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Impact of Organizations' Conditions of Work Effectiveness on Registered Nurses' Compassion Satisfaction and Compassion Fatigue

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Background

Compassion Satisfaction & Compassion Fatigue

Compassion Satisfaction (CS) refers to the pleasure an individual derives from performing their job well or the "good stuff" of helping [1]. Whereas Compassion Fatigue (CF) references the "bad stuff" and is subdivided into two concepts: burnout and Secondary Traumatic Stress (STS) [1]. Burnout includes exhaustion, frustration, and depression, while STS is a negative fear-based feeling related to work-trauma [1]. Symptoms of CF can include feeling unfairness of life, overwhelmed or saturated with emotions, problems disconnecting from work, and rejecting support even though it is wanted [2]. Sheppard (2015) [2] also discovered that nurses described "no longer caring" as a sign of CF.

According to the theoretical model of CS and CF, three elements affect the positive and negative attributes of helping others: work environment, client environment, and person environment [1]. The work environment encompasses anything specific to the setting where the individual works, including the hours, policies, flexibility, organizational culture, management structure, and so forth [1]. The client environment pertains to the characteristics of the person being helped and the type of relationship developed between the client and helper [1]. Finally, the person environment describes the personal life, experiences, and education of the helper [1].

Compassion Satisfaction & Compassion Fatigue among Nurses

Approximately 43% of registered nurses experience burnout as measured by the emotional exhaustion scale produced by the Maslach Burnout Inventory for Human Service workers [3]. The percentage can skew higher depending on the department and patient acuity. One study found moderate to high burnout scores among 82% of nurses in the emergency department and 86% reported moderate to high levels of Compassion Fatigue (CF) [4]. The study also found low rates of Compassion Satisfaction (CS) among emergency nurses, high risk for burnout among nurses in intensive care units, and high risk for CF among oncology nurses [4]. A meta-analysis of thirteen studies that used the Professional Quality of Life (ProQOL) survey found mean scores of 45.11 (CS), 22.65 (CF), and 23.55 (burnout) [5].

There are countless studies on burnout, CS and CF among nurses. One study even assessed nurse educator's professional quality of life based on their conditions of work effectiveness (Ruth-Sahd & Grim, 2020). However, no studies to date have assessed floor nurses' professional quality of life related to their conditions of work effectiveness. The purpose of this study was to determine what characteristics of the workplace promoted CS and negatively influenced burnout and secondary traumatic stress associated with CF among practicing nurses.

Methods

Research Design

This descriptive study used cross-sectional quantitative data collected by the research team via an electronic survey. The research question was what characteristics of the workplace promote CS and negatively influence burnout and secondary traumatic stress associated with CF among practicing nurses?

Data Collection

An electronic survey was created using the Professional Quality of Life Scale (ProQOL) that measures nurses' CS and CF. The ProQOL is a 30-question survey that asks respondents questions using a five-point Likert scale, regarding their positive and negative experiences serving as a helper [6]. The results are totaled to yield scores of CS and burnout and STS, components of CF.

The Conditions for Work Effectiveness questionnaire (CWE) was also included in the questionnaire as it measures structural empowerment in the workplace. The CWE questionnaire measures four dimensions of empowerment in the workplace: perceived access to opportunity, support, information and resources [7]. Opportunity refers to growth within the organization

and increasing knowledge or skills. Resources reflects an individual's ability to acquire resources to complete their work (e.g., finances, materials, time, or supplies). Information includes formal and informal knowledge to complete the work, as well as understanding organizational policies. Finally, support means the receipt of feedback and guidance from those around the individual. Empowerment in the workplace can be enhanced by both formal power in the form of job activities (e.g., flexibility, adaptability, decision-making opportunities, etc.) and informal power via organizational relationships (e.g., social connections within the organization) [7]. The aggregate of these four dimensions and the two types of power is called total structural empowerment.

The final component of the questionnaire was a series of demographic questions used to obtain additional information on the nurses' personal and professional characteristics. Such characteristics included age, gender, years of experience, hospital location (urban or rural), and nurse to patient ratios.

