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Prevalence and Predictors of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress among Oncology Nurses: A Cross-sectional Survey

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Abstract

Background: Compassion satisfaction, burnout, and secondary traumatic stress are common experiences among oncology nurses. These issues can be investigated to better understand their sentiments and actions, early diagnosis of personal and professional suffering, and potential solutions. Objective: to assess the prevalence of compassion satisfaction, burnout, and secondary traumatic stress among oncology nurses working at university hospitals in Jordan, as well as the work-related and sociodemographic factors that influence the prevalence of the outcomes. Methodology: This study used a cross-sectional methodology to assess secondary traumatic stress, burnout, and compassion satisfaction among a purposeful sample of 176 oncology nurses. Findings: Oncology nurses reported a moderate level of professional quality of life. Results revealed a significant relationship between compassion satisfaction and nurses' level of education. A significant relationship was observed between burnout and secondary traumatic stress. Implications: Oncology nursing policymakers should collaborate with oncology nurses and organizations to address compassion satisfaction, secondary traumatic stress, and burnout. The nursing curriculum should incorporate psychological resilience training and other psychological interventions with purpose of empowering nurses to manage their emotions and balance between work and personal life.

Keywords: *Oncology nurses, Burnout, Secondary Traumatic Stress, Compassion satisfaction*.

Introduction

The concept of professional quality of life encompasses perception and satisfaction about an individual's work life. The professional quality of life plays a significant role in determining whether an individual's expectations of job, workplace, and profession are met, as well as whether they can enjoy their professional life by guaranteeing the anticipated psychological satisfaction (Stamm, 2010; Yorulmaz et al., 2020). According to Stamm 2010, professional quality of life is a multidimensional construct, which includes both the positive and the negative psychological effects of the professional life of the caregivers(Stamm, 2010). Direct contact with patients and those in need occurs among caregivers in challenging environments such as oncology care units and can have both positive (compassion satisfaction) and negative (secondary traumatic stress and burnout) effects on their compassion levels and professional life (Stamm, 2010). For the oncology nursing community, providing care in these environments is extremely demanding on a physical, mental, and spiritual level (Challinor et al., 2020; Soheili et al., 2021). Based on Stamm's professional quality of life model, compassion satisfaction,

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burnout, and secondary traumatic stress are interrelated concepts. Therefore, Stamm's Professional Quality of Life Scale-5 (ProQOL-5) took into account these three concepts collectively.

LITERATURE REVIEW

According to Sacco and Copel (2018), compassion satisfaction is defined as " the pleasure, purpose, and gratification received by professional caregivers through their contributions to the well-being of patients and their families". Thus, the positive outcome of caregiving and helping patients and their families is compassion satisfaction (Nadarajan et al., 2025; Stamm, 2010). Oncology nurses who experience compassion are impacted by the mental, emotional, and spiritual challenges that patients face during treatment, which leads them to act in a helpful manner toward patients (Pehlivan & Güner, 2020; Stamm, 2010; Xie, Chen, et al., 2021). Compassion satisfaction causes the nurse to feel that it is her/his obligation to advocate for the patient's needs and to safeguard and support them emotionally (Nadarajan et al., 2025). Intrinsic sentiments of fulfillment are a hallmark of compassion satisfaction, which inspires a persistent desire to support patient care and stewardship in the workplace(Sacco & Copel, 2018; Thomsen et al., 1999). According to previous studies, the low prevalence of compassion satisfaction ranged between 19- 22% among oncology nurses(Ortega-Campos et al., 2019; Xie, Wang, et al., 2021), and 48% among other nurses(Zhang et al., 2018). In the nursing profession in general, compassion satisfaction has a major influence on the nurses' well-being, work output, and patient care. By lowering sense of emotional exhaustion, burnout, and intention to leave, it improves productivity at work, nurse-patient interactions, and the quality of care provided. Higher compassion satisfaction also encourages collaboration, career advancement, and lower absenteeism(Milutinović et al., 2023).

