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Reesearch Article

Prevalence of Compassion Fatigue Among Nursing Staffs Working in High Acuity Clinical Settings, within Dubai Health Authority Hospitals, UAE.

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Abstract

Background: Compassion Fatigue is common among nurses and can have devastating consequences if not detected early. The impact may be more prevalent where nurses work in emotionally challenging environments, such as high-acuity clinical areas. Studies about compassion fatigue (CF) are plenteous in the western world. Yet, there is a paucity of research attributed to these issues in the gulf region ,particularly in UAE. Our study explores the prevalence of Compassion Fatigue among Nurses working in Dubai Health Authority (DHA) hospitals.**Methods:** Our study used a Descriptive, Cross-sectional design. The Professional Quality of Life Scale version 5 (ProQOL 5) was used for data collection from nurses working in high-acuity clinical areas, in all the DHA hospitals. **Results:** A total of 525 Nurses returned the completed survey forms. 61% of the participants reported moderate compassion satisfaction while 38.1% reported high levels of compassion satisfaction. 67.6% of participants reported moderate levels of burnout with 54.7% seeming to be having secondary traumatic stress. **Conclusion:** the study strongly recommends initiating interventions and strategies aimed at combating compassion fatigue.

Key Words: Compassion satisfaction, Burnout, Secondary traumatic stress, High acuity area, Fatigue.

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1. INTRODUCTION:

CF is common among nurses and can have devastating consequences if not detected early. The impact may be more prevalent where nurses work in emotionally challenging environments, such as high-acuity clinical areas. Owing to this , Nurses are predisposed to reduced compassion satisfaction(CS) and higher compassion fatigue(CF) (Alacacioglu, Yavuzsen, Dirioz, Oztop, & Yilmaz, 2009) . Since the definition of CS and CF varies among researchers, it is important to clarify these terms for the purpose of this research.

It was Joinson in 1992 who first chronicled the behavioural charecteristics of CF (Joinson, 1992). Later, Stamm in 2002, coined a new term linked to compassion fatigue - Professional quality of life,which encompasses two aspects, the positive (CS) and the negative (CF) . Stamm identifed CS as the intense satisfaction achieved by the care giver with the provision of care. Further he describes , CF as the convergence of secondary traumatic stress (STS) and cumulative burnout (BO) (Stam, B. H-2002).

Ideally, the balance between CF and CS within and outside the workplace is preferred for a positive work life

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balance. Although nurses obtain professional satisfaction from their work, their repeated exposure to the aftermath of critical illness puts them at risk of compassion fatigue.

In a study conducted among emergency Nurses revealed that Professionals with high CF may exhibit a poor attitude toward the profession, delay, or absence from work, loss of self-worth, reduced productivity, and staff turnover. In turn, high CS can lead to an increase in patient satisfaction rates (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010).

A study done among nurses working in emergency, Intensive care, and medical surgical units in Jordan by Jarred et al revealed, nurses who cope negatively to compassion fatigue tend to adapt substance abuse including caffeine being the most misused (Jarrad, Hammad, Shawashi, & Mahmoud, 2018).

Previous literature reviews ascertain the fact that unidentified and unresolved compassion fatigue has the potential to destroy careers, families and even lives (McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011) .

Recent research has revealed that COVID 19 pandemic has a detrimental effect on the professional quality of life of health workers (Lluch, Galiana, Doménech, & Sansó, 2022). The high prevalence of burnout during COVID-19 has increased the turnover intention of Nurses. In addition to that, the loss of experienced nurses has a negative impact on the provision and continuity of patient care services and may lead to increased patient morbidity and mortality (Griffiths et al., 2019). In fact, the high turnover intention among experienced nurses during the COVID 19 pandemic was one of the driving factors for conducting this research. Furthermore, we identified a gap in literature related to compassion fatigue. Though there are extensive areas of research done related to compassion fatigue in western counties and even in the middle east, there are no measured baseline data available in the United Arab Emirates pertaining to compassion fatigue among Nurses.

