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Article

# Caring for the Carer: Psychosocial Wellbeing, Occupational Stress, and Coping Strategies Among Frontline Personnel in Local Government Units of Pangasinan, Philippines

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Abstract

Frontline local government unit (LGU) workers in the Philippines — spanning health, social welfare, disaster risk reduction and management (DRRM), fire protection, and public order roles — face chronic occupational stress and psychosocial burden yet remain underrepresented in the occupational mental health literature. Grounded in the Job Demands-Resources (JD-R) model and Conservation of Resources (COR) theory, this study investigated psychosocial wellbeing, occupational stressors, and coping strategies among multi-sector LGU frontline personnel in Pangasinan Province. A cross-sectional descriptive design was used. Proportional stratified random sampling (Slovin’s formula) recruited 90 respondents from eight LGU role categories (response rate: 90.0%). The researcher-developed Psychosocial Wellbeing Scale (PWS-10;  $\alpha = 0.81$ ) was used alongside a 27-item stressor checklist and 5-item coping inventory. Statistical analyses included Spearman’s correlation, Fisher’s Exact Test, and Kruskal-Wallis H with Dunn’s post-hoc (Bonferroni correction). Effect sizes were reported throughout. Overall wellbeing was positive ( $M = 4.06/5.00$ ). Employment stability was the primary stressor (70.0%), followed by high-risk situational exposure (64.4%). Social support dominated coping (76.7%); professional help-seeking was lowest (40.0%). Years of service ( $r_s = 0.278, p = 0.008$ ) and educational attainment ( $p = 0.004$ ) significantly predicted wellbeing. Significant inter-role differences emerged in spiritual/cultural wellbeing ( $H = 15.42, p = 0.038, \eta^2 = 0.17$ ); DRRM response personnel scored significantly lower than health workers ( $p_{Adj} = 0.041$ ). LGU frontline workers show generally positive wellbeing profiles, with gaps in mental health service access and a specific spiritual wellbeing deficit among DRRM personnel. Findings support role-differentiated psychosocial programs aligned with the Philippine Mental Health Act (RA 11036).

**Keywords:** psychosocial wellbeing; frontline workers; local government units; occupational stress; coping mechanisms; disaster risk reduction; mental health policy; public health workforce

## 1. Introduction

The psychosocial health of public sector frontline workers has emerged as a critical concern in global occupational health discourse. Across high- and low-to-middle-income countries (LMICs) alike, individuals employed in high-demand roles — including health workers, emergency responders, social welfare officers, and disaster management personnel — face compounding psychosocial stressors that include sustained work overload, emotional labour, secondary traumatic stress, and structural resource deficits [1,2]. The World Health Organization (WHO) estimates that depression and anxiety disorders alone cost the global economy USD 1 trillion annually in lost productivity, with frontline and service sector workers disproportionately affected [1].

Systematic reviews and meta-analyses have consistently documented elevated rates of burnout, anxiety, depression, and post-traumatic stress disorder (PTSD) among frontline healthcare and

emergency response workers, with burnout prevalence estimates ranging from 22% to 67% across professional groups and settings [8,9,31,63]. The COVID-19 pandemic substantially amplified these trends, generating a global evidence base on the psychosocial consequences of sustained occupational demand, resource inadequacy, and institutional unpreparedness [5–7,36,43,48,58]. Large-scale cross-sectional studies from Singapore, Spain, China, the United Kingdom, and Australia documented significant deterioration in wellbeing among health and emergency workers during pandemic surges [7,40–42,45], with institutional risk factors — including inadequate protective resources, poor supervisory support, restricted rest periods, and job insecurity — identified as primary drivers of psychological distress [37,38,44–46].

Within Southeast Asia, the picture is uneven. Filipino healthcare workers have been identified as experiencing high rates of burnout and occupational stress, particularly in public hospital and community health settings [17–19]. The COVID-19 pandemic compounded this burden significantly [18]. Yet the non-healthcare frontline sector — comprising DRRM officers, Bureau of Fire Protection (BFP) personnel, social welfare workers, and public order and safety officers (POSO) employed at the local government unit (LGU) level — remains poorly studied. This population occupies a critical but underexamined niche: it is neither a pure healthcare workforce nor a conventional emergency services cadre, but a hybrid multi-sector frontline whose psychosocial health needs cut across occupational categories and institutional boundaries.

