

PROFESSIONAL QUALITY OF LIFE AMONG HEALTHCARE WORKERS
IN A ROMANIAN INTENSIVE CARE UNIT:
A DESCRIPTIVE CORRELATIONAL STUDY

ELISABETA NIȚĂ*

Department of Anesthesiology and Intensive Care I, "Fundeni" Clinical Institute

SEBASTIAN ISAC

Department of Anesthesiology and Intensive Care I, "Fundeni" Clinical Institute;
Department of Anesthesiology and Intensive Care I, Faculty of Medicine,
"Carol Davila" University of Medicine and Pharmacy

GABRIELA DROC

Department of Anesthesiology and Intensive Care I, "Fundeni" Clinical Institute;
Department of Anesthesiology and Intensive Care I, Faculty of Medicine,
"Carol Davila" University of Medicine and Pharmacy

MIHAELA CAMELIA POPA

Institute of Philosophy and Psychology "Constantin Rădulescu-Motru";
Romanian Academy, UNATC "I.L.Caragiale" Bucharest

ADRIANA COTEL

"Carol Davila" University of Medicine and Pharmacy

MONICA LICU

"Carol Davila" University of Medicine and Pharmacy

ADRIAN POGACIAN

Incka Psycho-Oncology Center, Târgu-Mureș

DARREN HAYWOOD

Human Performance Research Centre, Insight Research Institute, University of Technology Sydney,
Ultimo, NSW 2007, Australia

Abstract

Aims and objectives: To describe professional quality of life and examine associations between compassion satisfaction, burnout and secondary traumatic stress among ICU healthcare workers in Romania.

Background: ICU work involves high emotional and cognitive demands and may increase risk of burnout and secondary traumatic stress. Evidence from Romanian ICU settings using the Professional Quality of Life (ProQOL) framework remains limited.

Design: Cross-sectional, single-centre correlational study.

* Department of Anesthesiology and Intensive Care I, "Fundeni" Clinical Institute, Bucharest, Romania.
Email: beti_iris@yahoo.com

Methods: Healthcare professionals working in a Romanian ICU completed the 30-item ProQOL questionnaire. Descriptive statistics, ProQOL cut-off categories and Pearson correlations were computed using jamovi (v2.4).

Results: Participants reported relatively high levels of compassion satisfaction alongside moderate levels of burnout and secondary traumatic stress. Burnout was negatively associated with compassion satisfaction and positively associated with secondary traumatic stress.

Conclusions: Burnout is closely aligned with secondary traumatic stress, while compassion satisfaction shows a protective association. Mean scores and ProQOL cut-off distributions suggest high compassion satisfaction alongside mostly average burnout and secondary traumatic stress in this ICU sample.

Relevance to clinical practice: Organisational approaches that reduce secondary traumatic stress and support compassion satisfaction may help sustain workforce wellbeing in intensive care settings.

Keywords: professional quality of life; ProQOL; intensive care unit; burnout; secondary traumatic stress; compassion satisfaction

What does this paper contribute to the wider global clinical community?

Provides initial ProQOL data for ICU healthcare workers in an underrepresented Eastern European context.

Shows strong alignment between burnout and secondary traumatic stress, and an inverse association between burnout and compassion satisfaction.

Reports ProQOL category distributions (low/average/high) to support practical interpretation of workforce wellbeing profiles.

1. INTRODUCTION

Healthcare professionals working in intensive care units (ICUs) face intense emotional and cognitive demands due to critically ill patients, high mortality rates, and continuous decision-making under pressure (Di Gesto *et al.*, 2025). Such environments have been consistently associated with elevated levels of occupational stress, burnout, and psychological strain, making the assessment of professional quality of life in these settings an important research priority (Saravanan *et al.*, 2023; Villagrancia *et al.*, 2025). The Professional Quality of Life (ProQOL) framework captures both the positive (compassion satisfaction) and negative (burnout and secondary traumatic stress) aspects of caregiving work, providing a comprehensive measure of wellbeing among healthcare workers (Brajković *et al.*, 2025). Although burnout and secondary traumatic stress are related constructs, burnout is generally associated with chronic occupational exhaustion and reduced professional efficacy, whereas secondary traumatic stress refers more specifically to stress reactions resulting from indirect exposure to others' traumatic experiences. ProQOL has been widely used in international research to understand how work-related stressors affect caregivers across healthcare settings and the implementation of effective interventions (Bahari *et al.*, 2022).

