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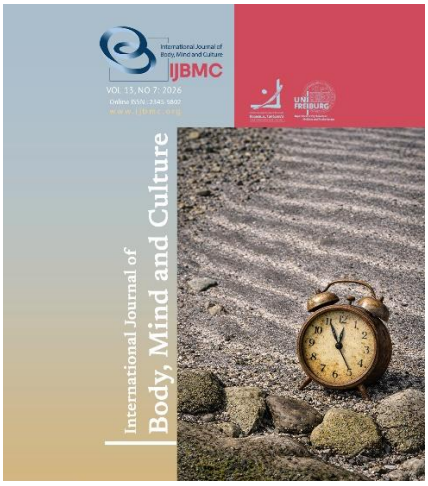
# Compassion Satisfaction, Burnout, and Secondary Traumatic Stress among Registered Nurses in Ilocos Sur, Philippines: A Cross-Sectional Correlational Study

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## ABSTRACT

**Objective:** This study examined the levels, interrelationships, and demographic correlates of compassion satisfaction, burnout, and secondary traumatic stress among registered nurses in Ilocos Sur, Philippines.

**Methods and Materials:** A cross-sectional correlational design was conducted among 168 nurses recruited from five hospitals using stratified sampling. Data were collected using the Professional Quality of Life Scale Version 5 (ProQOL-5) and a demographic questionnaire. Due to non-normal distributions, nonparametric analyses were applied, including Spearman's rho, Mann–Whitney U, and Kruskal–Wallis H tests with Dunn's post hoc and Bonferroni adjustment. Effect sizes were computed using r and $\eta^2$.

**Findings:** Nurses demonstrated moderate levels across all three ProQOL dimensions. Compassion satisfaction was negatively correlated with burnout and secondary traumatic stress, while burnout and secondary traumatic stress were strongly positively associated. Age and sex were significantly associated with all subscales, with mid-career nurses reporting higher burnout and females exhibiting higher scores across dimensions. Work experience was significantly associated with burnout and secondary traumatic stress but not compassion satisfaction, with more experienced nurses reporting lower trauma-related stress. Area of assignment approached significance for burnout.

**Conclusion:** Professional quality of life reflects a coexistence of moderate fulfillment and distress. The strong association between burnout and secondary traumatic stress suggests conceptual overlap within compassion fatigue. Interventions targeting career-stage vulnerabilities and enhancing compassion satisfaction are essential to sustain nurse well-being in rural healthcare settings.

**Keywords:** Compassion Satisfaction, Burnout, Traumatic Stress, Nurses, Quality of Life.

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## Introduction

The global nursing workforce faces unprecedented challenges to professional well-being, driven by escalating healthcare demands, persistent workforce shortages, and sustained exposure to occupational stressors (Galanis et al., 2021; Søvold et al., 2021) Nurses are exposed to demanding clinical environments and high levels of occupational stress, making them particularly vulnerable to psychological distress and reduced work-related quality of life (Labrague & de Los Santos, 2021). These challenges have been further exacerbated by evolving healthcare system demands, highlighting the urgent need to identify factors that foster resilience and support the sustainability of the nursing workforce (Dall'Ora et al., 2020; Woo et al., 2020).

Professional quality of life reflects both the positive and negative consequences of providing care in helping professions and is conceptualized within the Professional Quality of Life (ProQOL) framework as comprising three interrelated dimensions: compassion satisfaction, burnout, and secondary traumatic stress Stamm (2009) Compassion satisfaction refers to the fulfillment derived from caregiving, whereas burnout reflects emotional exhaustion and reduced engagement associated with chronic occupational stress. Secondary traumatic stress denotes stress responses resulting from indirect exposure to patients' traumatic experiences. These domains interact dynamically rather than functioning independently, thereby shaping nurses' overall professional well-being (Sacco et al., 2015). The Professional Quality of Life (ProQOL) framework conceptualizes burnout in relation to caregiving roles, emphasizing exhaustion and frustration associated with helping others, whereas the Maslach Burnout Inventory (MBI) defines burnout as a multidimensional construct encompassing emotional exhaustion, depersonalization, and reduced personal accomplishment within broader occupational contexts (Maslach & Jackson, 1981; Maslach et al., 1997; Stamm, 2009). Empirical evidence indicates only moderate convergence between the Professional Quality of Life (ProQOL) and Maslach Burnout Inventory (MBI) measures, suggesting that ProQOL burnout captures caregiving-specific aspects of exhaustion and distress that are not fully reflected in the broader occupational dimensions assessed by the MBI(Heritage et al., 2018; Maslach et al., 1997; Stamm, 2009).

Compassion satisfaction represents a protective component of professional quality of life and has been associated with resilience, engagement, and retention among nurses. Empirical evidence suggests that nurses frequently report moderate levels of compassion satisfaction despite demanding work environments, underscoring the sustaining role of meaningful patient interactions and a strong sense of professional identity (Xie et al., 2021; Zhang et al., 2018). Higher compassion satisfaction has been linked to reduced burnout and improved job satisfaction, suggesting an inverse association with occupational stress (Hegney et al., 2014). In contrast, burnout remains a pervasive concern in nursing, with significant implications for workforce stability, patient safety, and healthcare system performance. Systematic reviews have documented a substantial global prevalence of burnout among nurses (Galanis et al., 2021; Woo et al., 2020), with consistent evidence linking burnout to increased turnover intention, reduced job satisfaction, and compromised quality of care. The etiology of burnout is multifactorial, encompassing workload demands, emotional labor, inadequate organizational support, and work–life imbalance (Søvold et al., 2021), with early-career nurses demonstrating increased vulnerability to these stressors (Dall'Ora et al., 2020; Woo et al., 2020).