Our study was conducted in three tertiary care specialized hospitals under Dubai Health authority (DHA). As DHA is a multicultural organization, a vast majority of the Nurses belong to the expat population. Most Nurses have left their families in their home countries and juggle their work and life alone. In addition to that, the nurses find themselves under demanding work situations. The need for constant update with technological advances like electronic medical records, high expectation of best practice and quality care and to cope with accreditation requirements amplify the work-related stress. It is widely believed that the covid 19 pandemic added more burden to the existing stress levels. Our study aims to measure the prevalence of compassion satisfaction, and compassion fatigue among inpatient nurses working in high acuity clinical settings. Those patients often present with challenging medical conditions, and with significant, unpredictable needs. Furthermore, we intent to explore the demographic variables that contributes to the development of compassion fatigue and Compassion satisfaction.

2. MATERIALS AND METHODS

2.1 Study Design

Our study utilized a descriptive, cross-sectional survey for data collection.

2.2 Instrumentation

We adapted the Professional Quality of Life Scale: Pro QOL toolversion-5, it is a 30- item survey that measures the presence of compassion satisfaction and compassion fatigue. Pro QOL (Appendix A) and the Self-Scoring Guide (Appendix B) were developed by B. Hundall Stamm (2009) who grants full license to use these tools provided they credited, not altered, and not sold (Heritage, Rees, & Hegney, 2018).

The Pro QOL measures the frequency and the level of the nurse's response to a 30-item questionnaire about compassion and their related work experiences. Each item is scored using a five-point Likert-type scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often). Three constructs of CF are measured: compassion satisfaction, burnout, and secondary traumatic stress. Reliability of the ProQOL, reported in Cronbach alpha, is as follows for each of the subscales = 0.87, CF = 0.80, and BO = 0.72.

Although we did not alter the tool, however we add to convey the population characteristics of this study that included Age, years in Nursing, Marital status, Ethnicity, Education background and Gender.

2.3 Sample and Settings

We conducted our study in 3 tertiary specialized hospitals under Dubai Health authority. They are Rashid Hospital and trauma center (Hospital-1), Dubai Hospital (Hospital-2) and Latifa Hospital (Hospital-3), which includes highly specialized surgical, medical, intensive care units, operating theatres, and Emergency department.

Inclusion Criteria: Nurses working in High acuity inpatient clinical areas including Emergency department Operating theatre, Intensive care units, Medical and surgical units with high dependency beds.

Exclusion Criteria: Nurses working in outpatient clinical settings

2.4 Sample Size

We estimated the Nursing population in the 3 hospitals as 3000, confidence interval of 95%, Margin error 5%, Z score 1.96, The required sample size will be 341 Nurses.

2.5 Data collection process

We sent an official email to the heads of nursing departments in all the three hospitals seeking permission to conduct the research among nurses in their respective hospitals. After obtaining the approval of the ethical committee, we initiated the data collection. Owing to the pandemic situation, the study questions were converted into Microsoft forms. The electronic Survey included a consent form, a demographic questionnaire, and the Professional Quality of Life Scale version 5 (ProQOL 5). Further more ,The consent form clearly stated that the survey form need to be completed by the Nurses who are willing to participate in the study. We emailed the survey to all the nurses working in high acuity clinical areas in the DHA hospitals. In addition to that, a formal email was sent to all the high acuity unit in charges to encourage the nurses to participate in the survey. We executed the data collection process for 4 months considering the sample size.

2.6 Data Analysis Plan

We analyzed the data using SPSS version 16, after reverse coding of selected items, raw data were converted to scores as indicated in the ProQOL manual (Heritage et al., 2018). Demographic data and ProQOL constructs were analyzed using descriptive statistics including frequencies, percentage, means, and standard deviations. Independent t test and Analysis of variance (ANOVA) -F test, were used to compare mean differences of BO, STS, and CS scores according to age, gender, ethnicity, highest level of formal education, designation marital status, educational degree, no of years as RN, experience of job stress at workplace, current specialty. Analysis of variance with post hoc comparisons were used to compare mean scores for each subscale according to demographic characteristics. Standardized t scores were also converted to categorical levels (low = 22 or less, average = 23-41, and high = 42 or more) according to Stamm's scoring thresholds. Pearson's correlation was done to find out the correlation between the three constructs of PROQOL.

