson, 2024). Recurrent flooding may promote demotivation and reduce proactive coping, with women often relying on emotion-focused strategies that regulate emotions but do not alter circumstances.

This study examines the correlation between coping strategies and learned helplessness among Filipino women in late adulthood in flood-prone communities. By identifying which strategies foster resilience or contribute to helplessness, the research provides insights for the Local Government Unit (LGU) to design interventions that mitigate learned helplessness and enhance the psychological resilience of older adults during disasters.

Research Questions. This study aimed to answer four research questions, three of which can be tested using the instruments employed in the study. The fourth objective, which focuses on the intervention, was derived from the responses and interpretation of data. The specific research questions are as follows:

1. What is the primary coping strategy of Filipino women in late adulthood in high flood-prone communities in Bacoor, Cavite out of the following:
   1.1 Social Support (*paghingi ng tulong*)
   1.2 Problem-Solving (*pagtugon*)
   1.3 Religiosity (*pagkarelihiyoso*)
   1.4 Tolerance (*pagtitiis*)
   1.5 Emotional Release (*paglabas ng saloobin*)
   1.6 Overactivity (*pagmamalabis*)
   1.7 Relaxation-Recreation (*paglilibang*)
   1.8 Substance Use (*pagbibisyo*)
   1.9 Cognitive Reappraisal (*pagsusuri*)

2. What is the level of learned helplessness among Filipino women in late adulthood in high flood-prone communities in Bacoor, Cavite based on the Learned Helplessness Scale?

3. What is the correlation between the level of learned helplessness and the primary coping strategy of women in late adulthood in high flood-prone communities in Bacoor, Cavite?

4. What interventions may be proposed to the Local Government Unit to manage the development of learned helplessness among women in late adulthood in high flood-prone communities in Bacoor, Cavite?

Null Hypothesis (Ho). At the 0.05 level of significance, there is no significant correlation between the level of learned helplessness and the primary coping strategy of women in late adulthood in high flood-prone communities in Bacoor, Cavite.

LITERATURE REVIEW

Theory of Learned Helplessness. The Theory of Learned Helplessness, introduced by Seligman and Maier (1967), explains how individuals cease attempts to change adverse situations after repeated exposure to uncontrollable events. In their experiment, dogs subjected to inescapable

shocks later failed to escape even when able, unlike dogs exposed to escapable shocks, demonstrating how uncontrollability suppresses motivation and fosters passivity.

Seligman (1972) extended this to humans, proposing that chronic exposure to uncontrollable events can lead to generalized helplessness marked by motivational decline, emotional dysregulation, and cognitive impairments, forming a key model for understanding depression and related maladaptive states. Abramson et al. (1978) advanced the theory by emphasizing attributional style in their reformulated model. Learned helplessness begins with objective non-contingency, followed by perceived non-contingency and causal attributions, which shape expectations of future non-contingency. This process results in symptoms such as withdrawal and emotional distress. For instance, a father may stop seeking treatment if he attributes his child's lack of recovery to incurability, and a student who repeatedly fails despite studying may conclude he is incapable.

Boddez et al. (2022) redefined the concept as "a persistent lack of reinforcement," affecting both avoidance and approach behaviors. They proposed integrating Seligman's stimulus-based theory with Kuhl's (1981) goal-directed model, framing helplessness as disrupted goal pursuit in which individuals abandon goals after repeated failure or diminished belief in efficacy.

This reconceptualization broadens the theory's relevance to burnout, fatigue, and attachment disorders, showing how repeated failure leads individuals to disengage not due to lack of ability but to loss of belief in possible success.

Empirical research supports these ideas. Joy, Ramachandran, and George (2021) found that individuals repeatedly exposed to flooding in Kerala reported significantly higher learned helplessness and distress than those affected once or not at all. Repeated uncontrollable disasters increased feelings of powerlessness, anxiety, and depression. These findings reflect broader disaster literature showing that survivors of natural calamities often experience

prolonged helplessness, emphasizing the need for mental health interventions focused on psychoeducation, resilience building, and social support.

Thus, learned helplessness is a multifaceted response to uncontrollability, shaped by behavioral suppression and cognitive interpretations. From laboratory studies to disaster contexts, it remains essential in understanding how individuals respond to adversity and how recovery can occur.

Prevalence of Flooding in Bacoor, Cavite. Geographically, low-lying and coastal areas are more vulnerable to flood-related challenges (Williams et al., 2020). Cavite, a coastal province in the Philippines, faces high flood risks due to its low-lying terrain, drainage issues, and rapid urbanization. The Philippine Statistics Authority (2020) notes that Cavite's 76% urbanization rate surpasses the national average of 54%, ranking it 4th among the most urbanized provinces.