The eleventh version of the International Classification of Diseases (ICD-11) identifies burnout as a problem that particularly relates to the occupational setting and is a psychological reaction to work stress (World Health Organization, 2019). Emotional exhaustion, depersonalization, and a low sense of personal success are the hallmarks of burnout (Maslach et al., 2001; Thomsen et al., 1999). An earlier meta-analytic study that used the Maslach Burnout Inventory (MBI) scale to determine the prevalence of burnout among oncology nurses revealed that 30% of them had burnout (Cañadas-De la Fuente et al., 2018) other studies revealed high level of burnout ranged between 24.9-49.2% (Al-Majid et al., 2018; Jang et al., 2016), while other nurses reported 14% the level of burnout. Yet, the prevalence of burnout among oncology nurses differs greatly by geography (Cañadas-De la Fuente et al., 2018). The disparity in influencing factors and burnout intervention strategies among oncology nurses across various regions may be the cause of the diversity in burnout prevalence among these nurses. Burnout among nurses has a detrimental effect on productivity, job satisfaction, absenteeism, and relationships at work. It also affects job performance and the quality of patient care(HaGani et al., 2022; Russell, 2016). Maintaining a healthy workforce requires addressing burnout.

Working with people who have experienced trauma can emotionally cause secondary traumatic stress, a psychosocial effect associated with the workplace that can arise from exposure to a cumulative level of trauma (Sorenson et al., 2017). It is emotionally draining to care for patients in oncology units. On a daily basis, oncology nurses deal with patients' and their families' suffering. Oncology nurses may experience compassion fatigue as a result of frequently being in emotionally challenging circumstances (Ortega-Campos et al., 2019; Stamm, 2010). Partlak Günüşen et al. (2019) found that secondary traumatic stress had the following effects on

oncology nurses: a desire to leave the field, a sense of unfitness for nursing practice, a reluctance to report to work, avoiding patient care during specific times because of depression, a lack of emotional fortitude, a lack of motivation at work and having trouble sleeping (Partlak Günüşen et al., 2019). AL-Majid et al. (2018) study found that about 73% of oncology nurses had average to high levels of secondary traumatic stress(Al-Majid et al., 2018). Job satisfaction and the capacity to handle the emotional demands of oncology nursing are intimately related to the health and well-being of oncology nurses. In order to guide the creation of focused interventions to lower stress and enhance nurse well-being, the study will assess compassion satisfaction, burnout, and secondary traumatic stress in order to determine their predictors. In turn, nurses who are healthier and more involved are better able to deliver the best treatment possible, which enhances patient outcomes and the standard of healthcare in oncology settings(Al-Majid et al., 2018; Partlak Günüşen et al., 2019). Therefore, the current study aims to assess the prevalence of compassion satisfaction, burnout, and secondary traumatic stress among oncology nurses working at university hospitals in Jordan, as well as to identify work-related and sociodemographic factors that influence these outcomes. Assessing that aspect is valuable to assess changes over time in response to evolving healthcare challenges, where the field of oncology nursing is undergoing rapid change due to factors such as improved cancer treatments, more complex patients, a lack of staff, and growing emotional demands.

Research Questions

What is the prevalence of compassion satisfaction, burnout, and secondary traumatic stress among oncology nurses?

What are the influencing sociodemographic and work-related factors that affect the prevalence of compassion satisfaction, burnout, and secondary traumatic stress among oncology nurses?

Methods

Study Design

This study adopted a cross-sectional descriptive design to examine the prevalence of compassion satisfaction, burnout, and secondary traumatic stress among nurses providing care to patients with cancer. The study aimed to identify sociodemographic and work-related factors that influence each of the outcomes. A cross-sectional design was chosen for its efficiency in assessing outcomes and their associated risk factors at a single point in time, enabling the identification of prevalence and potential correlations (Pandis, 2014).

Setting

The setting of the study was oncology departments in two university hospitals in XX in XX, which is an affiliated teaching hospital with the XX. It is recognized for specializing in oncology care. XX, in XX. This hospital is a tertiary referral hospital with a comprehensive cancer center. These hospitals were chosen based on high patient volume, availability of specialized oncology services, and the large number of nurses employed in these departments of those hospitals, where the total number of nursing staff specialized in cancer care is approximately 450 nurses (DOS, 2023).