3. RESULTS

A total of 525 Nurses completed the survey via Microsoft forms. Table 1 shows participants' descriptive analysis of demographic characteristics. Most participants were married (80.2%) females (84.4%) between the ages of 25 – 35 years (49.3%) with bachelor's degrees in nursing (81.1%), works as staff Nurses (75%) in a tertiary care trauma center hospital (66.7%) with 6 to 10 years' experience in nursing (35%) and had experienced job stress within 2yrs (81.9%). Table 1 details the participants charachteristics.

3.1 Compassion Satisfaction

The Anova test and the independent t test revealed that demographic characteristics like, Age(p=0.044), gender(p=0.044), ethnicity (p=0.000), level of education(p=0.002), marital status(p=0.005), experience of job stress at work (p=0.000), the type of hospital (p=0.005) and the specialty of work (p=0.011) significantly affected the CS scores. The post hoc Duncan test showed a significant difference between the mean of CS scores with more favorable CS score in Nurses above 46 yrs., females, Indian Nurses, diploma holders; married nurses, those who didn't experience job stress at work, Nurses working in Maternity and pediatric hospital and OT/PACU nurses.

Variable	Group	N	%
Age	25-35	259	49.3
	36-45	191	36.4
	above & 46	75	14.3
Gender	Male	82	15.6
	Female	443	84.4
Ethnicity	Indian	304	57.9
	Filipino	199	37.9
	Arab	22	4.2
Marital Status	Married	421	80.2
	Single	104	19.8
Qualification	Diploma	77	14.7
	Bachelors	426	81.1
	Masters	22	4.2
Designation	Assistant Nurse	70	13.3
	Staff Nurse 2	394	75
	Staff Nurse 3	43	8.2
	Senior Staff Nurse	18	3.4
Experience	less than 5 Yrs	76	14.5
	Yrs 10 6-	184	35
	yrs 11-15	125	23.8
	yrs & above 15	140	26.7
Specialty area	Emergency	97	18.5
	ICU	78	14.9
	Medical	144	27.4
	Surgical	91	17.3
	OT/PACU	35	6.7
	others	80	15.2

Table 1: Participants Demographic

3.2 Burn out

The Anova one way analysis and independent t test revealed statistically significant results for demographic variables like, Ethnicity (p=0.000), age (p=0.000) marital status(p=0.016), level of education(p=0.001), years of experience(p=0.014), place of work (p=0.000), specialty of work (p=0.003) and experience of job stress at work (p=0.055) significantly determined the burnout scores. The post hoc Duncan analysis showed significant difference between the mean scores of BO with low BO scores among Indian Nurses, diploma holders, more than 15 years of experience and Maternity and pediatric hospital Nurses. High mean BO scores were noted among Nurses between the age group of 25-35 yrs., Single nurses, Emergency Nurses, and those nurses who experienced job stress at work in the last 2 yrs.

3.3 Secondary Traumatic stress

The Anova analysis showed the following demographic variables like Ethnicity (p=0.034), designation (p= 0.056), place of work (p=0.007) and experience of job stress at work (p=0.000) significantly determined the scores of secondary traumatic stresses. The post hoc Duncan analysis revealed only 2 variables with statistically significant high mean STS scores, Senior staff nurses and those who experienced job stress at work for the last 2 yrs. The other demographic variables identified in the anova analysis failed to make any significant difference.