This vulnerability is most evident in Bacoor, a first-class coastal city adjacent to Metro Manila. Inocencio (2024) identified Bacoor among seven highly flood-prone municipalities at a 1:10,000 scale. It is the most densely populated, with 664,625 residents (PSA, 2021), and serves as Cavite's gateway to Manila, only 21 km away (Geodatos, 2025). Bacoor is also the only coastal city among the group, spanning about 93,679.38 hectares with a 122.57 km shoreline, making it particularly susceptible to coastal flooding (Skouloudis et al., 2022).

HazardHunterPH identifies twelve of Bacoor's 73 barangays as highly flood susceptible. Urban-driven infrastructure problems further aggravate flood conditions. Although urban living is associated with higher income, education, and occupational structures (Easterlin et al., 2011, as cited in Palanca-Tan, 2021), Sander (2011, as cited in Palanca-Tan, 2021) states that residence influences lifestyle and happiness. Studies indicate that rural residents and those living in countryside are slightly happier than urban residents (Pew Research Center 2006; Sander 2011, as cited in Palanca-Tan, 2021).

Dizon et al. (2023) found that rapid development and land conversion in the Imus River Basin, which includes Bacoor, increased peak discharges and runoff, worsening flooding in low-lying areas. Manila Bay's shallow, semi-enclosed basin also contributes to elevated sea levels during storms and monsoon winds, intensifying flooding (Rivera et al., 2020).

The Prinza Dam adds to water-level issues. It overflowed on October 29, 2024, due to heavy rains from Severe Tropical Storm PaengPH, disrupting a key route between Bacoor and Las Piñas (Rappler, 2024). Bacoor's drainage problems continue to worsen floodwaters during typhoons, prompting the Bacoor Reclamation and Development Project to stress the need for proper drainage systems.

Recent typhoons highlight the severity of flooding. In July 2024, Bagyong Carina PH displaced 6,000 Caviteños, leaving Bacoor roads impassable (Deña, 2024). Two dams and nine river systems were also reported overflowing during Bagyong Kristine's landfall in October 2024 (Delizo, 2024).

Rationale in Choosing Women in Late Adulthood as Respondents. In 1963, Erik Erikson introduced the psychosocial development theory, outlining eight stages of human growth, each marked by a psychological conflict. Late adulthood, from age 65 until death, centers on integrity versus despair. Those who perceive their lives as meaningful experience contentment, while those dwelling on regrets feel dissatisfaction (Lang & Cone, 2022). Although widely applied, Erikson's model reflects Western perspectives and may overlook cultural differences (Skalski, 2022). The APA (2021) notes that late adulthood spans five decades, resulting in wide variation in emotions, behaviors, and experiences. This highlights the need to study Filipino older adults, as prior research on flooding-related helplessness focused on adults aged 24–45 in Kerala (J et al., 2021) and a broader age range in Nottinghamshire (Fothergill et al., 2021).

Older adults face heightened disaster risks and insufficient response. Physical decline, including diminished senses and increased susceptibility to conditions like arthritis and neurocognitive disorders, makes them especially vulnerable during flooding (Lang & Cone, 2022). They often experience severe injuries or death, yet disaster response frequently overlooks their needs, fostering fear and anxiety (Phraknoi et al., 2023). Khan (2023) also identifies older adults, particularly with pre-existing conditions, as highly vulnerable to climate change and extreme weather. Frailty and sensory impairments exacerbate difficulties in mobility, resource access, and emergency responsiveness (Chompunud & Inkaew, 2019).

Limited awareness and preparedness further increased risk. Many older adults underestimate hazards or lack information (Bogdan et al., 2024), while those living alone face additional challenges in receiving timely support (Guiamalodin et al., 2024). Consequently, coping strategies are essential, with older adults relying more on emotion-focused than problem-focused approaches, as observed during the SARS outbreak.

Age and gender also affect emotional processing. Abbruzzese et al. (2019) found that older women outperform men in emotion recognition, though declines in physical function reduce recognition of sadness and disgust. Givon et al. (2023) showed women generate more negative emotions than men, linked to caregiving roles and traditional gender norms. These findings indicate compounded vulnerabilities for older adults—physical limitations, inadequate preparedness, and emotional challenges—especially for women, reinforcing the focus on Filipino women in late adulthood in studying disaster-related helplessness.