Currently practicing registered nurses were recruited via email and social media sites to participate in this study. The email contained a brief overview of the study, the risks and benefits of participating, and a link to the electronic survey. To participate in the study, individuals must have been registered nurses and at least 18 years of age. Nurses were incentivized to complete the survey by being entered into a drawing to win one of fifty $25 gift cards.

Sample

279 RNs consented to participate. Since only 178 completed the survey, the 101 blank or incomplete surveys were removed from further analysis. Demographic characteristics of the 178 registered nurses indicate that approximately 60% of the sample was under the age of 40, 89% identified as female, nearly 60% had less than 6 years of nursing experience, and two-thirds practiced in an urban setting. The patient to nurse ratio of the sample was diverse but 72% worked in a unit with at least a 1:4 ratio.

Data Analysis

Descriptive statistics assessed the sample's demographic characteristics. Correlation matrices were used to determine if correlations were present between the ProQOL and CWE variables. Additionally, linear regression of the ProQOL variables were analyzed to determine if a significant association existed with CWE variables while controlling for the nurse demographics. Data were analyzed using SAS 9.4. This study was approved by the researcher's institutional IRB.

Results

Descriptive results of the ProQOL survey found that the sample had mean scores of 39.87 (CS), 23.67 (burnout), and 22.36 (STS) (Table 1). Mean results of the Conditions for Work Effectiveness (CWE) indicate a moderate to high mean for access to opportunities among the sample (mean = 4.04). Access to resources, information, support, and organizational relationships all scored above the median of the scale with means of 3.42, 3.28, 3.04, and 3.41, respectively. Total structural empowerment, which is an aggregation of the CWE components, was found to be 20.10 out of 29 among this sample (Table 2).

Pearson correlation results indicate several significant correlations between the dependent variables in the ProQOL. There was a significant, moderate, and positive correlation between burnout and STS (0.4884, $p<.0001$) and a significant, stronger negative correlation between CS and burnout (-0.6414, $p<.0001$). However, there was no significant correlation between STS and CS ($p=0.0936$) (Table 3).

There were significant and positive correlations between the ProQOL and the CWE variables. Excluding total structural empowerment, which is a combination of the other six CWE variables, the strongest correlation was found between CS and access to opportunities (0.4636). For burnout, there were significant negative correlations between burnout and each of the seven CWE variables. Aside from total structural empowerment, the strongest negative correlation was found between burnout and job activities (-0.4196). Similarly, there were significant negative correlations between STS and five of the CWE variables, including access to information, support, job activities, global empowerment, and total structural empowerment. Among this sample, there were no correlations between STS and access to opportunities, resources, or organizational relationships (Table 3).

Results of linear regression indicate that 45% of the variation in the model of CS is related to the CWE ($R^2 = 0.4457$; $p<.0001$). Access to opportunities in the workplace ($p<.0001$) has a significant positive association with CS. For every one unit increase in a nurses' perception of access to opportunities in the workplace, CS increased by 2.64 ($p<.0001$). There were no other significant associations between the CWE variables and compassion satisfaction (Table 4).

Linear regression results indicate that 33% of the variation in burnout is associated with the model ($R2 = 0.3286$; $p<.0001$). Age, location, and access to opportunities were significantly associated with nurses' burnout. Specifically, younger nurses scored significantly higher and nurses practicing in rural hospitals reported significantly lower burnout scores (-1.64) when compared to their counterparts. Furthermore, nurses with fewer opportunities in the work place reported significantly higher burnout ($p=0.0466$) (Table 4).

The final dependent variable was STS. Linear regression results found that 27% of the variation in this model was associated with the independent variables ($R^2 = 0.2671$; $p=0.0016$). Age, years of experience, and the nurse-to-patient ratio were the only variables with a significant association with STS. Secondary

traumatic stress scores decreased with age yet increased with years of experience. For the nurse-to-patient ratio, nurses with a 1:5 ratio reported significantly lower scores of STS compared to nurses with a ratio of 1:6+ (p=0.0144) (Table 4).