In the Philippines, LGUs serve as the primary delivery mechanism for a wide range of public services, from health and disaster response to social protection and community safety. The frontline workers who staff these services operate under conditions that combine high demand, limited resources, employment precarity, and inadequate institutional mental health support [11–14]. Despite this, no published study has examined the psychosocial wellbeing of a multi-sector LGU frontline workforce in a Philippine provincial context using a theoretically grounded, multi-dimensional wellbeing framework.

### *1.1. Theoretical Framework*

This study is grounded in two complementary theoretical frameworks. The Job Demands-Resources (JD-R) model [3,21,23] posits that work characteristics can be categorised into job demands — physical, psychological, social, or organisational aspects of work that require sustained effort — and job resources — aspects that help achieve work goals, reduce demand costs, or stimulate personal growth. The JD-R model predicts two distinct processes: a health impairment process (chronic demands → burnout → health deterioration) and a motivational process (adequate resources → engagement → performance) [21,25]. The model is particularly applicable to the LGU frontline context, where role-specific demands vary markedly while organisational resources such as recognition, professional development, and mental health services may be distributed inequitably across role categories [3,25].

Conservation of Resources (COR) theory [4,22] provides a complementary lens by arguing that people are motivated to protect, retain, and build personal and social resources. Resource loss is more salient and psychologically consequential than resource gain, and individuals who have accumulated fewer resources are more vulnerable to resource loss spirals. COR theory predicts that individuals with greater resource reserves — including social support networks, organisational recognition, spiritual wellbeing, and employment security — will demonstrate greater resilience under occupational demand [4,22,70,71]. In the LGU context, employment stability and supervisory support function as key COR resources whose presence or absence has amplifying effects on overall psychosocial wellbeing.

### *1.2. Philippine Policy Context*

The Philippines enacted the Mental Health Act (Republic Act No. 11036) in 2018, establishing a legislative mandate for workplace mental health promotion across all government levels, including LGUs [11]. The Department of Health's National Mental Health Program subsequently issued

operationalising guidelines for public sector institutions [12], and the Civil Service Commission (CSC) and DOH issued a Joint Memorandum Circular mandating the provision of psychosocial support services in government workplaces [13]. The National Disaster Risk Reduction and Management Council (NDRRMC) has additionally issued welfare policies for disaster response personnel that include provisions for psychological first aid and post-incident debriefing [14].

Despite this legislative scaffolding, implementation at the LGU level — particularly in provincial municipalities — remains inconsistent and underdocumented. This study provides baseline evidence directly relevant to that implementation gap and to the broader question of health equity in occupational wellbeing support within the Philippine public sector.

1.3. Research Objectives

This study aimed to:

- Describe the demographic profile of frontline personnel in selected LGUs of Pangasinan Province;
- Assess the current level of psychosocial wellbeing across multiple dimensions using the PWS-10;
- Identify the primary sources of occupational stress and the most frequently utilised coping mechanisms;
- Examine inter-role differences in psychosocial wellbeing across the eight LGU frontline role categories; and
- Determine the associations between demographic variables (gender, age, educational attainment, job position, years of service) and overall psychosocial wellbeing.

2. Materials and Methods

2.1. Study Design and Setting

A cross-sectional descriptive quantitative design was employed in accordance with the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines [81]. The study was conducted in two municipalities in the first district of Pangasinan Province, Central Luzon (Region I), Philippines, during the third quarter of 2024. Pangasinan is one of the most populous provinces in Luzon, with a population of approximately 3.16 million [15]. LGU frontline services in this setting span health, social welfare, disaster management, fire protection, and public order. The two study municipalities were selected purposively on the basis of administrative accessibility, the availability of all eight designated role categories, and institutional cooperation of LGU leadership.

2.2. Participants and Sampling

The target population comprised all LGU-employed frontline personnel in the selected municipalities, estimated at approximately N = 100 eligible workers across eight role categories. Employing Slovin's formula [82] with a 5% margin of error ( $e = 0.05$ ), the minimum required sample was  $n = 80$ . Proportional stratified random sampling was applied, targeting  $n = 90$ . The achieved response rate was 90.0% (90/100) [16,83].

Inclusion criteria: (1) employed as frontline LGU personnel in one of the eight designated role categories; (2) regularly reporting to an LGU office in the selected municipalities; (3) at least six months in their current position; and (4) willing to provide written informed consent. Exclusion criteria: (1) personnel on leave exceeding 30 consecutive days; (2) those who declined to participate or withdrew consent; and (3) respondents with more than 20% missing data on the PWS-10.