Recent international studies have found that ICU healthcare professionals commonly report moderate levels of compassion satisfaction alongside significant levels of burnout and secondary traumatic stress (Rayani *et al.*, 2024). For example, cross-sectional research with critical care nurses showed that 74.2% of

participants reported moderate levels of compassion satisfaction, 78.5% reported moderate burnout, and 48.8% reported moderate secondary traumatic stress, highlighting the pervasive emotional burden in ICU contexts (Latsou *et al.*, 2022). Other research has similarly documented relationships between organisational and clinical factors and ProQOL outcomes, emphasizing the importance of work environment in shaping professional quality of life (Ni *et al.*, 2023). Together, these findings suggest that even outside of pandemic conditions, ICU staff remain at risk for poor professional quality of life, reinforcing the need for focused evaluation in diverse clinical settings.

Despite the growing international evidence base of ProQOL in ICU workers, research from Eastern Europe, and particularly from Romania, remains limited. Existing studies in Romania have largely examined occupational stress and burnout among healthcare professionals using instruments such as the Maslach Burnout Inventory or broader measures of work-related stress, revealing substantial emotional exhaustion and psychological strain among physicians and other clinical staff. For example, recent research has documented significant levels of stress and burnout among Romanian medical specialists across both clinical and surgical disciplines, reflecting ongoing post-pandemic workforce challenges (Silistraru *et al.*, 2024). Additionally, national surveys indicate that a considerable proportion of Romanian physicians are at risk of burnout, underscoring the importance of psychosocial working conditions within the Romanian healthcare system (Colegiul Medicilor din România, 2023). However, these studies typically do not examine the multidimensional construct of professional quality of life as conceptualized by the ProQOL, nor do they focus specifically on ICU professionals, leaving a gap in understanding the patterns and interrelationships among compassion satisfaction, burnout, and secondary traumatic stress within this critical care context.

Given the intense emotional and cognitive demands of ICU work, and the limited evidence on professional quality of life in Romanian clinical settings, this brief report aims to describe and examine the associations among compassion satisfaction, burnout, and secondary traumatic stress among healthcare professionals working in a Romanian intensive care unit.

2. METHODS

2.1. STUDY DESIGN AND SETTING

A cross-sectional, single-center study was conducted in the ICU of a large public tertiary hospital in Romania, providing multidisciplinary critical care services.

2.2. PARTICIPANTS

Healthcare professionals employed in the ICU, including physicians, nurses, and auxiliary healthcare staff, were invited to participate in the study. Participation was voluntary and anonymous. All participants were actively working in the ICU at the time of data collection.

2.3. DATA COLLECTION AND INSTRUMENT

Data were collected in December 2025 using the Professional Quality of Life Scale (ProQOL), a 30-item self-report questionnaire designed to assess professional quality of life among helping professionals (Saravanan *et al.*, 2023; Stamm, 2010). The instrument measures three dimensions: Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS). Items are rated on a five-point Likert scale, with higher scores indicating higher levels of the respective construct. Each ProQOL subscale comprises 10 items rated from 1 (never) to 5 (very often), yielding possible subscale scores ranging from 10 to 50, with higher scores indicating higher levels of the respective construct. Reverse-scored items were coded according to the ProQOL manual prior to analysis. The ProQOL scale has been previously used in Romanian healthcare research (Stamm, 2010), supporting its applicability in this cultural and professional context. In the present study, internal consistency was good for the Compassion Satisfaction (Cronbach's $\alpha = 0.76$) and Burnout (Cronbach's $\alpha = 0.76$) subscales, and acceptable for the Secondary Traumatic Stress subscale (Cronbach's $\alpha = 0.59$).

2.4. VARIABLES

The primary variables of interest were the three ProQOL subscales: Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS). Sociodemographic and professional characteristics (*e.g.*, professional role and unit/department identifiers as applicable) were collected to describe the sample.