Study Population

The study specifically targeted registered nurses who gave direct care to patients in the oncology departments in the selected hospitals. Registered nurses who had been working in oncology units

for at least three months, nurses who provided direct care to cancer patients, and nurses who were available and agreed to participate at the time of data collection were included in the study. However, the exclusion criteria were nurses who worked in outpatient clinics or other nursing specialization units and nurses who were on administrative duties or leave at the time of data collection.

Sample Size and Sampling

The sample size was calculated with the help of G*Power software (version 3.1.9.7) for multiple linear regression analysis. Based on the parameters of medium Effect size ($f^2 = 0.15$), Alpha level (0.05), Power (0.80), and number of predictors were 10. The minimum sample size required was 118 respondents. Considering possibly attaining a non-response rate of up to 10%, the final sample aimed at a size of 130 respondents. Eligible participants were enrolled by using purposive sampling methods. However, the researchers distributed 200 questionnaires to avoid the issue of missing data or participants not returning the questionnaire. Finally, there were 176 completed questionnaires, 100 from XX and 76 from XX.

Data Collection Instruments

The survey used a close-ended, self-administered questionnaire with two major parts to collect the data. The first part was sociodemographic and work-related characteristics of the participants, which were developed by the researchers. This section contained items on Age, gender, marital status, level of education, and income. Work-related variables were hospital name, total years of nursing experience, years of hospital experience, years of oncology/palliative care experience, history of oncology/ palliative specific training, average number of patients cared for per shift, and shift type (e.g., day or night). The second part was the Professional Quality of Life Scale-5 (ProQOL-5).

The ProQOL-5 tool is highly validated and measures the professional quality of life developed by Stamm 2010 (Stamm, 2010), validated and translated into Arabic(M. Algamdi, 2022; M. M. Algamdi, 2022). Numerous studies have utilized the scale. Researchers in several target populations, including teachers, social workers, nurses, therapists, and clinicians' counselors (Bae et al., 2020; Bazmandegan et al., 2022; Buselli et al., 2020; Cavanagh et al., 2020; Stamm, 2010). A 30-item questionnaire on a 5-point Likert scale (ranging from 1 = never to 5 = very often) was used to measure ProQOl-5, which has three subscales. The first subscale is the Compassion satisfaction scale. The compassion satisfaction score is the total of 10 items, those items were (3, 6, 12, 16, 18, 20, 22, 24, 72, and 30), with a Cronbach alpha value of 0.87 for the compassion satisfaction subscale(M. Algamdi, 2022; M. M. Algamdi, 2022; Stamm, 2010). The second subscale is the burnout scale, which has 10 items with Cronbach alpha value of 0.760, those items were (1,4,8,10,15,17,19,21,26, and 29). While the third subscale is the secondary traumatic stress subscale with a Cronbach alpha of 0.815 for the 10 items, those items were (2,5,7,9,11,13,14,23,25, and 28)(M. Algamdi, 2022; M. M. Algamdi, 2022; Stamm, 2010). The total score of each subscale was interpreted as either high (≥42), moderate (23–41), or low (≤22) (M. Algamdi, 2022; Stamm, 2010). In the present study, the Arabic version of ProQOL-5—validated for use with populations of healthcare workers in Arab countries—was used (M. M. Algamdi, 2022).

Data Collection Procedure

Data was collected over two months, May–June 2024, and was conducted according to the following steps. Firstly, nurses were approached during staff meetings, shift handovers, or by

departmental coordinators. The study aims were explained, and participants who were eligible to participate were invited. Then, informed consent in writing was collected from each participant. The self-administered questionnaire was distributed to respondents, who were asked to complete it in a quiet and private place to ensure the confidentiality needed. The survey was estimated to take 15–20 minutes to complete.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Boards (IRBs) of the XX and the participating hospitals. The study followed the ethical principles of the Declaration of Helsinki, including respect for persons, beneficence, and justice (Salako, 2006)Participation was voluntary, and informed consent was obtained from all nurses, including the right to withdraw at any time without repercussions. No identifying information was collected, and the completed questionnaires were stored securely. Results were also published in aggregated form to ensure anonymity and confidentiality.