Discussion

This study's sample reported average scores of CS (39.87), low to average burnout scores (23.67), and low scores for STS (22.36), according to the ProQOL's benchmarks [8]. The ProQOL manual indicates that the greater the score the more satisfaction or fatigue is felt by the respondent [8]. Particularly, with a CS score less than 23, it can be concluded that the individual has problems in their work setting or does not derive pleasure from their workplace [8]. Inverse to CS, a burnout score above 41 indicates higher risk of burnout and the need for the individual to reevaluate what at work makes them feel ineffective [8]. Similar to burnout, a STS score above 43 may require an individual to reevaluate what frightens them at work or determine if there is another external cause of their STS [8]. Based on these benchmarks, the participants in this study expressed high CS and low burnout and STS. The ProQoL scores of this study are supported by similar studies [9,10].

Results of correlational analysis indicate a significant negative correlation between burnout and CS, which indicates an inverse relationship between burnout and CS among nurses. Finding ways to improve CS may reduce feelings and symptoms of burnout. Results of this study indicate that access to opportunities was associated with higher levels of CS. By increasing nurses' access to opportunities that afford growth and movement within the organization and additional opportunities for nurses to expand their knowledge and skillset, managers can enhance nurses' CS. Burtson & Stichler (2010) [11], found that compassion satisfaction and satisfaction with opportunities for social interaction at work explained the variability found in nurse caring behaviors. Similarly, research found a significant positive relationship between engagement and work effectiveness [12]. The strength of the relationship was greater among more experienced nurses, which indicates that experienced nurses may thrive in organizations that focus on nurse empowerment. Conversely, new nurses may require structural empowerment found within more basic organizational structures that allow them to apply their recently obtained knowledge [12].

Linear regression results indicate an association between a nurse's age and burnout and STS. Younger nurses were likely to experience higher burnout and STS scores compared to older nurses. Sacco et al. (2015) [13] and Wu et al. (2016) [10], found that younger nurses experienced significantly higher secondary traumatic stress than older nurses. Similarly, another study reported that younger nurses (<33 years of age) reported lower CS [14] and greater burnout and STS compared to older nurses [9]. Others support this by finding that new graduates are more vulnerable to feelings of compassion fatigue [15]. One explanation for why older nurses report higher CS and lower burnout and STS pertains to having more preparation to handle the challenges of the nursing profession resulting from exposure to more professional and life experiences [13]. Knowledge and skill building over the expanse of a career could decrease burnout and STS [11]. Additionally, older nurses may have developed coping mechanisms that reduce the effects of CF [11].

Conversely, this study found an inverse relationship between years of experience and STS. In relation to the findings on age and STS, these results could indicate that young nurses are affected by STS due to their inexperience in the profession, and nurses who have been in the profession for 16-20 years have compounding STS, resulting from years of traumatic stress in patient care delivery. Another explanation is that older nurses who start their nursing career later in life are less affected by STS as a result of their personal and other life experiences.

Additionally, though not assessed in this study, unit specialization and patient acuity may impact these results. One study found a significant inverse association between years of experience in their current position and burnout scores among psychiatric nurses [16]. This could indicate that the type of work or nature of the patient conditions may have a greater impact on nurses' CF. Developing individualized psychosocial support systems [10], based on nurses' specializations may help reduce CF (Tables 1-4).

Nurse Demographics	N	%
Age		
19-29	53	29.78
30-39	54	30.34
40-49	37	20.79
50-59	26	14.61
60-69	8	4.49
Gender		
Male	18	10.23
Female	157	89.2
Years working as RN		
0-5	101	57.06
6-10	25	14.12
11-15	17	9.6
16-20	14	7.91
21-30	8	4.52
31-40	11	6.21
40+	1	0.56
Hospital location		
Rural	60	33.71
Urban	118	66.29
Nurse to Patient Ratio		
1:01	12	6.78
1:02	26	14.69
1:03	12	6.78
1:04	43	24.29
1:05	28	15.82
1:06	33	18.64
1:6+	23	12.99

Table 1: Demographic characteristics of the sample.

Variable	Mean	Std Dev
Burnout	23.67	5.38
Compassion satisfaction	39.87	5.56
Traumatic stress	22.36	5.83
Opportunity	4.04	0.75
Resources	3.42	0.95
Information	3.28	0.97
Support	3.04	0.91
Job activities	2.91	0.97
Organizational relationships	3.41	0.97
Structural empowerment	20.10	3.96

Table 2: Mean Scores of ProQOL and CWE Variables.