2.3. Data Collection Instruments

Three instruments were administered as a unified self-report questionnaire in English (the language of official communication in Philippine government offices):

**Part 1 — Demographic Profile Form.** Collected data on gender, age group, educational attainment (five levels from high school to doctorate), job position (eight categories), and years of service in current position.

**Part 2 — Psychosocial Wellbeing Scale (PWS-10).** A 10-item researcher-developed Likert-type scale (1 = Strongly Disagree to 5 = Strongly Agree) assessing ten wellbeing domains: (1) psychological resilience; (2) social connectedness; (3) material/economic resources; (4) sense of purpose; (5) spiritual/cultural expression; (6) emotional regulation; (7) collegial support; (8) personal and professional growth; (9) organisational recognition; and (10) mental health service access. The composite wellbeing score was computed as the arithmetic mean of all 10 items (range: 1.00–5.00). Content validity was established through expert review by three social work and public health faculty members at PSU prior to pilot testing. The scale demonstrated good internal consistency (pilot  $n = 15$ ; Cronbach's  $\alpha = 0.81$ ), satisfying the threshold of  $\alpha \geq 0.70$  recommended for research instruments [88,89].

**Part 3 — Occupational Stressor Checklist and Coping Inventory.** A 27-item multiple-response stressor frequency checklist covering eight thematic domains (workload, job benefits, support systems, stressful situational exposure, resource availability, work environment, recognition/feedback, job security, and personal factors) [84]. A 5-item coping mechanism inventory used the same multiple-response format, covering social support, hobbies, mindfulness/meditation, physical exercise, and professional help-seeking.

2.4. Statistical Analysis

All data were encoded and analysed using IBM SPSS Statistics v27 [90]. Descriptive statistics (frequencies, percentages, means, standard deviations) were computed for all demographic and wellbeing variables.

For inferential analyses:

- Spearman's rank correlation coefficient ( $r_s$ ) was used to assess associations between ordinal demographic variables (age, years of service) and the composite PWS-10 wellbeing score [85,86]. Effect sizes were interpreted using Cohen's (1988) [84] conventions:  $r_s \leq 0.10$  (small), 0.30 (medium), 0.50 (large).
- Fisher's Exact Test was applied in place of Chi-Square for categorical demographic variables (gender, educational attainment, job position)  $\times$  wellbeing strata, given that preliminary Chi-Square runs identified violations of the expected cell-count assumption ( $> 20\%$  of cells with expected count  $< 5$ ) [85,86]. This substitution is the recommended corrective procedure for cross-tabulations involving sparse cells.
- Kruskal-Wallis H test was used to compare PWS-10 item scores across the eight job-role categories. Where the omnibus test reached significance ( $p < 0.05$ ), Dunn's post-hoc test [83] with Bonferroni correction was applied to identify specific inter-group differences.
- Effect sizes were reported for all statistically significant findings: Cramer's V for Fisher's Exact associations;  $r_s$  for Spearman's correlations; and partial eta-squared ( $\eta^2$ ) computed as  $H/(N-1)$  for Kruskal-Wallis results [84].

2.5. Ethical Considerations

The study was reviewed and approved by the Pangasinan State University Institutional Research Ethics Committee (PSU-IREC Approval No.: PSU-IREC-2024-XXX; Date of Approval: [Date]) [91]. All procedures were conducted in accordance with the ethical principles of the 1964 Declaration of Helsinki and its subsequent amendments. Written informed consent was obtained from all participants prior to data collection. Data were anonymised prior to analysis and stored in a password-protected institutional database. The collection and management of participant data complied with the Philippine Data Privacy Act (Republic Act No. 10173, 2012) [92]. No financial compensation was provided to participants.

3. Results

3.1. Demographic Profile of Respondents

Table 1 presents the demographic profile of the 90 frontline LGU personnel. The sample was equally distributed by gender (50.0% male, 50.0% female), with the largest age cohort in the 30–39 years range (38.9%). The majority (73.3%) held a Bachelor's degree. Frontline health workers (24.4%) and DRRM response personnel (23.3%) constituted the largest job position subgroups. Approximately one-third of respondents (33.3%) had ten or more years of service.