Secondary traumatic stress, a core component of compassion fatigue as conceptualized by Figley (1995, 2002), has been recognized as an important dimension of professional quality of life, particularly in high-acuity clinical settings. It arises from indirect exposure to patients' traumatic experiences and is conceptually distinct from, yet often co-occurs with, burnout due to shared exposure to occupational stressors. Empirical evidence indicates that secondary traumatic stress is positively associated with burnout and negatively associated with compassion satisfaction, highlighting the interrelated nature of these constructs (Sacco et al., 2015). Figley's foundational work further emphasizes that professionals working with traumatized individuals are at risk of experiencing trauma-related symptoms through empathic engagement. In addition, demographic and professional factors, including age, years of experience, and clinical assignment, have been shown to influence professional quality of life outcomes. More experienced nurses tend to report more favorable outcomes, likely due to enhanced coping mechanisms

and professional adaptation, whereas less experienced nurses may experience heightened stress and transitional challenges (Kelly et al., 2021; Ruiz - Fernández et al., 2020; Woo et al., 2020). Organizational factors, such as staffing adequacy, leadership support, and workplace culture, also play a critical role in shaping these outcomes.

Despite extensive global research, evidence from low- and middle-income countries remains limited, with regional disparities in the Philippines inadequately examined. Filipino nurses encounter systemic challenges, including high patient loads, workforce migration, and constrained access to mental health support services (Labrague & de Los Santos, 2021; Labrague et al., 2019). In Ilocos Sur, a province in northern Philippines, healthcare delivery is further shaped by geographically dispersed facilities and dependence on resource-limited municipal health units Authority (2018) Such conditions may exacerbate occupational stress through expanded professional roles, and limited access to specialist support. Empirical evidence on compassion satisfaction, burnout, and secondary traumatic stress among nurses in Ilocos Sur remains scarce, indicating a critical gap in localized research

Existing literature has largely examined individual dimensions of professional quality of life in isolation or within urban and tertiary care settings, limiting comprehensive understanding of how these dimensions interact within rural healthcare contexts. Addressing this gap, the present study aims to examine the levels, interrelationships, and demographic correlates of compassion satisfaction, burnout, and secondary traumatic stress among registered nurses in Ilocos Sur, Philippines. Specifically, it seeks to determine the levels of each ProQOL dimension, assess their interrelationships, and identify differences across demographic and professional variables. It is hypothesized that nurses will report moderate to high levels of compassion satisfaction and moderate levels of burnout and secondary traumatic stress (Galanis et al., 2021; Woo et al., 2020; Xie et al., 2021), that compassion satisfaction will be negatively correlated with burnout and secondary traumatic stress while the latter two will be positively correlated Sacco et al., (2015), and that older and more experienced nurses will demonstrate more favorable professional quality of life outcomes (Kelly et al., 2021; Ruiz - Fernández et al., 2020). By generating context-specific evidence, this study aims to inform targeted interventions, workforce policies, and mental health support strategies to enhance nurse well-being and healthcare delivery in rural settings.

## Methods and Materials

### *Study Design*

This study employed a quantitative, cross-sectional, correlational research design to examine the levels and interrelationships of compassion satisfaction, burnout, and secondary traumatic stress among registered nurses, as well as to determine differences across selected demographic and professional variables. A cross-sectional design is appropriate for describing and analyzing associations among variables at a single point in time without manipulating exposure or outcomes (Galanis et al., 2021). Accordingly, this design enables the identification of statistically significant relationships among study variables; however, it does not permit causal inference or the establishment of directional or predictive effects. Therefore, findings are interpreted strictly in terms of associations rather than causation, and terms such as "protective" or "buffering" are avoided in the interpretation of results.

### *Setting and Sample*

The study was conducted among registered nurses employed in five hospitals within the Second District of Ilocos Sur, Philippines, from August to November 2025. Hospital names were withheld to ensure confidentiality. A stratified sampling technique was employed to ensure proportional representation of participants from each hospital; however, stratification was limited to hospital affiliation, and no further stratification by unit or clinical assignment was undertaken.

The total population of registered nurses across the five participating hospitals was 290, distributed as follows: Hospital A (n = 153), Hospital B (n = 57), Hospital C (n = 40), Hospital D (n = 23), and Hospital E (n = 17). A proportionate sampling approach was employed based on the size of the nursing workforce in each institution, with approximately 58% of nurses targeted from each hospital, resulting in 224 nurses being invited to participate in the study. Of those invited, 168 nurses completed the survey, yielding a response rate of 75%.

Non-respondents were not replaced, and only fully completed responses were included in the final analysis.

Both public and private hospitals were included in the study, and proportional representation across hospital types was ensured through the stratified sampling procedure based on institutional distribution. The sample included 115 nurses from public hospitals and 53 from private hospitals, reflecting the distribution of the target population.

Eligibility criteria included full-time registered nurses with at least one year of clinical experience. Nurses on extended leave and those assigned exclusively to administrative functions were excluded from the study. The classification of eligible participants was limited to staff nurses and clinically active nurses, including contractual and part-time nurses, to maintain homogeneity of employment status and workload exposure. Nurses occupying managerial or supervisory positions were included only if they maintained active clinical duties; otherwise, purely administrative managers were excluded. Casual and floating nurses were excluded from the study due to variability in their clinical assignments and exposure to patient care.

Participants were recruited through nursing supervisors and provided written informed consent prior to participation. The sample size was determined using the Raosoft calculator with a 95% confidence level, a 5% margin of error, and a 50% response distribution, consistent with Polit & Beck (2008). However, this calculation is appropriate for prevalence estimation and may not provide sufficient power for detecting group differences or correlations. A post hoc power analysis was conducted to determine the statistical power for the planned correlational and group comparison analyses.

Data were collected using a structured questionnaire consisting of two parts: the Professional Quality of Life Scale Version 5 (ProQOL-5) and a demographic profile sheet. The ProQOL-5, developed by Stamm (2009), is a standardized instrument designed to measure three dimensions of professional quality of life: compassion satisfaction, burnout, and secondary traumatic stress. Each subscale contains 10 items rated on a five-point Likert scale ranging from 1 (never) to 5 (very often). In this study, scoring followed the standard ProQOL-5 scoring procedure, wherein subscale scores were computed based on item means to ensure comparability across constructs. Raw sum scores were also calculated for categorical interpretation according to ProQOL guidelines Stamm (2009), consistent with the presentation of results in Table 2.

