Differences by Nurse Type in Professional Quality of Life Perceptions from Pre-COVID-19 to Intra-COVID-19

Karen Gabel Speroni, PhD, RN, BSN, MHSA
Susan Antol, PhD, MS, RN
Lisa Lisle, MSN, RN, CEN
Wynne Aroom, MSN, RN-BC, CDCES, CWCN

Article

Abstract

The healthcare environment has become increasingly difficult during the SARS-CoV-2 (COVID-19) pandemic that began in March 2020. In this article, we discuss a study that considered differences by nurse type in professional quality of life perceptions. The primary study aim was to quantify differences in pre-COVID-19 and intra-COVID-19 perceptions of compassion satisfaction (CS) and compassion fatigue (CF) by nurse type, using the ProQOL survey. A secondary aim was to evaluate nurse perceptions of the intra-COVID-19 work environment. The study methods utilized a survey design with random sampling by nurse type (clinical, nurse manager, nurse director, and other nurse). Results suggested that intra-COVID-19, nurse managers had significantly greater CF scores. Intra-COVID-19, nurse directors had greater CS. COVID-19 negatively impacted self-care activities for nurses. Our discussion considers these findings related to pre-pandemic research that considered CS and CF. Implications for research and practice included identification of best practices for improvement in work environment, especially for nurse managers, and general recommendations for hazard pay and paid time off. While nurse managers have the greatest CF, all nurses need pandemic-related support.

Key Words: compassion fatigue, compassion satisfaction, burnout, secondary traumatic stress, healthy work environment, nurse, clinical nurse, nurse manager, nurse leader, coronavirus, COVID-19, pandemic

The healthcare environment has become increasingly difficult during the SARS-CoV-2 (COVID-19) pandemic that began in March 2020. Just before the pandemic, the Joint Commission had released a Quick Safety Advisory noting that 15.6% of nurses reported burn-out in data from a national nursing engagement survey (Joint Commission, 2019). The World Health Organization's (WHO) International Classification of Diseases defines burnout as a syndrome that is conceptualized as resulting from chronic workplace stress, not successfully managed (WHO, 2019).

> The healthcare environment has become increasingly difficult during the SARS-CoV-2 (COVID-19) pandemic that began in March 2020.

In October 2021, the American Nurses Foundation (ANF) published results of their most recent Mental Health and Wellness survey of over 9,500 nurses (ANF, 2021). Key findings were that 34% of nurses said they were not emotionally healthy and 42% had experienced trauma due to COVID-19.

> Quality of life in this context requires finding that balance between positive and negative aspects of the workplace.

Professional quality of life (QOL) has always been a need in the workplace, and this is even more true during the pandemic. Quality of life in this context requires finding that balance between positive and negative aspects of the workplace. The positive aspect is represented as compassion satisfaction (CS), while the negative aspect is compassion fatigue (CF). The latter can manifest as burnout and/or secondary traumatic stress (STS). The Professional Quality of Life (ProQOL) survey (Stamm, 2010) is a validated tool which measures one CS score, and two CF scores (burnout and STS).

In a pre-COVID-19 study, researchers (Lisle et al., 2020) reported findings from 208 registered nurses (RN), which addressed the evidence gap in CS and CF rates by nurse type (i.e., clinical nurses, nurse managers, nurse leaders, and other nurse group). They reported that significant differences existed by nurse type for CF, including both burnout and STS scores. Nurse leaders had greater CF and the other nurses scored the least. There were also significant differences for some shared governance activities and workplace violence measures. Lisle et al. (2020) concluded that opportunities exist for evaluation of interventions for healthier work environments, particularly for nurse leaders, including supporting shared governance activities for all nurse types and zero-tolerance policies for workplace violence.

In this article, we discuss a study that considered differences by nurse type in professional quality of life perceptions. The primary study aim was to quantify differences in pre-COVID-19 and intra-COVID-19 RN CS and CF perceptions by nurse type, using the ProQOL survey. A secondary aim was to evaluate nurse perceptions of the intra-COVID-19 work environment.

> ...opportunities exist for evaluation of interventions for healthier work environments, particularly for nurse leaders...