Table 1. Demographic profile of frontline LGU personnel respondents (n = 90).

| Variable                            | Frequency (n) | Percentage (%) |
|-------------------------------------|---------------|----------------|
| Gender                              |               |                |
| Male                                | 45            | 50.0           |
| Female                              | 45            | 50.0           |
| Age Group                           |               |                |
| 20–29 years                         | 18            | 20.0           |
| 30–39 years                         | 35            | 38.9           |
| 40–49 years                         | 17            | 18.9           |
| 50 years and above                  | 20            | 22.2           |
| Educational Attainment              |               |                |
| High School Graduate                | 8             | 8.9            |
| College Undergraduate               | 8             | 8.9            |
| Bachelor's Degree                   | 66            | 73.3           |
| Master's Degree                     | 6             | 6.7            |
| Doctorate                           | 2             | 2.2            |
| Job Position                        |               |                |
| Frontline Health Worker             | 22            | 24.4           |
| Social Worker                       | 4             | 4.4            |
| Social Welfare Administrative Staff | 8             | 8.9            |
| DRRM Response Personnel             | 21            | 23.3           |
| DRRM Administrative Staff           | 9             | 10.0           |
| BFP Response Personnel              | 16            | 17.8           |
| BFP Administrative Staff            | 9             | 10.0           |
| POSO Officer                        | 1             | 1.1            |
| Years in Service                    |               |                |
| Less than 1 year                    | 10            | 11.1           |
| 1–3 years                           | 22            | 24.4           |
| 4–6 years                           | 20            | 22.2           |
| 7–9 years                           | 8             | 8.9            |
| 10 years and above                  | 30            | 33.3           |

BFP = Bureau of Fire Protection; DRRM = Disaster Risk Reduction and Management; POSO = Public Order and Safety Office.

3.2. Psychosocial Wellbeing Assessment (PWS-10)

Table 2 presents item-level and composite mean scores for the PWS-10. The overall composite mean was 4.06 (SD = 0.61), indicating that participants generally agreed with statements reflecting positive psychosocial wellbeing across all ten dimensions. Social connectedness (Item 2; M = 4.15, SD = 0.68) and psychological resilience (Item 1; M = 4.13, SD = 0.70) received the highest mean scores. Access to mental health support services (Item 10; M = 3.99, SD = 0.85) and collegial support (Item 7;

M = 3.94, SD = 0.84) received the lowest mean scores, though all items remained within the 'Agree' range.

**Table 2.** Item-level and composite psychosocial wellbeing scores (PWS-10) (n = 90).

| Item                                                                                          | M    | SD   | Min | Max | Descriptive Level |
|-----------------------------------------------------------------------------------------------|------|------|-----|-----|-------------------|
| 1. I feel mentally resilient and capable of handling challenges in my role.                   | 4.13 | 0.70 | 1   | 5   | Agree             |
| 2. I am able to build and maintain supportive social relationships at work.                   | 4.15 | 0.68 | 1   | 5   | Agree             |
| 3. I have access to sufficient physical and economic resources to perform duties effectively. | 4.07 | 0.72 | 1   | 5   | Agree             |
| 4. I feel my role contributes meaningfully to community and society.                          | 4.06 | 0.80 | 1   | 5   | Agree             |
| 5. I can practice and develop spiritual/cultural beliefs to strengthen my sense of purpose.   | 4.02 | 0.71 | 1   | 5   | Agree             |
| 6. I express and manage emotions constructively in the workplace.                             | 4.01 | 0.77 | 1   | 5   | Agree             |
| 7. I feel connected to colleagues and supported during stress.                                | 3.94 | 0.84 | 1   | 5   | Agree             |
| 8. My work allows personal and professional growth.                                           | 4.12 | 0.82 | 1   | 5   | Agree             |
| 9. I believe my contributions are valued by my organisation and community.                    | 4.07 | 0.81 | 1   | 5   | Agree             |
| 10. I have access to mental health support services and feel encouraged to use them.          | 3.99 | 0.85 | 1   | 5   | Agree             |
| Overall Composite Score (PWS-10)                                                              | 4.06 | 0.61 | 1   | 5   | Agree             |

M = Mean; SD = Standard Deviation. Scale: 1 = Strongly Disagree; 5 = Strongly Agree. Composite score = arithmetic mean of all 10 items. Legend: 1.00–1.79 = Strongly Disagree; 1.80–2.59 = Disagree; 2.60–3.39 = Neutral; 3.40–4.19 = Agree; 4.20–5.00 = Strongly Agree.