According to Stamm (2009), the ProQOL-5 demonstrates good internal consistency, with Cronbach's alpha values of 0.88 for Compassion Satisfaction, 0.75 for Burnout, and 0.81 for Secondary Traumatic Stress. A structured demographic questionnaire was used to collect data on age, sex, civil status, educational attainment, years of nursing experience, hospital type (public/private), and clinical unit assignment.

Data collection was conducted using printed self-administered questionnaires after obtaining institutional approval from the participating hospitals. Distribution was coordinated with the chiefs of hospitals and chief nurses in each institution to ensure proper organization and standardization of data collection procedures. Questionnaires were distributed and collected by trained research assistants who were not employed in the participating hospitals. Nursing supervisors were informed of the study and assisted in participant orientation; however, they were not involved in questionnaire administration, retrieval, or access to completed responses, to minimize potential coercion and response bias.

Participation was voluntary, and respondents were informed that they could decline or withdraw at any time without consequence. To ensure confidentiality and anonymity, no identifying information was collected. Completed questionnaires were returned in sealed envelopes and deposited in secure collection boxes placed in designated hospital areas accessible only to the researchers. This procedure ensured that participants could decline participation privately without their decision being observed by supervisors.

*Data Analysis*

Data were analyzed using IBM SPSS Statistics for Windows, Version 26.0. Descriptive statistics, including frequencies, percentages, means, standard deviations, medians, and ranges, were computed to summarize participants' demographic and professional characteristics, as well as ProQOL subscale scores. Subscale scores were categorized into low, moderate, and high levels per ProQOL guidelines Stamm (2009), consistent with the interpretation presented in the results section. The proportion of nurses in each

category (low, moderate, high) for each ProQOL domain was also calculated and reported.

Prior to conducting inferential analyses, the Shapiro–Wilk test was employed to assess the normality of the data distribution for each ProQOL dimension, as this test is recommended for sample sizes less than 2,000 (Field, 2024). As presented in the results section, the Shapiro–Wilk test yielded significant results for Burnout ($p = 0.021$) and Secondary Traumatic Stress ($p = 0.001$), indicating a significant deviation from normality for these variables. Although the Compassion Satisfaction variable approached normality ($p = 0.051$), at least one variable in the dataset demonstrated non-normal distribution. Consequently, nonparametric statistical methods were utilized for all subsequent analyses to ensure robustness and appropriateness of the statistical approach, given the violation of the normality assumption.

To examine the relationships among the three ProQOL dimensions, Spearman's rank-order correlation coefficient (Spearman's rho) was computed, as this nonparametric measure is appropriate for assessing monotonic relationships between variables when normality assumptions are violated (Polit & Beck, 2008). Correlation coefficients were interpreted based on the following guidelines: $r < 0.30$ indicated a weak correlation, $r = 0.30–0.49$ indicated a moderate correlation, $r = 0.50–0.69$ indicated a strong correlation, and $r \geq 0.70$ indicated a very strong correlation (Cohen, 1988). Additionally, coefficients of determination ($r^2$) were calculated to quantify the proportion of shared variance between constructs, providing a more comprehensive interpretation of the strength and practical significance of the observed associations. It is important to note that these correlations represent associations, not causal relationships; interpretations avoid causal language such as "protective" or "buffering."

To determine differences in ProQOL subscales across selected demographic and professional variables, nonparametric tests were employed based on the nature of the independent variables. The Mann–Whitney U test was used for dichotomous variables (sex and type of healthcare facility), while the Kruskal–Wallis H test was applied to variables with three or more categories (age, civil status, highest educational attainment, length of work experience, and area of assignment). When significant omnibus results were obtained from the Kruskal–Wallis H test, Dunn's post hoc test with Bonferroni adjustment was conducted to identify specific group differences and control for Type I error inflation associated with multiple pairwise comparisons (Dunn, 1964). Statistical significance was set at $p < 0.05$ for all analyses. This analytical approach directly corresponds to the nonparametric findings presented in Table 5 of the results section.

Due to the small subgroup sizes in certain demographic categories (e.g., doctorate degree: $n = 1$; separated: $n = 2$; widowed: $n = 3$; age 40–49: $n = 8$; age 50–59: $n = 9$; ≥16 years experience: $n = 8$), the results of group comparisons involving these categories should be interpreted with caution. These small sample sizes may result in reduced statistical power and increased risk of Type II error. Furthermore, although Cronbach's alpha and nonparametric tests were appropriately applied, the limited sample size in some subgroups precludes definitive conclusions about differences across all demographic categories.

Effect sizes were calculated for all significant group comparisons. For Mann–Whitney U tests, the effect size r was computed as $r = Z/\sqrt{N}$, where Z is the standardized test statistic and N is the total sample size (Rosenthal et al., 1994). For Kruskal–Wallis H tests, the effect size $\eta^2$ (eta-squared) was calculated as $\eta^2 = (H - k + 1)/(n - k)$, where H is the Kruskal–Wallis statistic, k is the number of groups, and n is the total sample size (Tomczak et al., 2014). Effect sizes were interpreted using Cohen (1988) guidelines: $r \geq 0.10$ (small), $r \geq 0.30$ (medium), $r \geq 0.50$ (large); and $\eta^2 \geq 0.01$ (small), $\eta^2 \geq 0.06$ (medium), $\eta^2 \geq 0.14$ (large).

Given the limitations of bivariate comparisons and the potential confounding between demographic variables (e.g., age and work experience are likely correlated), multivariable regression analysis was considered. However, due to the non-normal distribution of the outcome variables and the small sample size in several demographic subgroups, the primary analytical approach remained nonparametric bivariate tests. Future research with larger samples should consider multivariable regression to better understand the independent contributions of demographic and professional factors to ProQOL outcomes.

*Rigor and Data Quality Assurance*

Methodological rigor was maintained through standardized instruments with established validity and

reliability. Data were screened for missing values, normality, and outliers. Parametric test assumptions were evaluated prior to analysis Polit & Beck (2008). The use of nonparametric statistical methods, as detailed above, ensured that the analytical approach was appropriately matched to the empirical characteristics of the data, thereby enhancing the validity and robustness of the study findings (Field, 2024). To ensure reliability in scoring, two independent research assistants verified data entry for 10% of randomly selected questionnaires, with 100% agreement achieved.