Pearson correlation coefficient analysis revealed

Variable	Category	Compassion Satisfaction			Burnout			Secondary Traumatic Stress		
		MEAN	SD	p	MEAN	SD	p	MEAN	SD	P
Age	Yrs 25-35	38.97	6.33	0.044	25.37	4.59	0.000	24.14	6.08	0.161
	Yrs 36-45	39.31	5.2		23.79	4.10		23.51	6.24	
	yrs 46<	40.88	5.31		23.53	3.97		22.65	6.15	
Gender	Male	37.79	7	0.007	25.79	4.46	0.005	23.14	6.13	0.377
	Female	39.66	5.54		24.3	4.35		23.8	6.16	
Ethnicity	Indian	40.31	5.55	0.000	23.21	3.92	0.0000	23.11	5.99	0.034
	Filipino	38.08	5.81		26.50	4.40		24.52	6.37	
	Arab	37.62	7.26		25.14	4.23		24.57	6.05	
Qualification	Diploma	41.51	5.45	0.002	22.92	3.60	0.001	22.26	5.30	0.081
	Bachelors Degree	39.05	5.83		24.73	4.46		23.93	6.30	
	Masters Degree	38.04	5.42		26.27	4.53		24.32	5.75	
Designation	Assistant Nurse	41.20	5.70	0.043	23.00	3.61	0.005	22.71	5.29	0.056
	Staff Nurse-2	39.04	5.95		24.83	4.52		23.73	6.30	
	Staff Nurse-3	39.40	4.71		23.84	4.25		23.53	6.38	
	Senior Staff Nurse	39.39	5.14		25.72	3.80		27.17	4.57	
Marital Status	Married	39.72	5.61	0.005	24.11	4.16	0.00	23.62	5.99	0.554
	Single	37.95	6.46		26.24	4.95		24.02	6.84	
Experience	Yrs 5 >	38.89	6.29	0.352	25.05	4.28	0.014	23.71	6.50	0.524
	Yrs 6-10	39.52	6.21		25.02	4.84		23.83	5.94	
	Yrs 11-15	38.79	5.54		24.62	4.07		24.18	6.38	
	Yrs 15<	39.96	5.27		23.54	4.02		23.09	6.07	
Specialty area	Emergency	37.74	6.95	0.011	25.92	4.43	0.003	24.42	5.80	0.329
	ICU	39.08	5.83		25.05	4.40		23.85	6.30	
	Medical Unit	39.47	5.81		24.24	4.45		23.85	5.71	
	Surgical Unit	39.53	5.30		24.32	4.10		23.89	6.25	
	OT/PACU	41.49	4.54		23.14	4.41		21.83	8.04	
	Others	40.36	5.00		23.74	4.28		23.01	6.16	

Table 2: details the differences in three main variables among the participants sub-groups

	Level	(%) N	M (SD)
Compassion Satisfaction	Low (22≥)	(1.0) 5	
	Moderate (23-41)	(61.0) 320	39.35 (5.82)
	High (42≤)	(38.1) 200	
Burn Out	Low (22≥)	(32.4) 170	
	Moderate (23-41)	(67.6) 355	24.53 (4.40)
	High (42≤)	0	
Secondary traumatic Stress	Low (22≥)	(45.0) 236	
	Moderate (23-41)	(54.7) 287	23.70 (6.16)
	High (42≤)	(0.4) 2	

Table 3: Level of CS, BO, and STS among participants

a significant Negative Correlation between Comp. Satisfaction and Burnout (r= - 0.614; p = 0.01), Negative Correlation between Comp. Satisfaction and ST_ Stress (r= - 0.374; p = 0.01) Positive Correlation between ST_Stress and Burnout (r = 0.659; p = 0.01).

Table 3 summarizes ProQOL scores of participants. Most of the participants reported moderate (61%) to high (38.1%) compassion satisfaction scores. A considerable number of the participants reported moderate (67.6%) levels of burnout. While a sizable number of participants reported moderate (54.7%) levels of secondary traumatic stress. Compassion fatigue risk is highest when CS is below 43 and BO and STS scores are above 57.