Study Methods

This study was reviewed by our hospital system institutional review board and deemed exempt. Nurse researchers initiated the study in 2021, at a rural health system (total inpatient beds = 163; total emergency department beds = 82) located in the mid-Atlantic region of the United States. The hospitals have American Nurses Credentialing Center Magnet™ recognition. Health system RNs were included. Traveler RNs were excluded.

Design and Sampling

For our survey research, we employed random sampling of hospital RNs by four nurse types: clinical, manager, director and other. RNs randomly selected amongst the four nurse types received a recruitment letter via email with an electronic link to review the study informed consent. Those who agreed to participate were then taken directly to the study survey, which was completed in an electronic platform. RNs who completed the survey received no payment or incentive.

> Nurse type groups were aligned with definitions provided for clinical nurse, nurse manager, and nurse director...

Nurse type groups were aligned with definitions provided for clinical nurse, nurse manager, and nurse director, according to the American Nurses Credentialing Center (ANCC) Magnet Application Manual (ANCC, 2019). Clinical nurses spent the majority ($\geq$51%) of time providing direct patient care. Nurse managers had accountability and supervision of all RNs and other healthcare providers who deliver nursing care in an inpatient or ambulatory setting. Nurse directors had line authority over multiple units with RNs who deliver nursing care in an inpatient or ambulatory care setting and are positioned on the organizational chart between the nurse manager and the chief nursing officer. The "other" nurse group was comprised of roles such as employee health, clinical specialists, infection control, educators, nurse navigators, inpatient care coordination, and ambulatory clinics.

Data Collection

The 75-item survey contained four parts. Parts 1, 3 and 4 were previously used in the aforementioned pre-COVID-19 survey study, for which the study publication provided the specific validations of survey Parts 1, 3, and 4 (Lisle et al., 2020). Part 1 contained nine demographic questions. The newly added part 2, intra-COVID-19 work environment, contained four questions. For Part 2, a content validity index of 1.0 was obtained via four reviewers following Lynn's procedures (Polit & Beck, 2006). Part 2 was also piloted by members of the hospital system's Nursing Inquiry Council prior to initiation of the survey. Part 3 contained the ProQOL (30 questions). This article reports findings from Parts 1, 2 and 3.

Part 4 contained 32 questions on work environment-related measures (e.g., shared governance activities, a nurse satisfaction rating, leadership changes, intent to stay/retention, workplace violence, lateral violence and open-ended questions regarding CS and CF. Findings from Part 4 will be reported separately.

The target sample size was a 30% response rate from hospital RNs randomly selected to participate. The intra-COVID-19 survey response rate was 31.8% (140 of 441 RNs randomly sampled). Intra-COVID-19 survey responses were compared to the pre-COVID-19 survey responses, which had a 31.9% response rate. Both the pre-COVID-19 and intra-COVID-19 samples were derived from nurses working in the same settings, following the same sampling methods, and eligibility criterion for all nurse types.

Analysis

Descriptive statistics, including mean or median and standard deviations (s.d.), were used for continuous variables and frequency and percentage for categorical variables. To determine relationships between the designated four nurse types and each categorical outcome variable, Chi-square and Fisher Exact tests were used. The Aligned Rank Transform (ART) for

Nonparametric Factorial Analysis tests was used to examine differences in the four nurse types and pre- and intra-COVID-19 outcomes for each outcome variable (Wobbrock et al, 2011). Median scores for the ProQOL analysis were used with reporting of scale scores for CS and CF (burnout and STS).

Significant findings were reported at p<0.05. Aligned Rank Transform analyses were completed using the ARTool in R (Kay et al, 2021). All other statistical analysis was completed in SAS, version 9.4 (SAS institute Cary, NC).

Conventional content analysis was used for open-ended survey questions (Hsieh & Shannon, 2005). Participant response data were initially coded separately by nurse researchers. Consensus was then reached for all final codes with the four nurse researcher authors. Codes were identified, aggregated into categories, and reported by primary themes.

Results

Most of the 140 RNs who completed the intra-COVID-19 survey were clinical nurses (*n* = 80, 57.1%), followed by other nurses (*n* = 44, 31.4%), nurse managers (*n* = 12, 8.6%), and nurse directors (*n* = 4, 2.9%). Most had a bachelor or higher degree in nursing (*n* = 139 92, 66.2%), with mean years of experience at 21.5 (range = 1.51; standard deviation = 11.94). Most worked full-time (*n* = 105, 75.0%). These nurses worked in surgical services, emergency department, critical care or medical/surgical units (*n* = 87, 62.1%).