Types of Coping Strategies. Coping strategies refer to the measures individuals take to mitigate and overcome the adverse effects of stress. These strategies represent how individuals respond to situations perceived as threats to their well-being. Such responses may be either conscious or unconscious, as individuals might unknowingly employ coping

strategies to address stress (Widowati et al., 2020). Stress arises from different sources and manifests in different forms. According to Lazarus and Folkman, as cited in Wisesa et al. (2020), stressful events are conditions that negatively impact individuals both physiologically and psychologically, and coping is the cognitive and behavioral effort to manage it. They identified two primary types of coping strategies, emotion-focused and problem-focused. As cited in Altamura et al. (2019), problem-focused strategies involve efforts to address and manage the source of distress by taking action within oneself or the surrounding environment.

These strategies are generally regarded as adaptive and positive approaches to coping. According to Crosby (2022), emotion-focused coping involves regulating emotional responses to situations that cannot be altered or are beyond one's control. Emotion-focused strategies are often categorized into two subtypes. The first subtype is the active emotion-focused coping which represents adaptive emotional regulation, and second, the avoidant strategies which are considered maladaptive and associated with negative outcomes. Typically, individuals use a combination of problem and emotion-focused strategies to effectively manage stress, but some use either the former or the latter depending on the situation. Different events result in different emotions and coping strategies.

Problem-Focused Coping Strategies. As theorized by Lazarus and Folkman, problem-focused coping involves directly addressing a stressor by actively attempting to resolve or manage it (Cho & Choi, 2024). Individuals focus on overcoming problems rather than being overwhelmed by emotions. Jabbar et al. (2024) note that strategies such as active coping, planning, and instrumental support help directly resolve stressors. Instrumental support, a tangible form of social assistance, addresses specific needs and falls under the broader social support dimension, which includes both instrumental and emotional support like offering help, practicing bayanihan,

and fostering family and friend relationships (Semmer et al., 2008, as cited in Thorsteinsen et al., 2023; Rilveria, 2018).

Cho and Choi (2024) emphasize that emotional clarity facilitates the effective use of problem-focused coping, mitigating emotional vulnerability in later life. Reyes et al. (2021) found that older adults using problem-focused strategies reported higher subjective well-being; however, this tendency declines with age. According to socioemotional selectivity theory, older adults prioritize emotional regulation and stability over acquiring new information. These findings suggest that while problem-focused coping remains effective, older adults often rely more on emotion-focused strategies. This supports the present study's hypothesis that older women in late adulthood use religiosity, an emotion-focused strategy, to manage stress and maintain well-being.

Emotion-Focused Coping Strategies. Fuller et al. (2021) noted that older adults surviving Hurricane Katrina often used distracting behaviors to divert thoughts from the disaster. Similarly, studies during the SARS epidemic found older adults tend to rely on emotion-focused rather than problem-focused coping, possibly due to heightened awareness of mortality, leading them to prioritize positive emotions. Faith, as an emotion-focused strategy, has proven effective in large-scale crises where individuals have little control over circumstances, suggesting older adults often rely on such strategies, which can be adaptive or maladaptive depending on context.

Adaptive emotion-focused coping includes seeking emotional support, reframing situations, and practicing forgiveness and acceptance to reduce stress and anger (Raypole, 2020). Maladaptive coping involves distraction, disengagement, substance use, and excessive rumination, which may worsen stress (SonderMind, 2023). While coping aims to manage stress, its effectiveness varies by individual (Upton et al., 2021). When coping fails, unresolved stress may lead to mental health problems; maladaptive strategies like substance abuse and self-distraction are linked

to higher anxiety (Altamura et al., 2019; Dohmen et al., 2022) and can foster learned helplessness, impairing motivation, emotion, and cognition.

In this study, the stressful event is repeated flooding and its aftermath. If poorly managed, such experiences may lead to learned helplessness. The research posits that religiosity serves as a primary coping strategy among women in late adulthood, particularly in flood-prone areas of Bacoor. While generally adaptive, religiosity can be maladaptive. Negative religious coping, arising from anxious attachment to God, involves fears of punishment, abandonment, or retribution and is linked to poorer psychological outcomes (Wnuk, 2024). Spiritual complacency, where individuals over-rely on divine intervention with minimal personal effort, can reinforce passivity and learned helplessness (Youvan, 2024). Religion plays a central role in Filipino life, especially among older adults, with 79.53% of the population belonging to the Christian demographic (Ahmadi et al., 2024). Older adults frequently turn to faith for comfort, supporting the hypothesis that women in late adulthood in high flood-prone areas of Bacoor may exhibit learned helplessness and rely primarily on religiosity as their central coping strategy.

Synthesis and Gaps. Building on prior research, this study examines which domains of the Filipino Coping Strategies Scale are most used by women in late adulthood who exhibit learned helplessness. Unlike previous experimental or cognitive studies, this research uses a correlational approach to explore real-life associations between coping strategies and learned helplessness in naturalistic settings, offering insight into how older adults in flood-prone areas navigate chronic adversity without manipulated variables.