4. DISCUSSION

Our study is the first of its kind done in United Arab Emirates using the PROQOL tool. We believe, the strength of our study is the diversity between the participants. Our study identifies the prevalence of moderate levels of CF in Nurses with most respondents scoring in the average levels of BO (67.6%) and STS (54.7%) which are the two components of CF. We identified in our study that the ,prevalence of BO one of the components of CF was low to average 67.6% (mean=24.53) . In contrast to our findings, the results of a similar study done among Spanish and Brazilian palliative care professionals indicated low levels of BO scores (mean= 15.62 and 15.05) (Galiana, Arena, Oliver, Sansó, & Benito, Enric, MD, PhD, 2016). However, a study done among Iranian critical care Nurses revealed high BO (mean=26.68) (Salimi, Pakpour, Rahmani, Wilson, & Feizollahzadeh, 2020). Van Mol et al (2014) reported low to average levels of STS 54.7% (mean =23.7), This finding contradicts a study done among critical care nurses from Iran,which identified the prevalence of average to high level of STS 96% (mean= 26.90) (Kakemam, Chegini, Rouhi, Ahmadi, & Majidi, 2021).In another review study of predominantly North American and European countries, the prevalence of high levels of STS in critical care nurses ranged from 21% to 44% (Van Mol et al., 2014). Whereas alarmingly high level of STS was reported by a Korean study with more than 79% of oncology nurses had moderate to high levels of STS (Jang, Kim, & Kim, 2016).

It is remarkable to note that, the silver lining finding of our study is the prevalence of high (38%) to moderate (68%) levels of CS among the respondents. Our study findings resonate with a study done among U.S. surgical intensive care unit and trauma nurses which reported, average levels of BO (58%) and STS (38%). In the same study 27 % of the nurses scored high CS, and 73% scored average on CS (Mason et al., 2014). These study results seem to suggest that the differences in the prevalence of BO &STS, might be due to the influence of several factors, like culture, organizational policies, inherent traits of nurses etc. In a systematic review of the literature, certain factors like high workload, pressure in the work and imbalance between rewards and work, poor emotional support, rejection and giving up behavior can increase the number of those with compassion fatigue (Handini, Patarru', Weu, Heryyanoor, & Purwanza, 2020).

Like other published studies, in our study we noted significant findings in demographic data with regard to age and experience. Young Nurses (25–35 years) reported low levels of CS while their older counterparts (>46 yrs.) reported higher levels of CS. Similarly, nurses with less than 5 years of experience reported higher levels of BO. While those with >15 years of experience reported lower levels of BO. It is interesting to note that in a similar study done among Nurses from an emergency and urgent care unit for adults, nurses aged 36 years or older presented higher levels of compassion satisfaction and low burnout. Younger nurses, women, and with less than 11 years of job experience scored high levels of secondary traumatic stress (Borges et al., 2019a)

It is worth to note in our study that, nurses working in emergency and critical care units had low CS and high BO mean scores . Meanwhile , the operating theater (OT)/ post anesthesia care unit nurses reported moderate CS and low BO mean scores (PACU). These results were corroborated in a similar study conducted among Nurses in a Large Urban Trauma Center,which revelaed moderate to high levels of BO Among intensive care unit (ICU) and emergency department (ED) nurses, while Lowest levels were found in nurses who worked in Pre-op/Post Anesthesia

Care Unit (PACU)/Operating Room (Wijdenes, Badger, & Sheppard, 2019) .Our study findings indicate that CS has a significant negative correlation with BO and STS whereas , there exists a positive correlation between BO and STS.

Female Nurses reported more CS(mean=39.66) and less BO (24.3)when compared to male nurses which contradicts the results from a previous study (Borges et al., 2019b) (Mooney et al., 2017) .Marital status significantly affected the CS and BO mean scores with married nurses reported high levels of CS (39.72)and single Nurses with high BO (26.24) scores .These results identifies with a similar study ,where being married, was positively associated with compassion satisfaction) (Mooney et al., 2017)Our study findings indicate that the presence of job stress at work in the past 2 years, significantly affected all the 3 constructs of ProQOL. Those who experienced job stress had high mean scores for BO & STS (25.01 & 24.16), than their counterparts, while No job stress increased the CS score(mean=42.01).