Compassion Satisfaction and Compassion Fatigue (Burnout and STS)

There were significant differences between nurse types for the two CF scores, burnout and STS, but not for CS (Table 1). Intra-COVID-19, nurse managers had significantly greater CF scores for both burnout and STS (p = 0.02) than clinical nurses, nurse directors and the other nurse group. Pre-COVID-19, nurse directors had significantly greater CF scores for both burnout and STS (p < 0.05). Pre-COVID-19, nurses reported lower levels of burnout and STS (clinical nurses, other nurses, and overall scores). Intra-COVID-19, burnout and STS scores all increased to average burnout.

> There were significant differences between nurse types for the two CF scores, burnout and STS, but not for CS

Table 1. *Professional Quality of Life by Nurse Type and Time Period (Pre-COVID-19 versus Intra-COVID-19)*

Scale, # (range) [SD] {level}	Clinical Nurses		Nurse Managers		Nurse Directors		Other Nurses		Total RNs		P-value +
	Pre n = 142	Intra n = 80	Pre n = 13	Intra n = 12	Pre n = 6	Intra n = 4	Pre n = 47	Intra n = 44	Pre n = 208	Intra n = 140	
Average CS Score*	40.1 (26-50) [6.5] {avg}	34.5 (19-48) [6.7] {avg}	42.0 (39-45) [2.7] {high}	33.6 (28-39) [4.1] {avg}	40.9 (31-50) [5.3] {avg}	36.3 (32-41) [3.7] {avg}	42.1 (26-50) [5.3] {high}	35.8 (21-49) [6.5] {avg}	40.7 (26-50) [6.2] {avg}	34.9 (19-49) [6.4] {avg}	0.18
Average Burnout Score**	12.1 (14-29) [3.5] {low}	26.2 (15-36) [6.5] {avg}	22.8 (19-27) [3.3] {avg}	27.4 (17-35) [5.8] {avg}	24.2 (19-31) [4.0] {avg}	27.0 (21-31) [4.3] {avg}	20.7 (15-30) [2.8] {low}	24.9 (13-35) [5.3] {avg}	21.3 (14-31) [3.5] {low}	25.9 (13-36) [5.4] {avg}	0.02
Average STS Stress Score***	21.8 (11-37) [5.1] {low}	24.5 (12-42) [6.5] {avg}	24.3 (18-33) [5.1] {avg}	28.8 (20-36) [5.8] {avg}	25.5 (14-45) [6.3] {avg}	27.5 (24-32) [3.4] {avg}	21.2 (12-34) [5.3] {low}	25.8 (16-40) [6.0] {avg}	22.0 (11.37) [5.3] {low}	25.4 (12-42) [6.3] {avg}	0.02

* Compassion satisfaction (CS) levels: <22=Low; 23-41=Average; >42=High
**Burnout levels: <22=Low; 23-41=Average; >42 High
***Secondary traumatic stress levels (STS): <22=Low; 23-41=Average; >42=High
+Aligned rank analysis of variance was used due to small samples in some nurse types

Intra-COVID-19 nurse directors had greater CS (p = 0.18); pre-COVID-19 the other nurse group had the most CS (p = 0.26). While not significant, average CS scores were lower intra-COVID-19 (i.e., CS on average decreased across all four nurse types from pre-COVID-19 to intra-COVID-19). Two nurse types (managers and other nurses) had high CS pre-COVID-19 but average CS intra-COVID-19.

Intra-COVID-19 Nursing Work Environment

The primary theme of these comments was more personal and health challenges.