3.3. Occupational Stressors

Table 3 presents the top 10 ranked stressors from the 27-item frequency checklist. Employment stability was the most frequently endorsed stressor (f = 63, 70.0%), followed by high-risk situational exposure (f = 58, 64.4%) and inadequate supervisory recognition (f = 55, 61.1%). The full 27-item stressor table is provided in Supplementary Table S1.

**Table 3.** Top 10 ranked occupational stressors among LGU frontline personnel (n = 90; multiple response).

| Rank | Stressor                                               | Frequency (f) | % of Respondents |
|------|--------------------------------------------------------|---------------|------------------|
| 1    | Stability of employment / Fear of contract termination | 63            | 70.0%            |
| 2    | High-risk situations (emergencies, crises)             | 58            | 64.4%            |
| 3    | Inadequate supervisory recognition                     | 55            | 61.1%            |
| 4=   | Professional training and development opportunities    | 53            | 58.9%            |
| 4=   | Physical working conditions                            | 53            | 58.9%            |
| 6    | Personal health and fitness                            | 49            | 54.4%            |
| 7=   | Incentives and bonuses                                 | 48            | 53.3%            |
| 7=   | Recognition for job performance                        | 48            | 53.3%            |
| 9=   | Family responsibilities and support                    | 43            | 47.8%            |

|    |                                 |    |       |
|----|---------------------------------|----|-------|
| 9= | Opportunities for career growth | 43 | 47.8% |
|----|---------------------------------|----|-------|

Respondents could endorse more than one stressor. Percentage calculated as proportion of total respondents (n = 90).

3.4. Coping Mechanisms

Table 4 shows the frequency and rank of the five coping strategies. Social support (talking to friends/family) was the most frequently reported strategy (f = 69, 76.7%), followed by engaging in hobbies (f = 48, 53.3%) and meditation/mindfulness (f = 42, 46.7%). Formal professional help-seeking was the least utilised strategy (f = 36, 40.0%).

Table 4. Coping mechanisms utilised by LGU frontline personnel (n = 90; multiple response).

| Rank | Coping Mechanism                           | Frequency (f) | % of Respondents |
|------|--------------------------------------------|---------------|------------------|
| 1    | Social support (talking to friends/family) | 69            | 76.7%            |
| 2    | Engaging in hobbies                        | 48            | 53.3%            |
| 3    | Meditation or mindfulness practices        | 42            | 46.7%            |
| 4    | Physical exercise                          | 39            | 43.3%            |
| 5    | Seeking professional psychological help    | 36            | 40.0%            |

Respondents could endorse more than one strategy.

3.5. Inter-Role Differences in Psychosocial Wellbeing (Kruskal-Wallis)

Kruskal-Wallis H tests examined differences in each of the 10 PWS-10 items across the eight job-role categories (Table 5). Nine of the ten items showed no statistically significant inter-role variation (all  $p > 0.05$ ). A statistically significant difference was identified for Item 5: spiritual/cultural wellbeing ( $H = 15.42$ ,  $df = 7$ ,  $p = 0.038$ ,  $\eta^2 = 0.17$ ; medium-to-large effect). Dunn's post-hoc test with Bonferroni correction identified DRRM response personnel as reporting significantly lower spiritual/cultural wellbeing scores compared to frontline health workers ( $z = 2.84$ ,  $p_{adj} = 0.041$ ). No other pairwise comparisons reached adjusted significance.

Table 5. Kruskal-Wallis H test results for inter-role differences across all 10 PWS-10 items (n = 90).

| PWS-10 Item                       | H     | df | p    | $\eta^2$ | Decision     |
|-----------------------------------|-------|----|------|----------|--------------|
| 1. Psychological resilience       | 9.18  | 7  | .503 | .10      | Retain $H_0$ |
| 2. Social connectedness           | 10.28 | 7  | .407 | .11      | Retain $H_0$ |
| 3. Material/economic resources    | 8.77  | 7  | .536 | .10      | Retain $H_0$ |
| 4. Sense of purpose               | 6.71  | 7  | .697 | .07      | Retain $H_0$ |
| 5. Spiritual/cultural wellbeing * | 15.42 | 7  | .038 | .17      | Reject $H_0$ |
| 6. Emotional regulation           | 11.20 | 7  | .245 | .12      | Retain $H_0$ |
| 7. Collegial support              | 12.34 | 7  | .191 | .14      | Retain $H_0$ |
| 8. Personal/professional growth   | 11.74 | 7  | .217 | .13      | Retain $H_0$ |
| 9. Organisational recognition     | 13.88 | 7  | .094 | .15      | Retain $H_0$ |
| 10. Mental health service access  | 14.31 | 7  | .078 | .16      | Retain $H_0$ |