5. CONCLUSION

It is important to note that, we conducted our study during the peak of COVID 19 pandemic. It seems possible, that the vulnerability of healthcare professionals to compassion fatigue might have heightened even more because of the COVID-19 pandemic. Our results provide valuable insights in terms of establishing the predictors of BO, STS and CS. We consider the prevalence of moderate to high levels of CS in the study population as a favorable finding of this study. This fact that those who experienced compassion satisfaction were less likely to feel the effects of compassion fatigue is established in a study done among oncology nurses in the United States and Canada (Wu, Singh-Carlson, Odell, Reynolds, & Su, 2016)

Taken together, our findings suggest that effective ways to counter Compassion Fatigue is to augment the Compassion Satisfaction rates. We strongly believe the need to identify the prevalence rate of CF and CS before developing any interventions to target the prevention of CF. The significant findings related to the demographic variables can be used as a guide to start educational interventions aimed at boosting Compassion Satisfaction and resilience development strategies. A study by Wahl, Hultguist, Struwe, and Moore (2018) revealed a statistically significant increase in nurses' CS scores at post-test following a six-week resiliency training program on mindfulness, gratitude, and breath awareness strategies.

6. LIMITATIONS

We identified several limitations for our study. Our study used convenience sampling technique, which affected the generalizability of the results. We need more in-depth studies to verify the relationship among the three constructs of the professional quality of life. The study sample had more female Nurses, hence the results based on gender should be viewed with caution. The Questionnaire used in the study is a self-reporting tool. It is possible that the emotional and psychological status of the participants during the study could have affected their responses thereby decreasing the reliability of the findings. Due to these limitations, the results should be interpreted with caution.

7. FUTURE RESEARCH

Future studies should target on identifying the factors that can increase the development of CS which could be important for developing effective programs to manage CF. We recommend conducting Intervention studies on building resilience to reduce the CF and increase CS rates.

8. ETHICS

Ethical approval was obtained from the Dubai Scientific Research and Ethics Committee, Number DSREC-01/2020_02, dated January 26, 2020. The informed consent was obtained from participants to participate in the study through Microsoft forms.

9. CONFLICT OF INTEREST

The authors have no conflicts of interest to declare. All authors declare that they have no relevant or material financial interests that relate to the research described in this paper.

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None

12. AUTHOR CONTRIBUTIONS

S.R., B.V., S.B and J.V completed the review of literature. S.R. obtained all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. S.R and O.D completed the analysis and interpretation of data. S.R, drafting of the manuscript. S.R., O.D., B.V., S.B and J.V., Manuscript review. The manuscript was approved by all authors.

13. DATA AVAILABILITY STATEMENT

The data that support the findings of this study are not

publicly available due to privacy and security reasons which might affect the research participants. However, data are available from the corresponding author upon reasonable request.

14. REFERENCES

15. Alacacioglu, A., Yavuzsen, T., Dirioz, M., Oztop, I., & Yilmaz, U. (2009). Burnout in nurses and physicians working at an oncology department. Psycho-Oncology (Chichester, England), 18(5), 543-548. doi:10.1002/pon.1432

16. Borges, E. M. D. N., Fonseca, C. I. N. D. S., Baptista, P. C. P., Queirós, C. M. L., Baldonedo-Mosteiro, M., & Mosteiro-Diaz, M. P. (2019a). Compassion fatigue among nurses working on an adult emergency and urgent care unit. Revista Latino-Americana De Enfermagem, 27 doi:10.1590/1518-8345.2973.3175

17. Borges, E. M. D. N., Fonseca, C. I. N. D. S., Baptista, P. C. P., Queirós, C. M. L., Baldonedo-Mosteiro, M., & Mosteiro-Diaz, M. P. (2019b). Compassion fatigue among nurses working on an adult emergency and urgent care unit. Revista Latino-Americana De Enfermagem, 27 doi:10.1590/1518-8345.2973.3175

18. Galiana, L., PhD, Arena, F., MA, Oliver, A., PhD, Sansó, N., PhD, & Benito, Enric, MD, PhD. (2016). Compassion satisfaction, compassion fatigue, and burnout in spain and brazil: ProQOL validation and cross-cultural diagnosis. Journal of Pain and Symptom Management, 53(3), 598-604. doi:10.1016/j.jpainsymman.2016.09.014