Data Analysis

Data were entered into SPSS software (version 26) and analyzed (George & Mallery, 2019). Descriptive Analysis, including frequencies, percentages, means, and standard deviations, was calculated to summarize sociodemographic and work-related variables. Descriptive statistics are provided, presenting the prevalence of low, moderate, and high levels of compassion satisfaction, burnout, and secondary traumatic stress. The correlation coefficient was used to examine relationships between sociodemographic and work-related variables and ProQOL-5 subscale scores. Multiple linear regression analyses were conducted to identify independent compassion satisfaction, burnout, and compassion fatigue predictors. Variables with a p-value < 0.20 in bivariate analysis were included in the regression models. Results were reported as standardized beta coefficients (β), p-values, and 95% confidence intervals (CIs). Model fit was assessed using adjusted R^2 and residual analysis. The researchers coded sociodemographic variables and scales, entered data into software, and checked it with the original questionnaire. An exploratory analysis was carried out to discover missing values, discrepancies, and outliers. The dataset contained no missing values and no outliers were discovered.

Results

Two hundred self-administered questionnaires were distributed. The completed returned questionnaires were 176, with no missing data or incomplete questionnaires. So, the response rate was 88%.

Sample sociodemographic and work-related characteristics

A total of 176 nurses providing care to patients with cancer were enrolled in the current study. The majority of the participants were females 126 (71.6%). Most of the participants were aged between 25-35 years (54.0%), 80.7% were married, 41.5 % monthly earned between 501-700 JD which equal to (706.23-986.75) $, 77.3% had a bachelor's degree, 36.4% had an experience for 11-15 years in nursing, 33.5% had an oncology experience for 1-3 years, 7.4% had a certificate in oncology and /or palliative care nursing, and 33.5% had training in oncology and /or palliative care. Table 1 presents the sociodemographic and work-related variables of all 176 participants.

Table 1: *Sociodemographic and work-related characteristics of the participants (N = 176).*

Variable	Category	n	%
Age (years)	< 25	1	0.6
	25-35	95	54.0
	36-45	77	43.8
	>45	3	1.7
Gender	Female	126	71.6
	Male	50	28.4
Hospital Name	KAUH	100	56.8
	JUH	76	43.2
Marital Status	Single	25	14.2
	Married	142	80.7
	Divorce	7	4.0
	Widow	2	1.1
Income (JD) 1 JD= 1.41 $	300-500	16	9.1
	501-700	73	41.5
	701-900	70	39.8
	>900	17	9.7
Education Level	Diploma level	14	8.0
	Bachelor level	136	77.3
	Graduate level	26	14.8
Nursing Experience (years)	<1	2	1.1
	1-3	12	6.8
	4-6	22	12.5
	7-10	45	25.6
	11-15	64	36.4
	>15	31	17.6
Experience in the hospital (years)	<1	1	0.6
	1-3	28	15.9
	4-6	35	19.9
	7-10	41	23.3
	11-15	45	25.6
	>15	26	14.8
Experience in oncology department (years)	<1	14	8.0
	1-3	59	33.5
	4-6	32	18.2
	7-9	30	17.0
	>9	41	23.3
Certificate in oncology / palliative care nursing	Yes	13	7.4
	No	163	92.6
Training in oncology / palliative care	Yes	59	33.5
	No	117	66.5
Number of patients caring for on the given shift	<3 patients	25	14.2
	3-6 patients	29	16.5
	>6 patients	122	69.3

Usual shift work	Day shift (8 h/sh)	69	39.2
	Evening shift (8h/sh)	42	23.9
	Night shift (8 h/sh)	19	10.8
	Day shift (12h/sh)	2	1.1
	Night shift (12 h/sh)	44	25.0

The mean scores of ProQoL-5 subscales for the participating nurses are shown in Table 2. Nurses reported a moderate levels of compassion satisfaction with a mean score of 36.36±6.05, a moderate level of burnout with a mean score of 34.65±4.37, and a moderate level of secondary traumatic stress with a mean score of 29.26±6.28.