In the total RN sample, most nurses (72.3%) had cared for COVID-19 patients and 39.0% for a COVID-19 patient who had died (Table 2). Approximately half (49.7%) of the nurses reported that a loved one had COVID-19, and 20.8% reported a loved one had died from COVID-19. Only 12.8% had reported having had COVID-19 at the time of the intra-COVID-19 survey, which was prior to the omicron variant. A field was provided for nurses to offer open-ended comments. The primary theme of these comments was more personal and health challenges. Examples of comments included:

- "*I am in an accommodated role because I am a "long hauler" from Covid 19; I was a patient on my own unit*"
- "*...meeting basic personal needs at work and home from the exhaustion of patient care and inadequate resources*"
- "*I have had more challenges managing my other activities and home life*"

Table 2. *Intra-COVID-19 Perceptions by Nurse Type*

Consider each of the following about your personal and current work situation regarding COVID-19 experiences, select **all** that apply, # (%)	Clinical Nurses n = 80	Nurse Managers n = 12	Nurse Directors n = 4	Other Nurses n = 44	Total RNs n = 140	P-Value +
I have cared for COVID-19 patients at work	67 (83.8%)	7 (58.3%)	2 (50.0%)	26 (59.1%)	102 (72.3%)	<0.00
I have cared for COVID-19 patients who have died	39 (49.8%)	2 (16.7%)	1 (25.0%)	13 (29.6%)	55 (39.0%)	0.00
I have not had time at work to optimally support families of COVID-19 patients	30 (37.0%)	4 (33.3%)	0	9 (20.5%)	43 (30.5%)	0.00
I have not had time to adequately process losses during COVID-19	16 (20.0%)	4 (33.3%)	0	8 (18.2%)	28 (19.9%)	0.01
I have had COVID-19	13 (16.3%)	1 (8.3%)	0	4 (9.1%)	18 (12.8%)	0.02
A person who lives with me has had COVID-19	16 (20.0%)	1 (8.3%)	1 (25.0%)	12 (27.3%)	30 (21.3%)	0.01
A loved one has had COVID-19	44 (55.0%)	6 (50.0%)	2 (50.0%)	18 (40.9%)	70 (49.7%)	0.00
A loved one has died from COVID-19	16 (20.0%)	2 (16.7%)	2 (50.0%)	9 (20.5%)	29 (20.8%)	0.01
I have had more challenging experiences with children at home	26 (32.5%)	6 (50.0%)	1 (25.0%)	16 (34.1%)	48 (34.0%)	0.00
I have had more challenging experiences with elder care	21 (26.3%)	3 (25.0%)	2 (50.0%)	11 (25.0%)	37 (26.2%)	0.01
I have had more challenging experiences with a loved one being isolated during COVID-19	36 (32.5%)	5 (41.8%)	3 (75.0%)	14 (31.8%)	48 (34.0%)	0.00
I was not able to work on my requirements for my clinical ladder / professional advancement program	14 (17.5%)	1 (8.3%)	0	6 (13.6%)	21 (14.9%)	0.02

+Chi-square and Fisher Exact tests (α=0.05)

The top five self-care activities that most nurses reported were negatively impacted by COVID-19 were the inability to: 1) eat a balanced diet to maintain or achieve desired weight (52.5%); 2) have self-care activities in general (51.8%); 3) get exercise (48.9%); 4) get enough sleep (48.2%); and 5) drink enough water (47.5%). Of note, self-care activities were significantly different as well by nurse type (Table 3). Examples of open ended comments from nurse participants that related to self-care included:

- "*remembering what kind of person I was before COVID, a happy loving person, I miss her,*"
- "*travel and vacation, opportunities to get away, all negatively impacted by COVID*"

The primary theme of these comments was related to the ability to socialize.