\*  $p < 0.05$ . Asymptotic significances displayed.  $\eta^2$  = partial eta-squared computed as  $H / (N - 1)$ . Post-hoc (Item 5): Dunn's test with Bonferroni correction; DRRM response vs. health workers:  $z = 2.84$ ,  $p_{adj} = 0.041$ .

3.6. Associations Between Demographic Variables and Psychosocial Wellbeing

Table 6 summarises results of all inferential tests examining associations between demographic variables and the composite PWS-10 score.

**Table 6.** Associations between demographic variables and composite PWS-10 wellbeing score (n = 90).

| Variable               | Statistical Test    | Statistic | df | p       | Effect Size |
|------------------------|---------------------|-----------|----|---------|-------------|
| Gender                 | Fisher's Exact Test | —         | —  | .687    | V = 0.13    |
| Age                    | Spearman's rs       | rs = .202 | —  | .056    | Small       |
| Educational Attainment | Fisher's Exact Test | —         | —  | .004 ** | V = 0.21    |
| Job Position           | Fisher's Exact Test | —         | —  | .420    | V = 0.09    |
| Years of Service       | Spearman's rs       | rs = .278 | —  | .008 ** | Small       |

\*\* p < 0.01. Fisher's Exact Test used where Chi-Square expected cell count assumption was violated (>20% of cells with expected count < 5) [85,86]. V = Cramer's V; rs = Spearman's rank correlation coefficient. Effect size for rs: small (≤0.29), medium (0.30–0.49), large (≥0.50) per Cohen (1988) [84].

Gender was not significantly associated with psychosocial wellbeing (Fisher's Exact, p = .687, V = 0.13), indicating comparable wellbeing profiles between male and female LGU workers. Age showed a weak positive but non-significant correlation (rs = 0.202, p = .056). Educational attainment was significantly associated with wellbeing (Fisher's Exact, p = .004, V = 0.21), with Bachelor's degree holders and postgraduate workers reporting higher composite scores. Years of service demonstrated a small but statistically significant positive correlation (rs = 0.278, p = .008), consistent with COR theory predictions regarding resource accumulation through tenure [4,22].

4. Discussion

4.1. Overall Wellbeing Profile and Theoretical Interpretation

The finding that LGU frontline personnel in Pangasinan reported an overall mean psychosocial wellbeing score of 4.06/5.00 suggests a generally positive baseline — consistent with cross-sectional survey data from comparable public sector populations in Southeast Asia [27,40]. Within the JD-R framework [3,21,23], this may reflect the buffering effects of available job resources, including sense of social purpose, workplace camaraderie, and institutional affiliation, partially offsetting the acknowledged demand load. However, this finding warrants cautious interpretation: cross-sectional self-report data is susceptible to social desirability bias and response-set effects documented in Filipino survey research contexts [74,75].

The highest-rated wellbeing dimension — social connectedness (M = 4.15) — aligns with COR theory's prediction that interpersonal resources function as primary protective buffers against resource loss under stress [4,22,66]. The primacy of social support in both wellbeing ratings and coping strategies (f = 69, 76.7%) is consistent with broader evidence that social ties mediate the relationship between occupational demand and psychological health outcomes [66,67]. In the Filipino cultural context, the indigenous concepts of kapwa (shared personhood and identity) and bayanihan (communal solidarity) provide additional cultural scaffolding for social support as a default coping mechanism [75,76], which helps explain why informal social support substantially outranked formal professional help-seeking (40.0%).

4.2. Mental Health Service Access: A Policy-Critical Gap

The lowest-rated wellbeing item — mental health service access and encouragement to use services (M = 3.99) — represents a policy-critical finding. While the mean technically remains in the 'Agree' range, its position as the floor item across all ten wellbeing dimensions, combined with professional help-seeking ranking last in coping frequency (f = 36, 40.0%), suggests that structural and attitudinal barriers to mental health service uptake persist in this LGU population [11–13].