Table 2: *Mean scores of ProQoL subscales*

ProQoL measures	**M ± SD**	**Min- Max**
Compassion satisfaction	36.36±6.05	15-49
Burnout	34.65±4.37	25-46
Secondary traumatic stress	29.26±6.28	12-43

Level of professional quality of life measures

Regarding the Professional quality of life measures, nurses' levels of compassion satisfaction, burnout, and secondary traumatic stress were determined using descriptive statistics. Nurses had moderate level of compassion satisfaction (92.9%), moderate burnout (97.6%), and moderate secondary traumatic stress (97.6%). Table 3. Shown the level of compassion satisfaction, burnout, and secondary traumatic stress among study participants.

Table 3: *Prevalence of Compassion satisfaction, Burnout, and Secondary traumatic stress (N=176)*

ProQoL measures	**n**	**%**
Compassion Satisfaction		
Low	4	2.3 %
Moderate	135	76.7 %
High	37	21 %
Burnout		
Low	0	0 %
Moderate	167	94.9 %
High	9	5.1 %
Secondary traumatic stress		
Low	26	14.8%
Moderate	147	83.5 %
High	3	1.7 %

Correlation between ProQoL-5 Subscales

In order to identify relationships between ProQoL-5 constructs, identify risk factors, and guide interventions for healthcare workers—especially given the emotional nature of their work—it is helpful to examine the correlation between Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS) in the Professional Quality of Life (ProQoL-5) subscales among participants. To examine the interrelationship between the three subscales of ProQoL-5, Pearson correlations were used Table 4. summarizes the results of the correlation. The results revealed a weak relationship between compassion satisfaction and burnout (*r=0.2, p= 0.008)*, where higher compassion satisfaction is slightly associated with higher burnout. Conversely, a

strong positive relationship was between burnout and secondary traumatic stress (r = 0.64, p = 0.000), where higher burnout is associated with higher secondary traumatic stress. While, there is no significant association between compassion satisfaction and secondary traumatic stress (r = -0.075, p = 0.322). Since burnout, secondary traumatic stress, and compassion satisfaction are conceptually distinct and measure various aspects of professional quality of life (Stamm, 2010), it is not scientifically suitable to combine the scores of the ProQoL-5 subscales into a single measure in the purpose of studying the relationship of predictors and ProQoL-5 overall.

Table 4: *Relationship of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress*

ProQoL Subscale	**Compassion Satisfaction *r*, (p-value)**	**Burnout *r*, (p-value)**	**Secondary Traumatic Stress *r*, (p-value)**
Compassion Satisfaction	**1**		
Burnout	**0.2 (0.008)****	**1**	
Secondary Traumatic Stress	**-0.075 (0.322)**	**0.64 (<0.001)****	**1**
Pearson correlation coefficients (*r*), ** Correlation is significant at the 0.01 level			

Correlation between sociodemographic and work-related variables and ProQoL-5 subscales

Table 5 summarizes the correlations of different sociodemographic and work-related variables to burnout, compassion satisfaction, and secondary traumatic stress**.** The findings that had statistical significance are the higher level of education correlated positively to compassion satisfaction: p-value = 0.036, compassion satisfaction was negatively associated with years of nursing experience, p-value = 0.016, the years of hospital experience are negatively associated with compassion satisfaction: p-value = 0.014, and years in current department inversely relate to compassion satisfaction: p-value = 0.045. Other variables, such as age, gender, and salary, were not significantly related to any of the outcome variables.

The following variables were entered into the regression model based on significant correlations observed at p = 0.20, education level, years of nursing experience, years of hospital experience, and years in the current department in relation to secondary stress symptoms and compassion satisfaction. Education level was found to correlate positively with compassion satisfaction and negatively with secondary stress symptoms.

Table 5: *Correlations Between Sociodemographic and Work-Related Variables and Burnout, Compassion satisfaction (CS), and Secondary traumatic stress (STS)*

Variable	**Total Burnout**	**Total CS**	**Total STS**
Age	0.049 (p = 0.515)	0.094 (p = 0.215)	0.029 (p = 0.699)
Hospital Name	0.087 (p = 0.252)	-0.021 (p = 0.779)	0.097 (p = 0.199)
Gender	-0.087 (p = 0.251)	-0.035 (p = 0.643)	-0.055 (p = 0.467)
Marital Status	-0.070 (p = 0.353)	-0.032 (p = 0.677)	-0.094 (p = 0.213)
Salary	0.055 (p = 0.469)	-0.011 (p = 0.888)	0.113 (p = 0.135)