Table 3. *Self-Care Negatively Impacted by COVID-19, by Nurse Type*

Consider each of the following about your ability to have self-care during COVID-19. Self-care is described as the "practice of activities that an individual initiates and perform on their own behalf in maintaining life, health and well-being". Select **all** that apply that have been ***negatively impacted*** due to COVID-19, # (%)	Clinical Nurses n = 80	Nurse Managers n = 12	Nurse Directors n = 4	Other Nurses n = 44	Total RNs n = 140	P-Value +
Eating a balanced diet to maintain or achieve desired weight	45 (56.3%)	7 (58.3%)	3 (75.0%)	19 (43.2%)	74 (52.5%)	0.00
Having self-care activities in general	41 (51.3%)	7 (58.3%)	2 (50.0%)	23 (52.3%)	73 (51.8%)	0.01
Exercising	36 (45.0%)	6 (50.0%)	2 (50.0%)	25 (56.8%)	69 (48.9%)	0.00
Sleeping	39 (48.8%)	8 (66.7%)	0	21 (47.7%)	68 (48.2%)	0.00
Drinking enough water	41 (51.3%)	8 (66.7%)	1 (25.0%)	17 (38.6%)	67 (47.5%)	0.00
Reaching out to loved ones	25 (31.3%)	5 (41.7%)	3 (75.0%)	16 (36.4%)	49 (34.8%)	0.00
Using coping skills	22 (27.5%)	6 (50.0%)	3 (75.0%)	9 (20.5%)	40 (28.4%)	0.00
Practicing mindfulness	19 (23.8%)	5 (41.7%)	2 (50.0%)	13 (28.6%)	39 (27.7%)	0.00
Utilizing positive affirmations	15 (18.8%)	3 (25.0%)	1 (25.0%)	12 (27.3%)	31 (22.0%)	0.01
Tracking goals	16 (20.0%)	4 (33.3%)	2 (50.0%)	10 (22.7%)	32 (22.7%)	0.00
Reading	16 (20.0%)	3 (25.0%)	1 (25.0%)	11 (25.0%)	31 (22.0%)	0.01
Utilizing employee assistance programs (EAP) at work*	13 (16.3%)	3 (25.0%)	0	11 (25.0%)	27 (19.2%)	0.01
Arts, crafts, creative endeavors	18 (22.5%)	1 (8.3%)	1 (25.0%)	7 (15.9%)	27 (19.2%)	0.01

Praying	14 (17.5%)	2 (16.8%)	0	8 (18.2%)	24 (17.0%)	0.02
Doing yoga	13 (16.3%)	0	0	4 (9.1%)	17 (12.1%)	0.01
Breathing / relaxation techniques	10 (12.5%)	2 (16.8%)	1 (25.0%)	3 (6.8%)	16 (11.4%)	0.01
Journaling	11 (13.8%)	0	0	5 (11.4%)	16 (11.4%)	0.02
Meditating	8 (10.0%)	1 (8.3%)	1 (25.0%)	3 (6.8%)	13 (9.2%)	0.02

* EAP programs at work: stress management; anxiety and depression; substance abuse; parenting & family problems; relationship abuse; grief and loss; work stress; financial pressures; childcare; aging parents; ill family members; illegal matters; education planning; special needs; chronic health concerns; work-life balance; pet services; relocation)
+ Chi-Square and Fisher Exact Tests (α=0.05)

The top five improvements recommended by most nurses for intra-COVID-19 work environments are reported in Table 4, including which significantly differed by nurse type. These were: 1) providing hazard pay for working with COVID-19 patients (66.7%); 2) facilitating ability for nurses to utilize paid time off, with their unit still adequately staffed during their time off (58.9%); 3) ensuring adequate break time (55.3%); 4) increasing paid time off for vacation time (54.6%); and 5) increasing paid time off for sick time (46.1%).. The primary theme of the open-ended responses in this section was related to self-care and monetary compensation. Comments included:

- "*Employee assistance with medical bills; giving gift certificates for self-care activities; put the ladder on hold until the pandemic is over; 10-20% increase for hazard pay (you've sent your nurses, techs, respiratory, docs, rad techs, and phlebotomists to "war".....they deserve a million dollars a piece compensation for putting their lives on the line during this healthcare crisis. I almost died!!!*"
- "*Hazard, pay, incentive pay, and bonuses make the stress of working during COVID a little less painful. With that being said, more than anything else, inadequate staffing is by far the biggest stressor for nursing as it affects every single aspect of patient care and indirectly, time and energy for self-care.*"

Table 4. *Improvements for a COVID-19 Work Environment, by Nurse Type*

Consider each of the following about how your work environment could be improved during a pandemic, such as COVID-19, select all that apply, # (%)	Clinical Nurses n = 80	Nurse Managers n = 12	Nurse Directors n = 4	Other Nurses n = 44	Total RNs n = 140	P-Value +
Provide hazard pay for working with COVID-19 patients	59 (73.8%)	7 (58.3%)	3 (75.0%)	25 (56.8%)	94 (66.7%)	0.00
Facilitate ability to utilize paid time off with adequate staffing	52 (65.0%)	4 (33.3%)	3 (75.0%)	24 (54.6%)	83 (58.9%)	0.00
Ensure adequate break time	55 (68.8%)	6 (50.0%)	1 (25.0%)	16 (36.4%)	78 (55.3%)	<0.00
Increase paid time off for vacation time	52 (65.0%)	2 (16.7%)	0	23 (52.3%)	77 (54.6%)	<0.00
Increase paid time off for sick time	43 (53.8%)	4 (33.3%)	0	18 (40.9%)	65 (46.1%)	0.00