Ethical Considerations

Ethical approval was obtained from the Ilocos Sur Polytechnic State College Research Ethics Committee (Approval No. 2025-083). The study adhered to the Declaration of Helsinki principles: voluntary participation, informed consent, confidentiality, and the right to withdraw without penalty. Prior to data collection, all participants were provided with written and verbal information regarding the study's purpose, procedures, potential risks, and benefits. Written informed consent was obtained from all participants before their involvement in the study. To protect participant confidentiality, all data were anonymized and stored in a password-protected database accessible only to the research team. No personally identifiable information was collected, and completed questionnaires were maintained in locked cabinets separate from consent forms to ensure anonymity Polit & Beck (2008). Participants were informed that they could withdraw from the study at any time without providing a reason and without any negative consequences to their employment or professional standing. The study posed no more than minimal risk to participants, and no compensation was provided for participation.

## Findings and Results

This study examined the levels and interrelationships of compassion satisfaction, burnout, and secondary traumatic stress among nurses and analyzed differences across selected demographic and professional variables. Overall, the findings indicated moderate levels of compassion satisfaction and burnout, with secondary traumatic stress also present at comparable levels. Significant correlations were observed among the three constructs, and meaningful variations emerged across age, sex, work experience, and area assignment. These results provide updated empirical evidence on nurses' professional quality of life and reinforce its multidimensional and dynamic nature as described in recent literature (Zhang et al., 2018).

*Participant Characteristics*

A total of 168 nurses participated in the study**,** representing a 75.0% response rate from the 224 nurses invited to participate. The participants were predominantly young and early-career nurses. The majority were aged 20–29 years (46.4%) and 30–39 years (43.5%), with only 10.1% aged 40 years and above (40–49 at 4.8% and 50–59 at 5.4%). The workforce was largely female (66.7%). Over half were single (56.5%), while 40.5% were married, and a small minority were separated (1.2%) or widowed (1.8%).

In terms of educational attainment, the vast majority held a Bachelor's degree (94.0%), with only 5.4% holding a Master's degree and 0.6% holding a Doctorate degree. Regarding work experience, 56.5% had 1–5 years, 20.2% had 6–10 years, 18.5% had 11–15 years, and 4.8% had ≥16 years of experience.

Most participants were employed in public hospitals (68.5%), while 31.5% worked in private hospitals. In terms of assignment areas, the most common units were the Emergency Room (28.6%) and the Medical Ward (23.2%), followed by the Operating Room (12.5%), Intensive Care Unit (10.1%), Pediatric Unit (7.1%), Surgical Ward (6.6%), OB Ward (4.2%), Labor/Delivery (4.2%), and Out Patient Department (3.6%).

**Table 1**

*Demographic and Professional Profile of Nurse Participants*

| Demographic Profile | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| **Age (years)** | 20–29 | 78 | 46.43 |
| | 30–39 | 73 | 43.45 |
| | 40–49 | 8 | 4.76 |
| | 50–59 | 9 | 5.36 |
| **Sex** | Female | 112 | 66.67 |
| | Male | 56 | 33.33 |
| **Civil Status** | Single | 95 | 56.55 |
| | Married | 68 | 40.48 |
| | Separated | 2 | 1.19 |
| | Widow | 3 | 1.79 |
| **Educational Attainment** | Bachelor's Degree | 158 | 94.05 |
| | Master's Degree | 9 | 5.36 |
| | Doctorate Degree | 1 | 0.60 |
| **Work Experience (years)** | 1–5 | 95 | 56.55 |
| | 6–10 | 34 | 20.24 |
| | 11–15 | 31 | 18.45 |
| | ≥ 16 | 8 | 4.76 |
| **Facility Type** | Private Hospital | 53 | 31.55 |
| | Public Hospital | 115 | 68.45 |
| **Assignment Area** | Pediatric Unit | 12 | 7.14 |
| | Emergency Room | 48 | 28.57 |
| | OB Ward | 7 | 4.17 |
| | Intensive Care Unit | 17 | 10.12 |
| | Surgical Ward | 11 | 6.55 |
| | Medical Ward | 39 | 23.21 |
| | Operating Room | 21 | 12.50 |
| | Out Patient Department | 6 | 3.57 |
| | Labor/Delivery | 7 | 4.17 |

*Levels of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress*

Nurses reported moderate levels across all three ProQOL domains. The mean Compassion Satisfaction score was 37.62 (moderate), mean Burnout score was 25.08 (moderate), and mean Secondary Traumatic Stress score was 26.47 (moderate). According to ProQOL scoring guidelines, scores ranging from 22 to 42 for Compassion Satisfaction, 23 to 41 for Burnout, and 23 to 41 for Secondary Traumatic Stress are considered moderate. These scores indicate a balanced profile where professional fulfillment coexists with moderate occupational strain.

**Table 2**

*Levels of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress*

| ProQOL Subscale | Mean Score | Interpretation |
|---|---|---|
| **Compassion Satisfaction** | 37.62 | Moderate |
| **Burnout** | 25.08 | Moderate |
| **Secondary Traumatic Stress** | 26.47 | Moderate |

Note. *Interpretation based on Professional Quality of Life (ProQOL) scoring guidelines*

*Correlational Analysis of ProQOL Subscales*

The Shapiro–Wilk test was employed to assess the normality of the data distribution for each ProQOL dimension. As presented in Table 3, the Shapiro–Wilk test yielded significant results for Burnout ($p = 0.021$) and Secondary Traumatic Stress ($p = 0.001$), indicating a significant deviation from normality for these variables. Although the Compassion Satisfaction variable approached normality ($p = 0.051$), at least one variable in the dataset demonstrated non-normal distribution. Consequently, nonparametric statistical methods were utilized for all subsequent analyses to ensure robustness and appropriateness of the statistical approach, given the violation of the normality assumption.