19. Griffiths, P., Maruotti, A., Recio Saucedo, A., Redfern, O. C., Ball, J. E., Briggs, J., . . . Smith, G. B. (2019). Nurse staffing, nursing assistants and hospital mortality: Retrospective longitudinal cohort study. BMJ Quality & Safety, 28(8), 609-617. doi:10.1136/bmjqs-2018-008043

20. Handini, F. S., Patarru', F., Weu, B. Y., Heryyanoor, H., & Purwanza, S. W. (2020). Factors that influence professional quality of life (pro-QOL) on clinical nurses. Jurnal Ners, 14(3), 393-396. doi:10.20473/jn.v14i3.17176

21. Haskins, J. (2018). Mind over matter: Enhancing compassion satisfaction in oncology nursing Available from Dissertations & Theses @ University of North Carolina at Chapel Hill. Retrieved from https://search.proquest.com/docview/2058749774

22. Heritage, B., Rees, C. S., & Hegney, D. G. (2018). The ProQOL-21: A revised version of the professional quality of life (ProQOL) scale based on rasch analysis. PLoS ONE, 13(2), e0193478. doi:10.1371/journal.pone.0193478

23. Hooper, C., Craig, J., Janvrin, D. R., Wetsel, M. A., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. Journal of Emergency Nursing, 36(5), 420-427. doi:10.1016/j.jen.2009.11.027

24. Jang, I., Kim, Y., & Kim, K. (2016). Professionalism and professional quality of life for oncology nurses. Journal of Clinical Nursing, 25(19-20), 2835-2845. doi:10.1111/jocn.13330

25. Jarrad, R., Hammad, S., Shawashi, T., & Mahmoud, N. (2018). Compassion fatigue and substance use among nurses. Annals of General Psychiatry, 17(1), 13. doi:10.1186/s12991-018-0183-5

26. Joinson, C. (1992). Coping with compassion fatigue. Nursing (Jenkintown, Pa.), 22(4), 116-121. doi:10.1097/00152193-199204000-00035

27. Kakemam, E., Chegini, Z., Rouhi, A., Ahmadi, F., & Majidi, S. (2021). Burnout and its relationship to self-reported quality of patient care and adverse events during COVID-19: A cross-sectional online survey among nurses. Journal of Nursing Management, 29(7), 1974-1982. doi:10.1111/jonm.13359

28. Lluch, C., Galiana, L., Doménech, P., & Sansó, N. (2022). The impact of the COVID-19 pandemic on burnout, compassion fatigue, and compassion satisfaction in healthcare personnel: A systematic review of the literature published during the first year of the pandemic. Healthcare (Basel), 10(2), 364. doi:10.3390/healthcare10020364

29. Mason, V., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014). Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses: A pilot study. Dimensions of Critical Care Nursing, 33(4), 215-225. doi:10.1097/DCC.0000000000000056

30. McHugh, M. D., Kutney-Lee, A., Cimiotti, J. P., Sloane, D. M., & Aiken, L. H. (2011). Nurses' widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. Health Affairs, 30(2), 202-210. doi:10.1377/hlthaff.2010.0100

31. Salimi, S., Pakpour, V., Rahmani, A., Wilson, M., & Feizollahzadeh, H. (2020). Compassion satisfaction, burnout, and secondary traumatic stress among critical care nurses in iran. Journal of Transcultural Nursing, 31(1), 59-66. doi:10.1177/1043659619838876

32. Van Mol, M., Kompanje, E., Bakker, J., & Nijkamp, M. (2014). Compassion fatigue and burnout among healthcare professionals in the ICU. Critical Care, 18(Suppl 1), P19. doi:10.1186/cc13209

33. Wijdenes, K., Badger, T., & Sheppard, K. (2019). Assessing compassion fatigue risk among nurses in a large urban trauma center. The Journal of Nursing Administration, 49(1), 19-23. doi:10.1097/NNA.0000000000000702

34. Wu, S., Singh-Carlson, S., Odell, A., Reynolds, G., & Su, Y. (2016). Compassion fatigue, burnout, and compassion satisfaction among oncology nurses in the United States and Canada. Oncology Nursing Forum, 43(4), E161-E169. doi:10.1188/16.ONF.E161-E169