Offer self-care activities	16 (20.0%)	6 (50.0%)	1	15 (34.1%)	38 (27.0%)	0.00
Offer additional employee assistance programs	13 (16.3%)	3 (25.0%)	2 (50.0%)	8 (18.2%)	26 (18.4%)	0.00
Modify the clinical ladder / professional advancement program to include regular completion of self-care activities	14 (17.5%)	2 (16.7%)	0	9 (20.5%)	26 (17.3%)	0.02

+Chi-Square and Fisher Exact Tests (α=0.05)

Nurses were also asked, "Please provide any other comments regarding how to improve nurse well-being during COVID-19." Primary themes from these responses were adequate staffing and access to leadership. Nurses commented:

- "*Have your staff's back and provide ADEQUATE staffing along. Plus, it's hard to work along travelers making 3 or 4 times what you make*"
- "*Management helping when short staffed. Feelings of support from upper level*"
- "*Nurses need to feel appreciated in these difficult times. Leadership should be visible and helpful, if even just to answer a call light, visit with patients, help to feed or sit with someone so they are safe and don't climb out of bed. Make rounds and ask the staff what can be done to make their day a little better.*"

Discussion

This research that compared survey findings pre-COVID-19 and intra-COVID-19 of the four nurse types studied indicated that nurse managers have the most CF (burnout score and STS score) and the least CS intra-COVID-19. Pre-COVID-19, nurse directors had the most CF (burnout and STS). Pre-COVID-19, other nurses had greater CS. Intra-COVID-19, nurse directors had the most CS. While nursing management includes directors and managers to accomplish strategic initiatives, typically managers have more direct unit focused responsibilities, with presumably more support from their directors pre-COVID-19.

In the intra-COVID-19 work environment for hospitals not only in the United States but presumably worldwide, it is possible that nurse managers had more responsibilities with not only less director support, but higher patient acuity levels and compromised unit staffing, contributing to more CF. Other factors may have contributed as well, for which additional research is warranted. Directors may have been charged with broader organizational initiatives to address pandemic related operational issues, and this may have attributed to more CS. Additionally, some work could have been completed remotely by directors, contributing to CS, whereas nurse manager would be required primarily to complete work on the front line. As this research did not measure the why, additional research is warranted regarding evidence for differences by nurse types for CS, both burnout and STS.

> ...it is possible that nurse managers had more responsibilities with not only less director support, but higher patient acuity levels and compromised unit staffing...

> In this and other research, CF in the nursing work environment has increased over time, and CS has decreased.

In this and other research, CF in the nursing work environment has increased over time, and CS has decreased. For example, in a meta-analysis review of studies (Xie et al., 2021) from 2010 to 2019 of 28,509 nurses from 11 countries, the prevalence and mean scores of nurse burnout and STS increased over time. Xie et al. (2021) concluded that their findings may provide hospital leaders with the theoretical basis for management and treatment of CF.

The pandemic intensified an already problematic work environment for nurses, which researchers have also reported. In a global meta-synthesis, Zipf, et al. (2022) reported four primary themes from nurses' experiences from the COVID-19 pandemic: 1) fear and moral conflict, being unprepared and scared for safety; 2) duty, and a sense of calling and obligation; 3) mental and physical side effects, with exhaustion; and 4) growth, with a renewed sense of professional identify and calling. These themes, and in particular mental and physical side effects with exhaustion, relate to themes which emerged from this research, including personal and health challenges, the need for self-care, and having adequate staffing and access to leadership.

> The pandemic intensified an already problematic work environment for nurses...

In a cross-sectional online study during COVID-19 of 184 healthcare workers from 45 countries, researchers concluded those experiencing patients' physical pain, psychological suffering, and death were more likely to develop STS (Orru et al., 2021). During care of COVID-19 patients, it is presumed nurses were more likely to have had these experiences, which can

contribute to more CF and less CS. Accordingly, managers, who may have engaged in less front-line care pre-COVID-19, may have had more of these experiences intra-COVID-19, contributing to CF and less CS.