**Table 3**

*Tests of Normality for ProQOL Dimensions*

| Variable | Kolmogorov–Smirnov | | | Shapiro–Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| **Compassion Satisfaction** | .067 | 168 | .060 | .984 | 168 | .051 |
| **Burnout** | .087 | 168 | .003 | .981 | 168 | .021 |
| **Secondary Traumatic Stress** | .097 | 168 | .001 | .967 | 168 | .001 |

***Note.*** *Lilliefors significance correction was applied for the Kolmogorov–Smirnov test. Statistical significance was set at* $p < 0.05$.

Spearman's rho correlation analysis was conducted to examine the relationships among the three ProQOL subscales: Compassion Satisfaction, Burnout, and Secondary Traumatic Stress (Table 4). The results revealed statistically significant intercorrelations among all three dimensions, indicating meaningful associations between positive and negative aspects of professional quality of life.

*Relationship Between Compassion Satisfaction and Burnout*

A statistically significant, moderate negative correlation was observed between Compassion Satisfaction and Burnout ($r_s = -0.518, p < 0.01$), indicating that higher levels of satisfaction derived from caregiving work are associated with lower levels of burnout. Conversely, lower compassion satisfaction is linked to higher burnout scores. The squared correlation ($r_s^2 \approx 0.268$) suggests a moderate degree of shared variance between the two constructs, reflecting a meaningful inverse association. This finding is consistent with the ProQOL theoretical framework, which conceptualizes compassion satisfaction as a protective factor that may buffer against burnout.

*Relationship Between Compassion Satisfaction and Secondary Traumatic Stress*

A statistically significant, weak-to-moderate negative correlation was found between Compassion Satisfaction and Secondary Traumatic Stress ($r_s = -0.381, p < 0.01$). This indicates that higher professional fulfillment is associated with lower levels of trauma-related distress arising from indirect exposure to patients' suffering. The squared correlation ($r_s^2 \approx 0.145$) reflects a relatively modest degree of shared variance, suggesting that while compassion satisfaction is related to secondary traumatic stress, a substantial proportion of variability is likely influenced by other factors not examined in the present study. The comparatively weaker magnitude of this relationship, relative to burnout, suggests that compassion satisfaction may have a more limited association with trauma-related symptoms.

*Relationship Between Burnout and Secondary Traumatic Stress*

A statistically significant, strong positive correlation was identified between Burnout and Secondary Traumatic Stress ($r_s = 0.718, p < 0.01$). This indicates that higher levels of burnout are associated with increased levels of secondary traumatic stress. The squared correlation ($r_s^2 \approx 0.516$) suggests a substantial degree of shared variance between these constructs, highlighting considerable empirical overlap. The strength of this association exceeds those observed between compassion satisfaction and the negative dimensions, suggesting that burnout and secondary traumatic stress are more closely related to each other. This finding supports existing conceptualizations that position both constructs as interrelated components of compassion fatigue, while still recognizing them as theoretically distinct domains.

**Table 4**

*Spearman's Rank-Order Correlation Matrix of ProQOL Subscales*

| Variable | Compassion Satisfaction | Burnout | Secondary Traumatic Stress |
|---|---|---|---|
| **Compassion Satisfaction** | | −0.518** | −0.381** |
| **Burnout** | −0.518** | | 0.718** |
| **Secondary Traumatic Stress** | −0.381** | 0.718** | |

***Note.*** $r_s$ *= Spearman's rank-order correlation coefficient. All correlations were computed using two-tailed tests. Correlation is significant at the 0.01 level (*$p < 0.01$*).* $n = 168$ *for all variables.*

*Nonparametric Differences in ProQOL Subscales Across Profile Variables*

Given the violation of normality assumptions, nonparametric tests were employed. The Mann–Whitney U test was used for dichotomous variables, while the Kruskal–Wallis H test was applied to variables with three or more categories. Significant omnibus tests were followed by Dunn's post hoc comparisons with Bonferroni adjustment. Effect sizes were computed using eta squared ($\eta^2$) for Kruskal–Wallis tests and r for Mann–Whitney tests.

*Compassion Satisfaction*

A statistically significant difference in Compassion Satisfaction was observed across age groups, $H(3) = 12.63$, $p = 0.005$, $\eta^2 = 0.041$, indicating a small-to-moderate effect. Post hoc analysis using Dunn's test with Bonferroni adjustment revealed that nurses aged 40–49 years had significantly higher Compassion Satisfaction scores than those aged 30–39 years ($p = 0.039$) and 50–59 years ($p = 0.014$).

A significant difference was also found between sex groups, $U = 842.50$, $z = -2.29$, $p = 0.022$, $r = 0.16$, suggesting a small effect size. Female nurses demonstrated higher Compassion Satisfaction scores compared to male nurses.

No statistically significant differences were found across civil status, $H(2) = 2.02$, $p = 0.365$, highest educational attainment, $H(2) = 1.19$, $p = 0.553$, length of work experience, $H(3) = 5.62$, $p = 0.132$, type of healthcare facility, $U = 1456.00$, $p = 0.974$, or area of assignment, $H(3) = 3.74$, $p = 0.294$.

*Burnout*

Significant differences in Burnout were identified across age groups, $H(3) = 18.94$, $p < 0.001$, $\eta^2 = 0.062$, indicating a moderate effect size. Post hoc comparisons revealed that nurses aged 30–39 years reported significantly higher Burnout levels than those aged 20–29 years ($p < 0.001$) and 40–49 years ($p = 0.001$).

A significant difference was also observed across sex, $U = 856.00$, $z = -2.26$, $p = 0.024$, $r = 0.15$, with female nurses reporting higher Burnout levels.

Burnout also differed significantly across length of work experience, $H(3) = 9.26$, $p = 0.026$, $\eta^2 = 0.030$. Post hoc analysis indicated that nurses with 6–10 years of experience reported significantly higher Burnout levels than those with 1–5 years of experience ($p = 0.041$).

No statistically significant differences were observed across civil status, $H(2) = 2.69$, $p = 0.261$, highest educational attainment, $H(2) = 4.20$, $p = 0.123$, type of healthcare facility, $U = 1304.00$, $p = 0.112$, or area of assignment, $H(3) = 7.73$, $p = 0.052$, which approached but did not reach statistical significance.