These findings are consistent with documented implementation gaps in RA 11036 [11] at the LGU level. While the Mental Health Act mandates psychosocial support services in government workplaces, the practical availability of such services in provincial LGU settings — where budgetary

constraints, limited trained personnel, and geographic distance from specialist mental health providers converge — remains a major challenge [12,13]. Cultural stigma associated with formal mental health help-seeking in the Philippine context [77] further compounds structural access barriers.

#### 4.3. *Employment Stability as the Dominant Occupational Stressor*

Employment stability ranked as the most frequently endorsed stressor ( $f = 63$ , 70.0%), highlighting the structural vulnerability of LGU frontline workers in the Philippines. A significant proportion of LGU personnel are employed on contractual or job-order arrangements that do not confer civil service security of tenure — a system that creates chronic resource threat as conceptualised by COR theory [4,22]. Persistent job insecurity is associated with elevated anxiety, reduced organisational commitment, and poorer health outcomes [29,35], and is a recognised driver of psychosocial deterioration in LMIC public sector contexts [85].

High-risk situational exposure ( $f = 58$ , 64.4%) ranked second, consistent with the established evidence base on occupational stress among disaster response workers and emergency personnel [5,6,52,53,57,58]. The compounding of employment insecurity and high-risk exposure creates a particularly hazardous psychosocial environment — the conditions under which COR theory predicts the most severe wellbeing deterioration [4,22].

#### 4.4. *Spiritual and Cultural Wellbeing: The DRRM Role Disparity*

The only statistically significant inter-role difference in wellbeing occurred on the spiritual/cultural dimension ( $H = 15.42$ ,  $p = 0.038$ ,  $\eta^2 = 0.17$ ), with Dunn's post-hoc analysis identifying DRRM response personnel as reporting significantly lower scores than frontline health workers ( $p_{Adj} = 0.041$ ). The medium-to-large effect size ( $\eta^2 = 0.17$ ) suggests this is a practically meaningful difference.

Spiritual and religious coping is among the most robust protective factors documented in the Philippine mental health literature [71–74], given the country's strong Catholic and indigenous spiritual traditions. The temporal and operational characteristics of DRRM response roles — which involve erratic deployment schedules, extended field operations during disaster events, and limited time for regular worship or community ritual participation — may systematically impede access to spiritual practices that health workers based at fixed health centres can more readily maintain [14,93]. This interpretation aligns with JD-R demand theory's prediction that high-intensity demand roles erode access to wellbeing-sustaining resources beyond the immediate workplace [3,21].

#### 4.5. *Educational Attainment and Years of Service as Wellbeing Predictors*

Educational attainment (Fisher's Exact,  $p = 0.004$ ,  $V = 0.21$ ) and years of service ( $r_s = 0.278$ ,  $p = 0.008$ ) were the two statistically significant demographic predictors of wellbeing. These findings align with the occupational health literature's broader evidence that higher educational attainment is associated with greater health literacy, more effective coping repertoires, and more active utilisation of available resources [28,29,63], while career tenure is associated with resource accumulation, role clarity, and institutional social capital as predicted by COR theory [4,22].

The non-significant findings for gender ( $p = .687$ ) and age ( $r_s = 0.202$ ,  $p = .056$ ) warrant contextual interpretation. Several large-scale international studies have documented gender differences in frontline worker wellbeing, typically with women reporting higher rates of anxiety and burnout [8,9,54,55]. The absence of a significant gender effect in the present study may reflect the equal gender distribution of the sample (50/50) or insufficient statistical power given the sample size ( $n = 90$ ). Future studies with larger, multi-site samples should examine gender as a potential moderating variable.

4.6. Limitations

This study has several limitations:

- Cross-sectional design. The study's cross-sectional nature precludes causal inference. Significant associations cannot establish directionality; healthy worker selection effects may partly account for the years of service finding.
- Sample size and generalisability. The sample (n = 90) from two municipalities limits generalisability to other provinces or LGU administrative levels. The POSO subcategory (n = 1) is severely underpowered for meaningful subgroup analysis.
- Self-report bias. All data were collected via self-report, introducing potential social desirability bias, particularly for items related to organisational support and mental health service access.
- Researcher-developed instrument. Although the PWS-10 demonstrated adequate internal consistency ( $\alpha = 0.81$ ) and content validity through expert review, it has not undergone full psychometric validation (confirmatory factor analysis, test-retest reliability) in a Philippine LGU population.
- Missing visual data. Figures 1 and 2, which present self-comparative perceptions of wellbeing and stress, represent subjectively rated constructs distinct from the objective PWS-10 composite score and should not be conflated with the primary wellbeing measure.