In the Philippine context, cultural tendencies to romanticize resilience often obscure the psychological toll of recurring disasters. Disaster mental health research has largely focused on positive coping, neglecting maladaptive outcomes such as learned helplessness. Grounded in Seligman's (1967)

theory, learned helplessness occurs when repeated exposure to uncontrollable events leads individuals to believe they lack control, fostering passivity even when action is possible. Although studied in places like Kerala, India, its application among older adults in the Philippines remains limited. Older adults, particularly women, are highly vulnerable to climate change and extreme weather events (Phraknoi et al., 2023; Khan, 2023). Women's heightened emotional sensitivity, while supporting resilience, may also increase susceptibility to overwhelm and loss of control (Abbruzzese et al., 2019; Givon et al., 2023).

According to Lazarus and Folkman's transactional model (as cited in Widowati et al., 2020), individuals cope with stress using problem-focused or emotion-focused strategies. Problem-focused coping, though effective, declines with age (Reyes et al., 2021), while emotion-focused coping becomes more prominent (Crosby, 2022). Religious coping is particularly relevant in the Filipino context. Fuller et al. (2021) found that religiosity supports resilience during large-scale crises; however, negative religious coping—fear of divine punishment or abandonment—correlates with poor psychological outcomes (Wnuk, 2024). Spiritual complacency, or reliance on divine intervention without personal effort, can also contribute to learned helplessness (Youvan, 2024). Religion remains a core source of values and coping for Filipino older adults, particularly in disaster-prone areas (Ahmadi et al., 2024).

This study focuses on Bacoor, Cavite, a high flood-prone area (Inocencio, 2024) with 664,625 residents (PSA, 2021), coastal proximity, and rapid urbanization (Geodatos, 2025), making it an ideal setting to examine the psychological impact of flooding on older women.

The study aims to explore the relationship between learned helplessness and coping strategies among women in late adulthood in Bacoor's flood-prone barangays. Findings intend to inform mental health interventions, reduce helplessness, and strengthen community resilience amid recurring climate-related disasters.

METHODS

Research Design. The researchers employed a quantitative correlational design to examine the relationship between learned helplessness and coping strategies among Filipino women in late adulthood residing in flood-prone communities. This approach allowed for the analysis of naturally occurring variables without manipulation, preserving the authenticity of participants' experiences—an important consideration when working with psychologically and environmentally vulnerable populations.

A correlational design was also justified given the gaps in previous research. Earlier studies relied on experimental designs, which may not ethically or practically suit vulnerable populations, or qualitative methods, which provide rich context but limited generalizability. The correlational approach bridges these gaps, offering objective, quantifiable data that can support or challenge existing theories. Using closed-ended survey instruments, the study systematically measured the association between participants' learned helplessness levels and coping strategies. This method strengthens theoretical understanding of psychological resilience in disaster-prone contexts while providing practical insights to guide interventions and policy for older women in high-risk communities.
Respondent /Participants

Research Locale. This study was conducted in Bacoor, Cavite, Philippines, a highly urbanized city known for its significant population density, proximity to Manila, and coastal location. Bacoor has been identified as one of the municipalities highly susceptible to flooding through the spatial analysis of Inocencio (2024), cross-referenced with data from the HazardHunterPH map. Consequently, 12 barangays in the City of Bacoor were identified as high flood susceptibility areas. Among the 12 barangays, Barangay Habay 1, Barangay Habay 2, and Barangay P.F. Espiritu 4 were selected for the study, as they were the ones to formally grant permission for its implementation. Primarily, the selection of the three barangays

is driven by their classification as areas with high flood susceptibility which helps to determine whether there is a correlation between the development of learned helplessness and the coping strategies of Filipino women in late adulthood living in these vulnerable communities. The recurring and extreme flooding in these barangays will provide a relevant context for exploring the psychological impacts and adaptive mechanisms of the affected population.

Participants of the Study. The participants for this study were 116 Filipino women in late adulthood, aged 65 and above, residing in high flood-prone areas of Bacoor, Cavite, specifically in the barangays of Habay 1, Habay 2, and P.F. Espiritu 4, which were selected due to accessibility and practical constraints in reaching residents of flood-prone communities; they completed the adapted Filipino Learned Helplessness Scale and the Filipino Coping Strategy Scale, with researchers assisting throughout data collection to accommodate potential physical limitations such as impaired vision or hearing, and only women within the specified age group and geographic area were eligible, while individuals below 65, living outside the identified barangays, not having experienced flooding, or recent residents who had relocated were excluded.