*Secondary Traumatic Stress*

Statistically significant differences in Secondary Traumatic Stress were observed across age, $H(3) = 10.78$, $p = 0.013$, $\eta^2 = 0.035$, sex, $U = 829.50$, $z = -2.39$, $p = 0.017$, $r = 0.17$, and length of work experience, $H(3) = 12.94$, $p = 0.005$, $\eta^2 = 0.042$.

Female nurses reported higher Secondary Traumatic Stress compared to male nurses. Post hoc analysis revealed a significant difference between nurses with ≥16 years of experience and those with 1–5 years of experience ($p = 0.017$), with the more experienced group reporting significantly lower stress levels than those with fewer years of experience.

No statistically significant differences were found across civil status, $H(2) = 3.82$, $p = 0.148$, highest educational attainment, $H(2) = 3.61$, $p = 0.164$, type of healthcare facility, $U = 1452.00$, $p = 0.993$, or area of assignment, $H(3) = 5.53$, $p = 0.140$

*Summary of Nonparametric Findings*

Overall, age and sex were significantly associated with all three ProQOL subscales, although effect sizes were generally small to moderate. Length of work experience was significantly associated with Burnout and Secondary Traumatic Stress but not with Compassion Satisfaction. Civil status, highest educational attainment, type of healthcare facility, and area of assignment were not significantly associated with any of the ProQOL subscales, although area of assignment approached significance for Burnout ($p = 0.052$).

**Table 5**

*Nonparametric Tests of Differences in ProQOL Subscales Across Profile Variables*

| ProQOL Subscale | Profile Variable | Comparison / Category | Statistical Test | *p*-value | Decision |
|---|---|---|---|---|---|
| **Compassion Satisfaction** | Age | Overall | Kruskal–Wallis *H* | 0.005* | Significant |
| | | 40–49 vs 30–39 | Dunn's post hoc | 0.039* | Significant |
| | | 40–49 vs 50–59 | Dunn's post hoc | 0.014* | Significant |
| | Sex | — | Mann–Whitney *U* | 0.022* | Significant |
| | Civil Status | Overall | Kruskal–Wallis *H* | 0.365 | NS |
| | Highest Educational Attainment | Overall | Kruskal–Wallis *H* | 0.553 | NS |
| | Length of Work Experience | Overall | Kruskal–Wallis *H* | 0.132 | NS |
| | Type of Healthcare Facility | — | Mann–Whitney *U* | 0.974 | NS |
| | Area of Assignment | Overall | Kruskal–Wallis *H* | 0.294 | NS |
| **Burnout** | Age | Overall | Kruskal–Wallis *H* | < 0.001* | Significant |
| | | 30–39 vs 20–29 | Dunn's post hoc | < 0.001* | Significant |
| | | 30–39 vs 40–49 | Dunn's post hoc | 0.001* | Significant |
| | Sex | — | Mann–Whitney *U* | 0.024* | Significant |
| | Civil Status | Overall | Kruskal–Wallis *H* | 0.261 | NS |
| | Highest Educational Attainment | Overall | Kruskal–Wallis *H* | 0.123 | NS |
| | Length of Work Experience | Overall | Kruskal–Wallis *H* | 0.026* | Significant |
| | | 6–10 vs 1–5 | Dunn's post hoc | 0.041* | Significant |
| | Type of Healthcare Facility | — | Mann–Whitney *U* | 0.112 | NS |
| | Area of Assignment | Overall | Kruskal–Wallis *H* | 0.052 | NS |
| **Secondary Traumatic Stress** | Age | Overall | Kruskal–Wallis *H* | 0.013* | Significant |
| | Sex | — | Mann–Whitney *U* | 0.017* | Significant |
| | Civil Status | Overall | Kruskal–Wallis *H* | 0.148 | NS |
| | Highest Educational Attainment | Overall | Kruskal–Wallis *H* | 0.164 | NS |
| | Length of Work Experience | Overall | Kruskal–Wallis *H* | 0.005* | Significant |
| | | ≥16 vs 1–5 | Dunn's post hoc | 0.017* | Significant |
| | Type of Healthcare Facility | — | Mann–Whitney *U* | 0.993 | NS |
| | Area of Assignment | Overall | Kruskal–Wallis *H* | 0.140 | NS |

***Note.*** *p < 0.05 was considered statistically significant. NS = not significant. Kruskal–Wallis H test was used for comparisons involving three or more groups, while the Mann–Whitney U test was used for two-group comparisons. Dunn's post hoc test with Bonferroni adjustment was performed for pairwise comparisons following significant Kruskal–Wallis results.*

## Discussion and Conclusion

This study examined the levels, interrelationships, and correlates of compassion satisfaction, burnout, and secondary traumatic stress among registered nurses in Ilocos Sur, Philippines. Findings revealed moderate levels across all three ProQOL dimensions, significant intercorrelations, and meaningful variations by age, sex, and work experience**.** Notably, area of assignment approached significance for burnout (p = 0.052), suggesting a potential trend warranting further investigation with larger samples. These results reinforce the multidimensional nature of professional quality of life as a balance of positive and negative work-related experiences (Stamm, 2009; Zhang et al., 2018).

The moderate levels observed suggest a balanced yet cautiously concerning profile. Nurses reported meaningful fulfillment from caregiving alongside moderate occupational strain and trauma exposure. This pattern supports conceptualizing professional quality of life as comprising coexisting rewarding and distressing elements (Bride et al., 2007; Stamm, 2009). Similar moderate profiles have been documented in international nursing populations (Hinderer et al., 2014; Woo et al., 2020). Evidence from Filipino nurses during the COVID-19 pandemic likewise demonstrates a comparable pattern of high compassion satisfaction alongside moderate burnout and secondary traumatic stress (Labrague & de Los Santos, 2021). Although moderate levels do not indicate severe dysfunction, they remain clinically relevant because sustained occupational stress is associated with reduced job satisfaction, increased turnover intention, and compromised patient care (Dall'Ora et al., 2020; Galanis et al., 2021). Notably, while all three scores fell within the moderate range, Compassion Satisfaction (37.62) trended closer to the high threshold (≥43), whereas Burnout (25.08) and Secondary Traumatic Stress (26.47) remained nearer to the low end of the moderate spectrum (≤22 for low burnout/stress), suggesting a

relatively favorable profile within the moderate category.