...those experiencing patients' physical pain, psychological suffering, and death were more likely to develop STS

The need to support nurses in self-care practices will be even greater, particularly as COVID-19 transitions from pandemic to endemic. Many of the recent ANF (2021) survey findings were consistent with findings from this research. For example, ANF reported that most nurses (71%) identified spending time with friends and family as an activity that was helpful for well-being. They also reported top activities for well-being were: 1) maintaining a healthy diet, 2) receiving accurate COVID-19 information, 3) religious, community, and spiritual direction, 4) practicing/receiving expressions of gratitude, and 5) regular exercise. While each healthcare environment differs, all nurses have opportunities to identify and innovate ways to find balance and enhance self-care.

The need to support nurses in self-care practices will be even greater, particularly as COVID-19 transitions from pandemic to endemic.

Limitations of this research included the potential for self-selection bias inherent with survey research. Small sample sizes of managers and directors made it more difficult to compare differences amongst nurse types. As this research was conducted within a rural health system, results may not be generalizable to other settings. Lastly, as one additional survey part was added to address the intra-COVID-19 nursing work environment, the overall tool validity or reliability may have been impacted.

Implications for Research and Practice

Research is warranted to determine best practices that support healthier work environments that promote CS and decrease CF for all nurse types; those that best support nurse managers are imperative. To facilitate nurse CS and less CF in pandemic work environments, nurse leaders can identify best practices to provide more self-care activities for nurses, such as support for balancing diet and exercise, facilitating paid time off, and ensuring adequate break time. The need to provide hazard pay for working with COVID-19 patients cannot be undervalued. While nurse managers had the greatest CF, all nurses need pandemic-related support.

...all nurses need pandemic-related support.

Conclusion

While there continue to be significant differences by nurse type for average CF burnout and STS scores, those experiencing the most CF have changed from pre-COVID-19 to intra-COVID-19. Pre-COVID-19, nurse directors had the most CF (burnout and STS). In the intra-COVID-19 environment, nurse managers have significantly more burnout and STS than clinical nurses, directors, and other nurse types. While average CS decreased for all nurse type between pre-COVID-19 and intra-COVID-19, these differences were not significant.

...those experiencing the most CF have changed from pre-COVID-19 to intra-COVID-19.

Regarding work environment factors, most nurses reported more personal and health challenges, such as COVID-19 negatively impacting diet/weight, a lack of exercise, and lack of sleep. They recommended hazard pay and paid time off to improve the nursing work environment. Nurses also reported the need for adequate staffing and access to leadership. Opportunities exist for pandemic-related support and healthier work environment improvements for all nurse types, and particularly for nurse managers.

Conflict of Interest: The authors declare no conflict of interest.

Authors

Karen Gabel Speroni, PhD, RN, BSN, MHSA
Email: karen.speroni@outlook.com
ORCID ID: 0000-0001-6259-8501

Dr. Speroni provides research infrastructure and process consultation for University of Maryland Shore Regional Health, as well as other US and international hospitals and health systems. She has over 30 years of experience in biomedical research, including leading hospital-based research programs, publishing, presenting, serving on institutional review boards, and teaching as university faculty.

Susan Antol, PhD, MS, RN

Email: antol@umaryland.edu

ORCID ID: 0000-0001-8309-3203

Dr. Antol has 24 years of experience directing nurse-managed primary care practices at the University of Maryland School of Nursing and teaching community/ public health nursing and health systems and heath policy, leadership, and quality improvement. She also has 23 years prior experience as a home health nursing group leader, supervisor, regional director and director of patient care, and critical care nurse.

Lisa Lisle, MSN, RN, CEN

Email: llisle@umm.edu

ORCID ID: 0000-0002-7286-6044

Ms. Lisle has 15 years of emergency nursing experience. She has functioned in the role of staff nurse, clinical nurse coordinator, nurse research intern, and interim nurse manager. She is currently the Clinical Nurse Coordinator at University of Maryland Shore Emergency Center at Queenstown, a rural, freestanding emergency department.