Variable	Total Burnout	Total CS	Total STS
Education Level	-0.055 (p = 0.472)	0.158* (p = 0.036)	-0.046 (p = 0.547)
Years of Nursing Experience	-0.028 (p = 0.712)	-0.181* (p = 0.016)	0.077 (p = 0.310)
Years of Hospital Experience	0.016 (p = 0.833)	-0.185* (p = 0.014)	0.078 (p = 0.302)
Years in Current Department	-0.053 (p = 0.488)	-0.151* (p = 0.045)	-0.009 (p = 0.903)
Average Number of Patients per Shift	-0.057 (p = 0.454)	0.024 (p = 0.756)	0.012 (p = 0.875)
Degree in Oncology or Palliative Care	-0.095 (p = 0.209)	0.038 (p = 0.616)	-0.071 (p = 0.350)
Training in Oncology or Palliative Care	-0.077 (p = 0.309)	0.120 (p = 0.113)	-0.075 (p = 0.321)
Shift/Most of the Time	0.072 (p = 0.340)	0.025 (p = 0.737)	0.047 (p = 0.540)

* Correlation is significant at the 0.05 level, ** correlation is significant at the 0.01 level.

Predicting factors with the prevalence of Compassion satisfaction, and Secondary traumatic stress

The regression analysis shows that the model has a very low level of correlation with secondary traumatic stress, with an R=0.122, which explains only 1.5% of the variance in the dependent variable of Total secondary traumatic stress with an $R^2 = 0.015$ and adjusted $R^2 = -0.002$. The model F-change was 0.873 with a p-value of 0.456, thus showing that predictors (years of hospital experience, level of education, and years of experience in the current department) are not useful in predicting total secondary traumatic stress significantly. Durbin-Watson is at 2.003, which shows that there is no significant autocorrelation. Overall, this regression model doesn't significantly predict total secondary traumatic stress $F = 0.873$, $p = 0.456$. It shows a tiny residual sum of squares much bigger than the sum of squares, thus showing an insignificant proportion that this model represents the variance in a dependent variable. As shown in Table 6.

Table 6: Regression Coefficients for Predicting Total Secondary Traumatic Stress

Predictor Variable	Unstandardized Coefficients	Std. Error	Standardized Coefficients (Beta)	t	p-value	95 % Confidence Interval for B
(Constant)	29.172	2.008		14.528	0.000	25.209- 33.136
Education Level	-0.776	0.653	-0.090	-1.187	0.237	-2.066- 0.514
Years in Current Department	-0.159	0.424	-0.030	-0.375	0.708	-0.997- 0.678
Years of Hospital	0.396	0.363	0.087	1.090	0.277	-0.321- 1.113

Predictor Variable	Unstandardized Coefficients	Std. Error	Standardized Coefficients (Beta)	t	p-value	95 % Confidence Interval for B
Experience						

Model summary: R=0.122, R^2 = 0.015, adjusted R^2 = -0.002, sig. F Change= 0.456, Durbin-Watson= 2.003.

According to the regression model to predict compassion satisfaction, education level seems to be a significant predictor for total compassion satisfaction since the p-value is 0.071. However, it's marginally above the usual threshold of 0.05. The overall model was significant (p = 0.016); thus, years of nursing experience, education level, years in the current department, and years of hospital experience explain a small but meaningful proportion of variation in total compassion satisfaction, with an R^2 of 0.069. As shown in Table 7.

Table 7: ***Regression Coefficients for Predicting Total Compassion satisfaction***

Predictor Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	p-value	95 % Confidence Interval for B
(Constant)	39.559	1.941		20.381	0.000	35.728 - 43.390
Education Level	1.116	0.614	0.135	1.817	0.071	-0.096 - 2.328
Years in Current Department	-0.366	0.399	-0.072	-0.917	0.361	-1.153 - 0.422
Years of Hospital Experience	-0.300	0.485	-0.068	-0.618	0.537	-1.256 - 0.657
Years of Nursing Experience	-0.555	0.463	-0.130	-1.200	0.232	-1.469 - 0.358