The burnout dimension measured in this study reflects caregiving-specific exhaustion and frustration, which is conceptually distinct from the broader occupational burnout measured by the Maslach Burnout Inventory (MBI). The MBI conceptualizes burnout as emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1997). This distinction is important because ProQOL burnout emphasizes strain arising specifically from the caregiving context rather than general occupational stress (Bride et al., 2007; Stamm, 2009).

The moderate compassion satisfaction score indicates that nurses continue to derive meaningful professional fulfillment. Compassion satisfaction has been linked to resilience, work engagement, and retention (Kelly et al., 2015; Sacco et al., 2015). However, its moderate level suggests that organizational factors such as workload demands and staffing constraints may limit optimal professional fulfillment (Dall'Ora et al., 2020). Strengthening leadership support and professional development opportunities may enhance this positive dimension (Søvold et al., 2021).

The moderate burnout level reflects ongoing emotional exhaustion and work-related strain. Burnout remains a critical concern due to its association with decreased patient safety and increased turnover intention (Galanis et al., 2021; Woo et al., 2020). Even moderate burnout is clinically meaningful, as prolonged exposure to workplace stress can accumulate and result in long-term adverse outcomes if not addressed (Maslach & Leiter, 2016).

Similarly, moderate secondary traumatic stress indicates continued exposure to patient suffering and distress, reflecting the emotional consequences of repeated engagement with traumatic clinical experiences (Bride et al., 2007; Figley, 2002; Stamm, 2009). Secondary traumatic stress arises from empathic engagement with patients' trauma, making it an occupational risk among healthcare providers (Figley, 1995). This finding aligns with compassion fatigue literature, which recognizes the emotional burden inherent in caring for suffering individuals (Beck, 2011; Hinderer et al., 2014). These moderate levels, while not indicating severe distress, highlight the importance of organizational support structures that address the emotional consequences of repeated trauma exposure in clinical practice.

The significant correlations confirm the interconnected nature of these constructs. The moderate negative relationship between compassion satisfaction and burnout ($r_s = -0.518$, $r_s^2 = 0.268$) supports the role of professional fulfillment in mitigating burnout, with approximately 26.8% of the variance in burnout shared with compassion satisfaction (Stamm, 2009; Zhang et al., 2018). The inverse relationship between compassion satisfaction and secondary traumatic stress suggests that professional meaning may buffer trauma-related distress (Kelly et al., 2015). Conversely, the strong positive association between burnout and secondary traumatic stress reflects shared exposure to chronic occupational stressors (Cavanagh et al., 2020; Hinderer et al., 2014). The coefficient of determination indicates that a substantial proportion of variance in secondary traumatic stress is shared with burnout, suggesting conceptual overlap within the broader construct of compassion fatigue. The markedly stronger association between burnout and secondary traumatic stress compared to compassion satisfaction's associations with either negative dimension underscores that while compassion satisfaction is protective, burnout and trauma-related distress are more closely intertwined in the nursing experience.

Differences across demographic variables highlight the importance of career stage. Older and more experienced nurses demonstrated more favorable profiles. Nurses aged 40–49 years exhibited significantly higher compassion satisfaction compared to younger groups, while those aged 30–39 years reported higher burnout levels. Significant differences in secondary traumatic stress were also observed across age groups. These patterns may reflect the role of professional maturity and adaptive coping strategies (Kelly et al., 2015; Mealer et al., 2012). In contrast, younger and less experienced nurses appear more vulnerable to burnout and trauma-related stress, likely due to transition challenges and limited coping resources Dall'Ora et al., (2020) as well as the developmental stage of professional identity formation and the "reality shock" commonly experienced by early-career nurses.

Sex differences were also evident, with female nurses reporting higher compassion satisfaction, burnout, and

secondary traumatic stress across all three dimensions with small effect sizes (r = 0.16, 0.15, and 0.17, respectively).This pattern is consistent with evidence suggesting that gender-related expectations and work–family role strain contribute to increased occupational stress among women in healthcare (Galanis et al., 2021). At the same time, higher compassion satisfaction among female nurses suggests a complex interplay between fulfillment and distress within caregiving roles, possibly reflecting gendered socialization toward caregiving and emotional labor that simultaneously enhances meaning-making and increases emotional exhaustion.

Work experience was significantly associated with burnout and secondary traumatic stress but not with compassion satisfaction. Mid-career nurses demonstrated higher burnout compared to early-career nurses, while those with longer experience exhibited lower secondary traumatic stress. These findings suggest that accumulated experience may contribute to the development of coping mechanisms that mitigate trauma-related distress over time. The absence of a significant association between work experience and compassion satisfaction further suggests that professional fulfillment may be more closely tied to the intrinsic meaning derived from caregiving rather than tenure, potentially remaining stable across career stages despite fluctuations in occupational distress.

No statistically significant differences were found across civil status, educational attainment, type of healthcare facility, or most areas of assignment. This suggests that professional quality of life in this sample is more strongly influenced by individual and career-stage factors than by structural or institutional characteristics.

The absence of differences by facility type is noteworthy, indicating that nurses in both public and private settings experience comparable levels of professional fulfillment and occupational strain. This finding may suggest the presence of shared systemic factors influencing professional quality of life across healthcare institutions , such as similar patient acuity levels, staffing ratios, and administrative demands that transcend facility ownership. However, the near-significant trend for area of assignment in relation to burnout (p = 0.052) warrants cautious interpretation. While not reaching statistical significance, this finding suggests that specific clinical settings—particularly high-acuity units such as the Emergency Room and Intensive Care Unit—may confer differential burnout risk. The limited sample size within individual assignment areas may have constrained the detection of statistically significant differences, and future research with larger, more balanced samples across clinical specialties is needed to clarify whether certain practice environments are associated with higher occupational distress.