Sampling Technique. The participants for this study were Filipino women in late adulthood, aged 65 and above, residing in the high flood-prone areas of Bacoor, Cavite, specifically from the barangays of Habay 1, Habay 2, and P.F. Espiritu 4, chosen due to population accessibility and practical constraints in reaching residents of flood-prone communities. These participants were asked to complete the adapted Filipino Learned Helplessness Scale and the Filipino Coping Strategy Scale, with researchers providing assistance throughout data collection to accommodate potential age-related physical limitations, such as impaired vision or hearing. Only Filipino women within the specified age group and geographic area were eligible to participate, while individuals under 65, those living outside the identified flood-prone barangays, those who had not

experienced flooding, or recent residents who had relocated were excluded from the study.

Instruments of the Study. This study employed two validated instruments to assess coping strategies and learned helplessness among Filipino women in late adulthood living in flood-prone areas: the Filipino Coping Strategies Scale (FCSS) and the Filipino Adapted Learned Helplessness Scale (LHS). The FCSS is a 37-item self-report questionnaire using a 4-point Likert scale (from "Never" to "Always") to measure nine coping domains: Cognitive Appraisal, Social Support, Problem-Solving, Religiosity, Tolerance, Emotional Release, Relaxation/Recreation, and Substance Use, with composite scores calculated as the average of domain-specific items, where higher scores indicate greater reliance on a strategy; it demonstrated strong psychometric properties with Cronbach's alpha values ranging from 0.60 to 0.95 across domains and an overall reliability of 0.716, and construct validity was confirmed through CFA, with a KMO index of 0.780 and significant Bartlett's test, supporting sampling adequacy and item correlations, while its nine-factor structure aligned with theoretical expectations and converged well with established tools like the COPE Inventory and the Ways of Coping Questionnaire.

The LHS, adapted from Quinless and Nelson (1988), is a 20-item scale using a 4-point Likert format (from "Strongly Disagree" to "Strongly Agree") to assess psychological responses to recurring disasters, showing high internal consistency with an alpha of 0.82, where a total score of 41 or above indicates learned helplessness; it was translated into Filipino and validated for face validity through expert consultations, linguistic revisions, and revalidation with demographically similar individuals, achieving an Item-Face Validity Index (I-FVI) of 0.7–1.0 and a Scale-Face Validity Index (S-FVI) of 0.87, confirming clarity, appropriateness, and cultural relevance. Together, these instruments provided reliable, context-sensitive tools for quantitatively measuring how older Filipino women cope with environmental stressors and how repeated

disaster exposure may contribute to learned helplessness.

Procedures. The researchers prepared all necessary documents to secure ethical approval and ensure respondents' informed participation, validating all instruments for reliability and cultural appropriateness. The Filipino-adapted Learned Helplessness Scale (LHS) underwent face validity assessment by a Filipino teacher, five psychometricians, and ten raters, followed by a pilot test to determine reliability. Validated instruments were integrated into Microsoft Forms for efficient data collection, and coordination letters were sent to barangay officials in the identified locales. Using convenience sampling due to time and manpower constraints, the researchers collaborated with barangay officials to access populations of women aged 65 and above. Data collection began with briefings on ethical considerations, voluntary participation, informed consent, and confidentiality, with the informed consent form following APA (2024) Ethics Code Sections 3.10 and 8.02. Given the participants' age and potential medical conditions, the researchers read survey instructions aloud, recorded responses, and provided visual aids for easier selection, with legal guardians assisting when necessary.

Following data collection, raw data were processed using SPSS version 26, and Pearson's r correlation determined relationships between variables, with outputs reviewed collaboratively with a statistician to ensure accuracy. The researchers then interpreted the findings in relation to the study objectives and existing literature, carefully discussing the implications for the target population. Based on these discussions, appropriate recommendations were formulated to address the results, with particular attention to the unique needs and contexts of Filipino women in late adulthood residing in flood-prone areas. This systematic and carefully structured approach ensured methodological rigor while safeguarding ethical treatment of a highly vulnerable study population.