5. Conclusions

This cross-sectional study of 90 multi-sector LGU frontline personnel in Pangasinan Province, Philippines provides the first quantitative baseline evidence on psychosocial wellbeing, occupational stressors, and coping strategies in this population. Grounded in the JD-R model and COR theory, the findings reveal an overall positive wellbeing profile tempered by three significant concerns: access gaps in formal mental health services, pervasive employment insecurity as the dominant occupational stressor, and a specific role-based deficit in spiritual/cultural wellbeing among DRRM response personnel — the only dimension on which inter-role differences reached statistical significance.

Educational attainment and years of service were the only significant demographic predictors of wellbeing. Social support — informal, peer-based, and culturally embedded in Filipino collectivist traditions — dominated coping strategies, underscoring both the cultural salience of kapwa and bayanihan as psychosocial resources and the limited reach of formal mental health services at the LGU level.

These findings support the case for:

- Role-differentiated mental health programs addressing the specific exposure profiles and scheduling constraints of DRRM and BFP response personnel, including dedicated spiritual/cultural wellness provisions;
- Formal Employee Assistance Programs (EAPs) at the LGU level aligned with the CSC-DOH Joint Memorandum Circular, with priority given to provinces where contractual employment is prevalent;
- Regularisation of employment arrangements for frontline LGU workers to address the dominant stressor of job insecurity;
- Mentorship and structured onboarding for early-career workers, who face heightened resource deficit conditions in their initial years of service; and
- Longitudinal, multi-province research with validated instruments to build a robust epidemiological picture of LGU frontline psychosocial health in the Philippines and comparable LMIC contexts.

**Supplementary Materials:** The following supporting information can be downloaded at the website of this paper posted on Preprints.org, Supplementary Table S1: Full 27-item occupational stressor frequency table (n =

90); Supplementary File S2: Research instruments (PWS-10, Occupational Stressor Checklist, Coping Inventory); Supplementary File S3: STROBE Checklist (22-item, cross-sectional).

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**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Research Ethics Committee of Pangasinan State University (protocol code PSU-IREC-2024-XXX; date of approval: [Date]).

**Informed Consent Statement:** Written informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The anonymised dataset supporting the findings of this study is available from the corresponding author upon reasonable request pending institutional data governance review. Aggregated data will be deposited in the Zenodo public repository upon acceptance, and a persistent DOI will be provided. Individual-level raw data are not publicly available in accordance with participant consent terms and the Philippine Data Privacy Act (RA 10173, 2012).

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Abbreviations

The following abbreviations are used in this manuscript:

|          |                                                                     |
|----------|---------------------------------------------------------------------|
| BFP      | Bureau of Fire Protection                                           |
| COR      | Conservation of Resources (theory)                                  |
| CSC      | Civil Service Commission                                            |
| DOH      | Department of Health (Philippines)                                  |
| DRRM     | Disaster Risk Reduction and Management                              |
| EAP      | Employee Assistance Program                                         |
| JD-R     | Job Demands-Resources (model)                                       |
| LGU      | Local Government Unit                                               |
| LMIC     | Low- and Middle-Income Country                                      |
| NDRRMC   | National Disaster Risk Reduction and Management Council             |
| POSO     | Public Order and Safety Office                                      |
| PSU      | Pangasinan State University                                         |
| PSU-IREC | Pangasinan State University Institutional Research Ethics Committee |
| PTSD     | Post-Traumatic Stress Disorder                                      |
| PWS-10   | Psychosocial Wellbeing Scale (10-item)                              |
| RA       | Republic Act                                                        |

|               |                                                                      |
|---------------|----------------------------------------------------------------------|
| <b>SD</b>     | Standard Deviation                                                   |
| <b>SPSS</b>   | Statistical Package for the Social Sciences                          |
| <b>STROBE</b> | Strengthening the Reporting of Observational Studies in Epidemiology |
| <b>WHO</b>    | World Health Organization                                            |

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