Model Summary: R = 0.262, R^2 = 0.069, Adjusted R^2 = 0.047, F Change = 3.146, p-value = 0.016 (significant), Durbin-Watson = 1.844

Discussion

The current study aimed to determine the prevalence of ProQoL dimensions among oncology nurses working in university hospitals, as well as the work-related and sociodemographic factors influencing these results. A total of 176 nurses who care for patients with cancer were included. Arabic version of the Professional Quality of Life Scale-5 (ProQOL-5) was used to measure the study's variables of interest (Stamm, 2010). In this study, oncology nurses reported moderate levels of compassion satisfaction (76.7%), burnout (94.9%), and secondary traumatic stress (83.5%), similar to AL-Majid et al. (2018) study findings, where 80% of oncology nurses had a moderate to high levels of compassion satisfaction, which is approximately near to our finding, and 76% and 73% of oncology nurses had moderate to high levels of burnout and secondary traumatic stress, respectively (Al-Majid et al., 2018). Also, our findings were similar to other

studies on critical care nurses (Alharbi et al., 2020; Bahari et al., 2022). Contrary to the finding of Duarte & Pinto-Gouveia, where 48% of oncology nurses had a moderate level of compassion satisfaction, 53.8% had moderate burnout, and 62% had moderate secondary traumatic stress (Duarte & Pinto-Gouveia, 2017). As in the current study, all of these studies used ProQOL-5 but in different languages to measure compassion satisfaction, burnout, and secondary traumatic stress.

The current study findings could be interpreted as a result of the complex environment of oncology and palliative care units, where oncology nurses experience several personal and organizational challenges (Al Zoubi et al., 2020). Emotional attachment to patients, dealing with the dying process and the associated sadness and suffering, frustration due to inability to relieve patients' suffering, a lack of authority to inform patients about their conditions, and nursing staff and supply shortages are all factors that might escalate the risk of burnout and secondary traumatic stress (Al Zoubi et al., 2020; Challinor et al., 2020; Pérez-García et al., 2021).

The strongest correlation was found between the ProQol-5 subscales of burnout and secondary traumatic stress. Among oncology nurses, burnout increases susceptibility to secondary traumatic stress because of emotional exhaustion, high occupational use of self, and depersonalization, which depletes psychological resilience, empathy overload, and reduced coping resources (ÇELEBİ & ÖZTÜRK CAN, 2022; Hinderer et al., 2014; Peters, 2018). Previous publications on the professional quality of life among oncology nurses found the same in our results (Al-Majid et al., 2018; Jarrad & Hammad, 2020; Jeon et al., 2023; Nadarajan et al., 2025; Slocum-Gori et al., 2013; Sung et al., 2012). Plus, the correlation between compassion satisfaction and burnout was weak, and no correlation between compassion satisfaction and secondary traumatic stress, which is similarly demonstrated by Alghamdi where compassion satisfaction was weakly associated with secondary traumatic stress and weakly negatively associated with burnout (M. Algamdi, 2022). However, it differed from a prior study's findings, which showed that compassion satisfaction was weakly but negatively connected with secondary traumatic stress and negatively but strongly correlated with burnout (Nadarajan et al., 2025). A weak correlation between compassion satisfaction and burnout may suggest that some nurses maintain professional accomplishment and emotional reward, despite job demands and emotional exhaustion, which potentially diminish their ability to sustain high compassion satisfaction (M. Algamdi, 2022; Khatatbeh et al., 2022; Sacco & Copel, 2018). Furthermore, even though there is no correlation between compassion satisfaction and secondary traumatic stress, it does not always mean that oncology care nurses will not experience secondary traumatic stress, which is more impacted by patients' trauma than compassionate care and job satisfaction.

Sociodemographic and work-related circumstances may increase or decrease compassion satisfaction, burnout, and secondary traumatic stress (Stamm, 2010; Zhang et al., 2018). Overall, we found that compassion satisfaction could be predicted by four sociodemographic and work-related variables (level of education, years of nursing experience, oncology experience, and hospital experience) where compassion satisfaction was positively correlated with the level of experience, and negatively correlated with years of nursing experience, oncology experience, and hospital experience. These results are in line with previous studies. According to Jang et al. (2016) and Nam and Kwon (2012), compassion satisfaction was influenced and predicted by hospital experience, clinical experience in cancer care units, general nursing experience, and their level of education (Al-Majid et al., 2018; Jang et al., 2016; Nam & Kwon, 2012).