Data Analysis. This study aimed to address four research objectives through the application of various statistical analyses. Descriptive statistics were calculated to summarize the dataset by computing the means and standard deviations of the Learned Helplessness Scale (LHS) and Filipino Coping Strategies Scale (FCSS) scores. These analyses were used to identify the main coping strategy among participants for the first hypothesis and to determine the level of learned helplessness for the second hypothesis, based on the established cutoff score of 41. To address the third hypothesis, the Shapiro-Wilk test of normality was initially conducted to assess the distribution of the data. Following this, Pearson's correlation coefficient (r) was utilized to examine the relationship between learned helplessness and coping strategies. This analysis provided insight into the strength and direction of the correlation, indicating whether an increase in the use of coping strategies corresponded with an increase in the level of learned helplessness, or if no significant relationship was observed. A significance level of $p < 0.05$ was used to determine statistical significance, and the effect size (r value) was reported to evaluate the strength of the correlation. The internal consistency and reliability of the scales were assessed using Cronbach's alpha, ensuring the soundness of the measurement tools and the quality of the data collected. All statistical analyses were performed using SPSS software (Version 26).

Ethical Considerations. The study was conducted in strict adherence to the American Psychological Association (APA) Ethics Code, with a strong emphasis on protecting elderly participants aged 65 and above, many of whom may have physical, cognitive, or chronic health vulnerabilities. To ensure cultural sensitivity and accessibility, the research methodology and instruments were adapted to the local context, including the use of Filipino for all materials and communications. Informed consent procedures complied with Section 8.02 of the APA Ethics Code, outlining the study's purpose, procedures, duration, and potential risks and benefits, while emphasizing voluntary participation and the right to withdraw at any time. Special consent procedures were implemented for participants with physical or cognitive limitations, including fingerprint consent and the involvement of trusted individuals for support. Confidentiality protocols followed Section 6.02 of the Code, ensuring secure handling of personal data. To safeguard participants' well-being, local officials or senior citizen association representatives assisted in the data collection process. The study concluded with a debriefing to inform participants of the findings and address any concerns. These measures collectively ensured ethical integrity, participant autonomy, and the respectful inclusion of a vulnerable population.

RESULTS

The study's results were presented in a structured format. The findings were organized into four main sections, each aligned with a specific research objective. Within each section, the results were systematically reported, followed by detailed interpretations that directly relate to the research questions.

The primary coping strategies of Filipino women in late adulthood in high flood-prone communities in Bacoor, Cavite. The study explored the primary coping strategies employed by late-adult Filipino women residing in flood-prone communities of Bacoor, Cavite. These communities face recurring challenges due to frequent flooding, making it essential to understand how individuals, particularly vulnerable groups like older women, manage stress and adversity.

Table 1

Mean distribution of coping strategies of Filipino women in late adulthood in high flood-prone communities (n=116)

Factors	Mean	SD	Verbal Interpretation
Social Support *(paghingi ng tulong)*	2.76	0.704	High
Problem-Solving *(pagtugon)*	3.16	0.673	High
Religiosity *(pagkarelihiyoso)*	3.63	0.415	High
Tolerance *(pagtitiis)*	2.3	0.877	Low
Emotional Release *(paglabas ng saloobin)*	2	0.56	Low
Overactivity *(pagmamalabis)*	2.46	0.691	Low
Relaxation-Recreation *(paglilibang)*	3.05	0.542	High
Substance Use *(pagbibisyo)*	1.64	0.534	Low
Cognitive Reappraisal *(pagsusuri)*	2.86	0.571	High

The results of the study indicate that older Filipino women in Bacoor, Cavite primarily rely on adaptive coping strategies, with religiosity (pagkarelihiyoso) being the most prevalent method (Mean = 3.63, SD = 0.415). This includes spiritual practices such as prayer, religious rituals, and seeking comfort from a higher power, reflecting the deep-rooted role of faith in Filipino culture, especially during crises. Problem-solving (pagtugon) was also commonly practiced (Mean = 3.16, SD = 0.673), alongside relaxation and recreation (paglilibang) (Mean = 3.05, SD = 0.542), cognitive reappraisal (pagsusuri) (Mean = 2.86, SD = 0.571), and seeking social support (paghingi ng tulong) (Mean = 2.76, SD = 0.704). These findings suggest that respondents actively manage stress through internal reflection, leisure, and community ties, though individual variation exists, particularly in social support, influenced by access and cultural practices like bayanihan.

Less adaptive or avoidant coping strategies were used less frequently. Overactivity (pagmamalabis) had a mean of 2.46 (SD = 0.691), tolerance (pagtitiis) a mean of 2.30 (SD = 0.877) with the highest variability, and emotional release (paglabas ng saloobin) a mean of 2.00 (SD = 0.560), likely due to cultural norms discouraging overt emotional expression. Substance use (pagbibisyo) was the least utilized mechanism (Mean = 1.64, SD = 0.534), influenced by religious and moral beliefs. These results led to the rejection of the null hypothesis that religiosity is not the primary coping strategy among late-adult Filipino women in Bacoor, confirming it as the dominant mechanism. The Filipino Coping Strategy Scale (FCSS) demonstrated high reliability with a Cronbach's alpha of α = 0.82 (Dalyanto et al., 2021).