Overall, professional quality of life among nurses reflects the coexistence of positive and negative work-related experiences. The presence of moderate compassion satisfaction alongside moderate burnout and secondary traumatic stress highlights the need for balanced interventions that simultaneously enhance professional fulfillment and reduce occupational distress.

*Implications and Limitations*

The significant negative correlations between compassion satisfaction and both burnout and secondary traumatic stress suggest that these constructs are inversely associated, indicating that professional fulfillment and occupational distress tend to co-vary in opposite directions. This underscores the importance of promoting positive professional experiences alongside reducing occupational distress. At the practice level, routine ProQOL monitoring and integration of resilience-building strategies—reflective practice, peer support, stress management—are recommended, particularly for early-career nurses who demonstrated higher vulnerability. Structured mentorship and transition-to-practice programs may reduce emotional strain during early professional development.

At the organizational level, policies addressing staffing adequacy, workload distribution, and supportive environments are needed to mitigate occupational exhaustion. The moderate levels of burnout and secondary traumatic stress across all demographic groups suggest that organizational interventions should be implemented universally rather than targeting only high-risk groups. Institutional programs recognizing professional contributions and facilitating career development may enhance compassion satisfaction. From a policy perspective, workforce policies should prioritize safe staffing standards, psychological support services, and healthy work environments. Gender-responsive policies supporting work–life balance may reduce occupational strain given the higher vulnerability


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observed among female nurses. Given the near-significant trend for area of assignment, organizations should consider targeted assessments of burnout across different clinical units and implement unit-specific interventions where needed, particularly in high-acuity settings.

In nursing education, curricula should prepare students for the emotional demands of clinical practice, including coping strategies and awareness of professional quality-of-life risks, ensuring graduates enter the workforce with realistic expectations and resilience competencies.

Several limitations warrant consideration. The cross-sectional design precludes causal inference regarding relationships among compassion satisfaction, burnout, and secondary traumatic stress. Longitudinal research is needed to examine temporal changes and identify critical intervention periods. The study's focus on a single regional context (Ilocos Sur) limits generalizability to other healthcare systems and cultural environments. Specific subgroup sizes were notably small for older nurses (age 40–49: n = 8; age 50–59: n = 9) and those with advanced qualifications (doctorate: n = 1, Master's: n = 9), which may have reduced statistical power to detect significant differences or may have rendered findings for these groups less stable. Similarly, the uneven distribution across assignment areas—with some units represented by as few as six participants—may have constrained the detection of area-based differences, particularly given the near-significant trend observed for burnout ($p = 0.052$).

Reliance on self-reported measures introduces possible response bias and shared method variance, potentially inflating associations. Future studies should incorporate objective or mixed-method approaches. Important organizational and psychological factors—leadership support, staffing conditions, coping styles, resilience—were not examined, and the absence of detailed trauma exposure data limits interpretation of secondary traumatic stress variability. Multiple statistical comparisons raise the possibility of chance findings. Although observed effect sizes were meaningful, a substantial portion of variance in professional quality of life remains unexplained. Future investigations should employ longitudinal, multi-site, and multi-method designs incorporating organizational and psychological variables to inform evidence-based interventions.

*Conclusion*

This study achieved its objectives by establishing the levels, interrelationships, and demographic correlates of compassion satisfaction, burnout, and secondary traumatic stress among registered nurses, advancing knowledge on professional quality of life within a Southeast Asian nursing context. Nurses simultaneously experience moderate professional fulfillment and moderate occupational distress, supporting the multidimensional conceptualization of professional quality of life rather than viewing well-being and distress as opposite ends of a single continuum.

The study demonstrates strong interrelationships among the three ProQOL dimensions, confirming significant associations between compassion satisfaction and both burnout and secondary traumatic stress, while burnout and secondary traumatic stress strongly co-occur with over half of their variance shared. Age and professional experience consistently emerged as significant factors, whereas younger, less experienced, and female nurses were more vulnerable to occupational distress. Although most structural variables—including facility type and educational attainment—were not significantly associated with professional quality of life, the near-significant trend for area of assignment in relation to burnout suggests that clinical setting may merit closer examination in future research. These results extend global findings by providing regional evidence that professional quality of life varies across career stages and sex.

Scientifically, the findings justify continued use of multidimensional frameworks in assessing nurse well-being and highlight compassion satisfaction as a critical leverage point for intervention, given its significant inverse associations with both burnout and secondary traumatic stress. The moderate effect sizes observed underscore that while demographic and career-stage factors are meaningful contributors to professional quality of life, a considerable proportion of variance remains attributable to other individual and organizational factors not captured in this study. Practically, improving professional fulfillment through mentorship, resilience development, and supportive work environments may reduce occupational distress more effectively than focusing solely on burnout

reduction. Applications include routine professional quality-of-life monitoring, career-stage-specific mentorship programs, supportive staffing policies, and psychological support services , with particular attention to early-career and mid-career nurses who demonstrated heightened vulnerability. Nursing education and organizational policies should proactively prepare nurses for the emotional demands of practice and establish environments that sustain professional meaning and resilience.

Future research should extend these findings through longitudinal and multi-site studies examining causal pathways and career-stage trajectories. Investigations incorporating organizational climate, coping strategies, resilience, and trauma exposure variables are recommended to develop comprehensive intervention models. Studies with larger and more balanced samples across age groups, educational levels, and clinical assignment areas—particularly those with sufficient power to detect small effects and examine interaction effects—would further strengthen the evidence base. Experimental studies evaluating programs designed to enhance compassion satisfaction and reduce occupational distress would further strengthen evidence-based practice.

In conclusion, professional quality of life among nurses is shaped by beneficial and risk factors linked to career stage and work experience. Addressing these factors through targeted clinical, educational, organizational, and policy interventions offers a practical pathway to improving nurse well-being and sustaining the nursing workforce. The coexistence of moderate fulfillment and distress across the sample underscores that interventions must address both the positive and negative dimensions of professional quality of life to be truly effective.

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## Declaration of Interest

The authors of this article declared no conflict of interest.

## Ethical Considerations

The study protocol adhered to the principles outlined in the Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

## Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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## Authors' Contributions

All authors equally contribute to this study.

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