Despite the fact that the findings of this study are comparable to those found in previous research,

a few differences were identified. In this study, compassion satisfaction, secondary traumatic stress, and burnout did not significantly correlate with sociodemographic like age, gender, marital status, or income. Age and secondary traumatic stress were not shown to be significantly correlated in other investigations (Frey et al., 2018; Kelly & Lefton, 2017). Also, work-related factors such as the number of patients caring for on the given shift and usual shift hours showed no significant correlation or prediction for each of the ProQoL-5 concepts. Several studies in the literature shown the same results. The findings of the Al-Majed et al. (2018) study indicated that none of the ProQoL-5 concepts were correlated with the number of hours worked during a usual shift (Al-Majid et al., 2018).

Limitations

This study had several limitations. First, despite having a moderate sample size (N = 176), this study was limited by its purposive sampling and cross-sectional methodology. The study's design makes it challenging to assess the temporal precedence of the relationships between burnout, secondary traumatic stress, and compassion satisfaction. Second, when performing the regression analysis, we were unable to include within our statistical analysis each variable that was anticipated to have an impact on the degree of ProQoL concepts among oncology nurses. Third, our results depend on self-reported metrics, which may lead to social desirability bias. Fourth, due to a lack of relevant sample representation, the findings' generalization to other hospital levels may be limited.

Recommendations and Implications

Despite these limitations, the study is significant because it advances knowledge of the professional quality of life of oncology nurses, which influences the delivery of high-quality nursing care and the results of cancer patients' outcomes. Therefore, the long-term effects of interventions targeted to improve healthcare staff's compassion satisfaction, burnout, and secondary traumatic stress should be investigated in future research. After implementing psychological support programs and workforce management strategies into place, longitudinal research is required to evaluate improvements in compassion satisfaction, burnout, and secondary traumatic stress. The effectiveness of interventions including mindfulness-based stress reduction, motivational intervention, resilience training, peer support groups, and task management programs in promoting compassion satisfaction and reducing burnout and secondary traumatic stress should be assessed. The most effective methodologies to maintain well-being in situations of high stress may be better understood through comparative research across various healthcare settings and professions.

Oncology nursing policymakers are encouraged to collaborate with nurses and nursing organizations to identify factors that contribute to compassion fatigue, which includes secondary traumatic stress and burnout. This could result in better outcomes for nurses, patients, and institutions. Key recommendations include minimizing staffing shortages, assigning free-load staff, offering psychological counseling, providing managerial support, and focusing on psychological well-being. In order to build emotional resilience, identify burnout symptoms, and use professional psychological support, the nursing curriculum should include psychological resilience training, mental health literacy, clinical supervision, work-life balance, and workforce management.

Conclusion

Our study found that cancer care nurses reported moderate levels of compassion satisfaction, burnout, and secondary traumatic stress. Improving compassion satisfaction and preventing or managing burnout and secondary traumatic stress is crucial and would benefit the oncology nursing profession in Jordan. Since oncology nurses frequently witness their patients' pain, death, and grief, compassionate care has an impact on their emotions. This study provides significant data about the ProQoL-5 concepts among nurses providing care to patients with cancer in Jordan, which can inform the policymakers to take action. Since, poor ProQoL can affect the nurses' well-being, quality of care, and increase oncology nurses' intention to leave, and raise patient and nurse safety concerns.

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Competing interests

The authors declare no conflict of interest of any kind.

Authors' contributions

The first author was responsible for running the whole research process until final editing and revising were completed. The second author was responsible for the statistical analysis, tables, and results parts. Both authors read and approved the final manuscript.

Data Availability

The data sets are available on the primary investigator's local desk. Researchers interested in secondary data analysis can contact the author via email.

Ethical approval and consent for participation

Ethical approval was obtained from the Institutional Review Boards (IRBs) of the XX and the participating hospitals. The study's goal and process were fully explained to the participants, who subsequently signed consent forms.

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