The level of learned helplessness among Filipino women in high flood-prone communities in Bacoor, Cavite based on the Learned Helplessness Scale. Using the Learned Helplessness Scale, the study evaluated the degree of learned helplessness among late-adult Filipino women living in high-risk flood communities in Bacoor, Cavite (Table 2). With a mean score of 46.19 (SD = 0.89), the results

showed that respondents had a high level of learned helplessness. This suggests that many of them may feel powerless or incapable of changing or improving their situation, possibly as a result of repeated exposure to flood-related hardships. The relatively low standard deviation means that most of the scores are clustered close to the average, implying that this feeling of helplessness is quite common and consistent among the group studied. 94 out of the 116 participants revealed to have learned helplessness and the scores had a 0.65 Cronbach alpha level which is acceptable according to Dalyanto et al. (2021).

Table 2
Level of learned helplessness among Filipino women in late adulthood in high flood-prone communities

Factors	N	Mean	SD	Verbal Interpretation
Learned Helplessness	116	46.19	0.89	High

The correlation between coping strategies and learned helplessness scores of the participants. Pearson's correlation coefficient (r) was used to examine the relationship between the nine coping strategies and learned helplessness among late-adult Filipino women living in high-risk flood communities in Bacoor, Cavite. Among the nine coping strategies assessed, only two were found to be statistically significant at the 0.05 level.

Table 3
Correlation between the level of learned helplessness and the primary coping strategy of women in late adulthood in high flood-prone communities in Bacoor, Cavite

Coping Strategy	Learned Helplessness		Hypothesis
	r	p	
Social Support *(paghingi ng tulong)*	0.159	0.088	Fail to reject the null
Problem-Solving *(pagtugon)*	−0.046	0.62	Fail to reject the null
Religiosity *(pagkarelihiyoso)*	−0.067	0.478	Fail to reject the null
Tolerance *(pagtitiis)*	0.223*	0.016	Reject the null
Emotional Release *(paglabas ng saloobin)*	0.152	0.104	Fail to reject the null
Overactivity *(pagmamalabis)*	0.036	0.705	Fail to reject the null
Relaxation-Recreation *(paglilibang)*	−0.08	0.393	Fail to reject the null
Substance Use *(pagbibisyo)*	−0.092	0.327	Fail to reject the null
Cognitive Reappraisal *(pagsusuri)*	−0.212*	0.022	Reject the null

Note: *p < .05

The null hypothesis was rejected for tolerance (pagtitiis), which showed a significant positive

correlation with learned helplessness (r = 0.223, p = 0.016). This suggests that individuals who tend to endure stressful situations passively—characterized by emotional restraint, fatalism, and acceptance—are more likely to exhibit signs of helplessness or resignation. Similarly, the null hypothesis was rejected for cognitive reappraisal (pagsusuri), which demonstrated a significant negative correlation with learned helplessness (r = -0.212, p = 0.022). This indicates that those who actively reinterpret or positively reframe stress-inducing experiences are less likely to develop feelings of helplessness, highlighting cognitive reappraisal as a potentially protective strategy in the face of environmental adversity.

In contrast, the other coping mechanisms did not show statistically significant correlations with learned helplessness. These include social support (paghingi ng tulong) (r = 0.159, p = 0.088), problem-solving (pagtugon) (r = -0.046, p = 0.620), religiosity (pagkarelihiyoso) (r = -0.067, p = 0.478), emotional release (paglabas ng saloobin) (r = 0.152, p = 0.104), overactivity (pagmamalabis) (r = 0.036, p = 0.705), relaxation-recreation (paglilibang) (r = -0.080, p = 0.393), and substance use (pagbibisyo) (r = -0.092, p = 0.327). For these coping strategies, the null hypothesis was not rejected. Thus, no definitive conclusion can be drawn regarding their relationship.

Although religiosity was the most commonly used coping strategy (M ≥ 2.5), it showed no significant correlation with learned helplessness, as only one participant did not exhibit helplessness. In contrast, tolerance (pagtitiis) positively correlated with learned helplessness, with most high scorers experiencing helplessness. Cognitive reappraisal (pagsusuri) appeared more effective; among 83 high scorers, 15 did not manifest helplessness, and several prioritized it as their primary or secondary strategy.

These results suggest cognitive reappraisal may buffer against helplessness, whereas reliance on tolerance may increase vulnerability. Targeted programs that develop cognitive reappraisal skills are recommended.