	Burnout	Compassion satisfaction	Traumatic stress
Burnout	1	-0.64141	0.48838
		<.0001	**<.0001**
Compassion satisfaction	-0.64141	1	-0.12604
	<.0001		0.0936
Traumatic stress	0.48838	-0.12604	1
	<.0001	0.0936	
Opportunity	-0.21339	0.46356	-0.04202
	0.0042	**<.0001**	0.5776
Resources	-0.26066	0.36622	-0.11836
	0.0004	**<.0001**	0.1156
Information	-0.36756	0.30859	-0.20166
	<.0001	**<.0001**	**0.0069**
Support	-0.4043	0.26193	-0.23189
	<.0001	**0.0004**	**0.0018**
Job activities	-0.41957	0.42696	-0.24537
	<.0001	**<.0001**	**0.001**
Organizational relationships	-0.23804	0.3777	-0.06385
	0.0014	**<.0001**	0.3971

Table 3: Correlation Analysis of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress and the Conditions of Work Effectiveness.

		Compassion Satisfaction		Burnout		STS	
	R-Squared	0.4457		0.3286		0.2671	
	Parameter	**Estimate**	**Pr > |t|**	**Estimate**	**Pr > |t|**	**Estimate**	**Pr > |t|**
Variables	**Intercept**	28.942061	<.0001	34.87301	<.0001	34.56922163	<.0001
Age	19-29	-1.4913445	0.7115	8.2788389	**0.0172**	12.91116397	**0.0013**
	30-39	-0.7753887	0.8772	7.0198673	**0.0393**	9.68372392	**0.0136**
	40-49	-1.0663206	0.8201	7.3156783	**0.0294**	9.41107447	**0.015**
	50-59	-1.4912032	0.683	5.6019001	**0.0674**	6.53877407	0.0633
	60-69	0	.	0	.	0	.
Gender	**Male**	-2.4770182	0.0529	1.7929601	0.1478	0.53396467	0.7067
	Female	0	.	0	.	0	.
Years of Experience	0-5	-6.6990736	0.2243	-4.4756806	0.4498	-15.3387313	**0.0253**
	6-10	-5.7154342	0.2888	-5.9601493	0.3119	-16.0077507	**0.019**
	11-15	-6.9701123	0.2104	-5.0259955	0.3974	-14.6464804	**0.033**
	16-20	-4.0921758	0.4564	-5.1276854	0.3837	-14.5593997	**0.0325**
	21-30	-5.448916	0.3082	-5.277672	0.3896	-12.5383624	0.0766
	31-40	-6.1302293	0.2311	-1.2036122	0.8207	-9.9759742	0.1038
	40+	0	.	0	.	0	.
Hospital Location	**Rural**	1.1139371	0.1393	-1.6015912	**0.0468**	0.01247423	0.9892
	Urban	0	.	0	.	0	.
Nurse to Patient Ratio	1:01	3.1065389	0.092	-1.7370353	0.3314	-3.12167029	0.1298
	1:02	0.0965077	0.9822	-0.6019811	0.6886	-1.61468315	0.3503
	1:03	0.3494763	0.8877	-0.8717365	0.6478	-1.17047944	0.5936
	1:04	0.7254117	0.6765	0.2896792	0.8348	0.64509254	0.6862
	1:05	-2.022437	0.1351	-0.4844917	0.7445	-4.37019208	**0.0114**
	1:06	1.7599013	0.2079	-1.9457093	0.186	-2.22225028	0.1888
	1:6+	0	.	0	.	0	.
Conditions of Work Effectiveness	**Opportunity**	2.6652147	**<.0001**	-1.0824294	**0.0466**	-0.36276968	0.5594
	Resources	0.4322707	0.3855	0.0132301	0.9778	0.08839319	0.8713
	Information	0.0257373	0.952	-1.0338557	0.0695	-0.76085746	0.2437
	Support	-0.5384784	0.278	-0.9197704	0.1084	-0.78318461	0.2335
	Job Activities	1.3986028	0.059	-0.7288102	0.2676	-0.69643896	0.3564
	Organizational Relationships	0.7529161	0.1415	0.1935898	0.6738	0.70338594	0.1846

*p<0.05 are significant and bolded above.

Table 4: Linear Regression of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress based on the Conditions of Work Effectiveness.