2.5. STATISTICAL ANALYSIS

Descriptive statistics (means, standard deviations, and ranges) were used to summarize the ProQOL subscale scores and sample characteristics. Pearson correlation coefficients were calculated to examine bivariate associations between Compassion Satisfaction, Burnout, and Secondary Traumatic Stress. Normality assumptions for Pearson correlations were assessed through visual inspection of distributions and were considered acceptable. ProQOL subscale scores were additionally categorised into low, average, and high levels using the ProQOL manual cut-offs, and frequencies and percentages were reported. Statistical significance was set at $p < 0.05$. All analyses were conducted using Jamovi (version 2.4) statistical software (Jamovi project, 2023).

2.6. ETHICAL CONSIDERATIONS

The study was conducted in accordance with the principles of the Declaration of Helsinki and was approved by the Hospital Ethics Committee (approval no. 53215, 12 December 2025), prior to data collection. Data were collected in December 2025. Participation was voluntary and anonymous, and no identifiable personal data were collected.

3. RESULTS

3.1. DESCRIPTIVE STATISTICS AND CORRELATIONS

Descriptive statistics for the Professional Quality of Life dimensions are presented in Table 1. Overall, participants reported relatively high levels of Compassion Satisfaction ($M = 40.43$, $SD = 4.40$), alongside moderate levels of Burnout ($M = 26.06$, $SD = 4.79$) and Secondary Traumatic Stress ($M = 26.29$, $SD = 5.22$). Pearson correlation analyses indicated a moderate negative association between Compassion Satisfaction and Burnout ($r = -.50$, $p < .01$), such that higher professional satisfaction was associated with lower burnout. Burnout was strongly and positively correlated with Secondary Traumatic Stress ($r = .70$, $p < .01$). Compassion Satisfaction showed a weaker negative association with Secondary Traumatic Stress ($r = -.27$).

In addition to reporting continuous ProQOL scores and their intercorrelations (Table 1), subscale scores were also classified into standard ProQOL categories (low, average, high) using manual cut-offs to facilitate interpretation of the distribution of professional quality of life in this sample. Table 2 presents the proportion of participants falling within each category for Compassion Satisfaction, Burnout, and Secondary Traumatic Stress.

Table 1

Means, Standard Deviations, Ranges, and Pearson Correlations among ProQOL Dimensions ($N = 49$)

Variable	M	SD	Min	Max	1	2	3
1. Compassion Satisfaction (CS)	40.43	4.40	29	47	—		
2. Burnout (BO)	26.06	4.79	17	40	-.50**	—	
3. Secondary Traumatic Stress (STS)	26.29	5.22	16	44	-.27	.70**	—

Note. Pearson correlation coefficients are shown. ** $p < .01$.

Table 2

Distribution of ProQOL Categories (Low/Average/High) ($N = 49$)

Subscale	Low n (%)	Average n (%)	High n (%)
Compassion Satisfaction	0 (0.0)	25 (51.0)	24 (49.0)
Burnout	12 (24.5)	37 (75.5)	0 (0.0)
Secondary Traumatic Stress	12 (24.5)	36 (73.5)	1 (2.0)

Note. Values are n (%).

4. DISCUSSION

This brief report explored the relationships between compassion satisfaction, burnout, and secondary traumatic stress among healthcare professionals working in a Romanian intensive care unit. The strong positive association observed between burnout and secondary traumatic stress is consistent with previous international research conducted in critical care and other high-stress healthcare settings (Lee *et al.*,

2021). Studies published after 2020 have repeatedly shown that exposure to patients' suffering and traumatic clinical events contributes to both emotional exhaustion and trauma-related stress responses among healthcare professionals, particularly in intensive care contexts (Latsou *et al.*, 2022; Rayani *et al.*, 2024). Our results support the notion that burnout and secondary traumatic stress represent closely intertwined dimensions of professional distress in ICU staff.