Local peer support groups can offer safe spaces for sharing experiences, emotional expression, and affirmation. As Metts and Craske (2023) note, social reappraisal—reappraising stressors in a supportive context—enhances positive affect more than solo reappraisal. Senior citizen gatherings, therefore, can serve as practical venues to strengthen emotional resilience. Interventions should further assist participants in recognizing maladaptive tolerance patterns while promoting coping strategies that strengthen resilience and personal agency.

DISCUSSION

This study examined coping strategies and learned helplessness among women in late adulthood residing in flood-prone communities in Bacoor, using the Filipino Coping Strategies Scale (FCSS) and the Learned Helplessness Scale (LHS). Religiosity (pagkarelihiyoso) was the most utilized coping strategy (M = 3.63), reflecting the centrality of religious practices in Filipino life (Ahmadi et al., 2024). Religiosity includes seeking spiritual support, engaging in religious practices, and drawing strength from faith. Other strategies employed were problem-solving (pagtugon), relaxation-recreation (paglilibang), cognitive reappraisal (pagsusuri), and social support (paghingi ng tulong), reflecting both proactive and reflective stress management approaches.

Despite high religiosity use, participants exhibited high learned helplessness (M = 46.19), with 94 out of 116 showing signs of helplessness, suggesting religiosity alone may not buffer feelings of powerlessness (Graça & Brandão, 2024). Among the nine coping strategies, only tolerance (pagtitiis) and cognitive reappraisal (pagsusuri) were significantly correlated with learned helplessness. Tolerance, reflecting passive endurance, was positively correlated with helplessness (r = 0.223, p = 0.016), whereas cognitive reappraisal, involving reframing stressful events and maintaining optimism, was negatively correlated (r = -0.212, p = 0.022), supporting its role in enhancing emotional regulation and perceived control (Oh & Pyo, 2023; Wu & Tu, 2019).

Seven other strategies, including social support, problem-solving, religiosity, emotional release, overactivity, relaxation-recreation, and substance use, did not significantly relate to helplessness, suggesting repeated exposure to uncontrollable stressors like flooding may limit their protective effects. The findings highlight the need for targeted interventions that combine culturally meaningful faith-based coping with proactive strategies such as cognitive reappraisal and community-based problem-solving. Peer support groups and social reappraisal strategies, which leverage supportive social contexts, may enhance emotional resilience more effectively than solo approaches (Metts & Craske, 2023).

Overall, combining religiosity with adaptive, proactive coping strategies can empower older women, foster resilience, and mitigate the psychological impact of recurring environmental stressors in flood-prone communities.

Conclusion. The present study contributes to understanding how older Filipino women in flood-prone areas of Bacoor, Cavite, cope with stress from recurrent flooding. Using the Filipino Coping Strategies Scale (FCSS), religiosity, problem-solving, and relaxation-recreation were identified as the most common coping methods. Although religiosity was the primary strategy, it did not show a strong correlation with learned helplessness, suggesting that faith, while important, may not consistently reduce or increase feelings of helplessness. In contrast, cognitive reappraisal—reframing stressful situations positively—was linked to lower helplessness, whereas tolerance was associated with higher helplessness, indicating that proactive strategies may better support mental well-being.

Future research should include other barangays in Bacoor to broaden community representation and enhance generalizability. Increasing participant numbers would allow for deeper statistical analysis and stronger conclusions about the relationship between coping strategies and learned helplessness.

Additionally, employing alternative sampling techniques could improve population representation.

Recommendations. Based on the results of this study, the following actionable recommendations have been outlined:

1. Barangay officials, in coordination with Senior Citizen Associations and the Local Health Unit, should integrate one-hour workshops into regular monthly activities to develop cognitive reappraisal skills. Sessions should be age-appropriate, culturally sensitive, and use visual aids, local scenarios, and the Filipino language. Activities may include identifying negative thoughts, guided storytelling, and role-playing for coping with floods. To sustain these programs, officials should seek funding from barangay budgets, LGU grants, NGOs, local businesses, and philanthropic groups, ensuring transparent budgeting, clear objectives, and community involvement.

2. Existing localized peer support groups should be enhanced rather than replaced. These groups can provide safe spaces for emotional expression and experience sharing. Designating and training peer facilitators ensures sensitive and confidential interactions. Weekly meetings may focus on coping with floods, family stress, and aging-related changes, promoting solidarity and resilience.

3. Collaboration with religious or faith-based organizations is recommended to reinforce cognitive reappraisal through a spiritual lens. Faith leaders can co-facilitate sessions or provide reflections aligning cognitive reframing with values like hope and compassion. Regular house visitations can provide spiritual support and monitor the emotional well-being of homebound or vulnerable older women.

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