When assessing the association between burnout and location, nurses practicing in rural hospitals expressed lower burnout scores compared to their urban counterparts. One explanation for this could be better managerial support, access to opportunities, and decision-making capabilities [17]. By increasing an individual's flexibility, adaptability, creative decision-making opportunities, visibility, and centrality to the organization, managers can help reduce nurse burnout [7].

This study also found that nurse-to-patient ratios were associated with STS. Staffing shortages have been found to have a direct link to burnout, whereas appropriate nurse-to-patient ratios can improve CS [13,18]. Though difficult in the midst of a nursing shortage, finding a way to adjust nurse-to-patient ratios based on patient acuity can improve nurses' CS and decrease feelings of burnout. One study found that 17.5% of new nurses leave their position within a year [19]. This turnover may increase the number of patients per nurse and feelings of burnout among remaining nurses. Furthermore, unresolved CF has been cited as one source of turnover among new nurses [9]. So, having longer periods of high nurse-to-patient ratios can enhance feelings of burnout and further exacerbate turnover.

One technique to reduce CF is to create a culture of teamwork. Teamwork and an environment of team cohesiveness was found to be positively associated with increased CS and decreased CF [10]. Along with a culture of teamwork, research indicates that quality collegial relationships between nurses and physicians can improve compassion satisfaction [18]. Feelings of isolation and lack of collegiality can increase job dissatisfaction and turnover. Accurate measurement and prevention of turnover among nurses can have implications on staffing, which can affect long-term retention rates, CS, CF, and burnout among remaining nurses. Furthermore, CF can be intensified by unit or organizational culture that does not promote meaningful recognition of nurses [13]. A culture that focuses on managerial support has also been linked to increased CS among nurses [20]. To reduce STS, managers could increase access to information that is required for nurses to be effective, improve support systems by providing timely and comprehensive feedback and guidance, and the characteristics specific to the job itself, as outlined in burnout.

Another option, though the literature is not conclusive, is obtaining additional credentials. Some research has found that more highly educated nurses experience higher CS [10]. Conversely, Zang et al. (2018) and Mangoulia et al. (2015) [16], found an inverse relationship between nurses' education and burnout. There are impactful opportunities aside from formal education and attainment of higher credentials. One study of Taiwanese nurses found that nurses who participated in an educational program that incorporated trainings on CF resiliency, mindfulness respiration, and relative and friends' support, experienced increased CS and mental health and decreased STS compared to the control group [21]. These nurses also reported decreased burnout and improved physical health after completion of the training [21]. These informal trainings can provide coping mechanisms and practical skills nurses need to reduce CF and enhance CS.

A systemic problem is the stigmatization of compassion fatigue that creates fear of losing employment [22]. Reducing this stigma would allow nurses to seek guidance and training opportunities on methods to reduce CF without fear of repercussions. Nurses exist in this precarious situation of exuding compassion for their patients while simultaneously restricting their emotional saturation. More opportunities for social support coupled with managerial support and an organizational culture that promotes techniques to boost CS can decrease nurses' feelings of burnout and STS and improve the quality of care delivered.

Limitations

Cross-sectional data cannot report on causation. Researchers can postulate the meaning and relationship of the findings based on the results of previous literature, which is a limitation of this type of data. Furthermore, the researchers did not control when the nurses took the survey. The time of day the survey was completed may have affected the survey, mainly if it was immediately after a shift. Exhaustion, especially after a particularly emotional or challenging shift, may skew the results more negatively. The opposite is also true. The researchers also did not control for the professional and personal events of the nurse's day that may have impacted their feelings of CS and CF, which could have affected their scores on the survey. Future studies could triangulate the role personal factors have on CS and CF in relation to the conditions of work effectiveness. Additional research is also needed on ways to reduce the stigma of CF among nurses.

Conclusions

Results indicate a positive correlation between burnout and STS and a negative correlation between burnout and CS. Due to the caregiving nature of the nursing profession and frequent patient encounters, a greater level of perceived STS is correlated with higher rates of burnout. However, organizations should focus on increasing levels of compassion satisfaction due to its negative correlation with burnout. By offering greater access to support, opportunities, resources, and employee empowerment, organizations can help increase nurses' CS and decrease burnout [11].

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