In contrast, compassion satisfaction was negatively associated with burnout, suggesting a potential protective role of positive professional experiences. This finding aligns with prior studies reporting that deriving meaning and satisfaction from caregiving may buffer the negative psychological effects of demanding clinical work (Bahari *et al.*, 2022; Ruiz-Fernández *et al.*, 2020). Even in high-pressure environments such as intensive care units, maintaining professional fulfillment may mitigate the impact of chronic stressors. These findings may also reflect broader organizational pressures present in Romanian healthcare settings, including workforce shortages, high clinical workload, and limited psychological support resources for healthcare professionals. Such factors may intensify emotional exhaustion and trauma-related stress among ICU staff, particularly in high-intensity clinical environments (Colegiul Medicilor din România, 2023).

From a contextual perspective, these findings are particularly relevant for the Romanian healthcare system, where data on professional quality of life among ICU staff remain limited. Previous Romanian studies have primarily focused on occupational stress and burnout using unidimensional measures, without addressing the multidimensional framework of professional quality of life. By applying the ProQOL model in a Romanian ICU setting, this study contributes exploratory evidence that complements existing national research and aligns with international patterns reported in critical care populations.

Beyond the correlational pattern, the overall levels of professional quality of life in this sample suggest relatively favourable profiles, particularly for Compassion Satisfaction. Mean scores indicated moderate-to-high Compassion Satisfaction ($M = 40.43$, $SD = 4.40$), with Burnout ($M = 26.06$, $SD = 4.79$) and Secondary Traumatic Stress ($M = 26.29$, $SD = 5.22$) falling within the moderate range. Using the ProQOL manual cut-offs (low ≤ 22 ; average 23–41; high ≥ 42), approximately half of participants reported high Compassion Satisfaction (49.0%), while Burnout was predominantly in the average range (75.5%) with no cases in the high range, and Secondary Traumatic Stress was largely average (73.5%) with very few high scores (2.0%). In comparison with international studies using ProQOL, these levels appear broadly comparable and, in some contexts, more favourable (*e.g.*, lower Burnout and Secondary Traumatic Stress than reported in some ICU samples), although cross-country comparisons should be interpreted cautiously due to differences in settings, professional groups, and data collection periods.

Several limitations should be acknowledged. The relatively small sample size and single-center design may limit the generalizability of the findings to other

healthcare settings or ICU populations. Data were based on self-reported measures, which may be subject to response bias. Nonetheless, the study provides valuable preliminary insights into the interplay between compassion satisfaction, burnout, and secondary traumatic stress in an underrepresented clinical context. Additionally, the relatively low internal consistency observed for the Secondary Traumatic Stress subscale should be considered when interpreting these findings.

Overall, the results underscore the importance of organisational strategies aimed at reducing secondary traumatic stress while fostering compassion satisfaction among ICU healthcare professionals.

Potential interventions may include structured psychological support programs, peer-support initiatives, stress management training, supervision opportunities, and organisational strategies aimed at improving workload balance and professional recognition among ICU healthcare professionals. Future research should include larger multicenter samples and longitudinal designs in order to better understand the evolution of professional quality of life among ICU healthcare professionals and evaluate the effectiveness of organisational support interventions.

5. CONCLUSION

This brief report highlights meaningful associations between compassion satisfaction, burnout, and secondary traumatic stress among healthcare professionals working in a Romanian intensive care unit. Burnout was strongly associated with secondary traumatic stress and inversely related to compassion satisfaction, suggesting the coexistence of risk and protective factors within the ICU work environment. These findings underscore the emotional demands of intensive care practice and the relevance of assessing professional quality of life using a multidimensional framework. Although exploratory and limited to a single center, the study contributes preliminary evidence from an underrepresented healthcare context and supports the need for organisational strategies aimed at reducing psychological strain while fostering professional satisfaction among ICU staff.

Reporting method

This study is reported in accordance with the STROBE guidelines for cross-sectional studies.

Ethics

The study was conducted in accordance with the Declaration of Helsinki and approved by the Hospital Ethics Committee (approval no. 53215, 12 December 2025), prior to data collection. Data were collected in December 2025. Participation was voluntary and anonymous, and no identifiable personal data were collected. Consent was implied by voluntary completion of the anonymous questionnaire.

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