Wynne Aroom, MSN, RN-BC, CDCES, CWCN

Email: waroom@umm.edu

ORCID ID: 0009-0004-1248-0782

Ms. Aroom has 41 years of experience as a bedside nurse, 25 years as a nurse educator for various nursing programs and 20 years of experience as a certified diabetes educator. She is the wound care ostomy nurse at University of Maryland Shore Regional Health.

References

American Nurses Credentialing Center (ANCC). (2019). The 2019 *Magnet application manual.* ANCC.

American Nurses Foundation (ANF). (2021, October 13). *American Nurses Foundation mental health and wellness survey report*. American Nurses Foundation & Joslin. https://www.nursingworld.org/~4aa484/globalassets/docs/ancc/magnet/mh3-written-report-final.pdf

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288. https://doi.org/10.1177/1049732305276687

The Joint Commission. (2019, July 15). *Quick safety issue 50: Developing resilience to combat nurse burnout*. Newsletters. https://www.jointcommission.org/resources/news-and-multimedia/newsletters/newsletters/quick-safety/quick-safety-50-developing-resilience-to-combat-nurse-burnout/#.Y4VJ83bMI2w

Kay, M., Elkin, L., Higgins, J., & Wobbrock, J. (2021). *ARTool: R package for the aligned rank transform for nonparametric factorial ANOVAs*. https://dx.doi.org/10.1145/1978942.1978963

Lisle, L., Speroni, K. G., Aroom, W., Crouch, L., & Honigsberg, H. (2020). Differences in compassion satisfaction, compassion fatigue and work environment factors by hospital Registered Nurse types. *Online Journal for Issues in Nursing, 25*(3). https://doi.org/10.3912/OJIN.Vol25No03PPT44

Orru, G., Marzetti, F., Conversano, C., Vagheggini, G., Miccoli, M., Ciacchini, R., Panait, E., & Gemignani, A. (2021). Secondary traumatic stress and burnout in healthcare workers during COVID-19 outbreak. *International Journal of Environmental Research and Public Health, 18*(1), 337. https://doi.org/10.3390/ijerph18010337

Polit, D. F., & Beck, C. T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health, 29*(5), 489-497. https://doi.org/10.1002/nur.20147

Stamm, B. H. (2010). *The concise ProQOL manual: The concise manual for the professional quality of life scale* (2nd ed). Eastwoods, LLC. https://proqol.org/proqol-manual

Wobbrock, J., Findlater, L., Gergle, D., & Higgins J. (2011). *The aligned rank transform for nonparametric factorial analyses using only ANOVA procedures*. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '11), 143-146. https://doi.org/10.1145/1978942.1978963

World Health Organization (WHO). (2019, May 28). *Burn-out an "occupational phenomenon:" International classification of diseases*. News. https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases

Xie, W., Chen, L. Feng, F., Okoli, C. T. C., Tang, P., Zeng, L., Jin, M., Zhang, Y., & Wang, J. (2021). The prevalence of compassion satisfaction and compassion fatigue among nurses: A systematic review and meta-analysis. *International Journal of Nursing Studies, 120,* 103973. https://doi.org/10.1016/j.ijnurstu.2021.103973

Zipf, A. L, Polifroni, E. C., & Beck, C. T. (2022). The experience of the nurse during the COVID-19 pandemic: A global meta-synthesis in the year of the nurse. *Journal of Nursing Scholarship*, *54*(1), 92-103. https://doi.org/10.1111/jnu.12706

Related article

Lisle, L., Speroni, K. G., Aroom, W., Crouch, L., & Honigsberg, H. (2020). Differences in compassion satisfaction, compassion fatigue and work environment factors by hospital Registered Nurse types. *Online Journal for Issues in Nursing,* *25*(3). https://doi.org/10.3912/OJIN.Vol25No03PPT44

Related Articles

ARTICLE   July 18, 2022

Factors Affecting Hispanics' Access to Healthcare During the COVID-19 Pandemic: An Integrative Review

MaryAnn Perez-Brescia, PhD, RN

ARTICLE   April 03, 2023

Impact of a Mobile Meditation Application Among Hospital-Based Acute Care Nurses

Sherrel Smith, DNP, MEDSURG-BC, NE-BC

ARTICLE   April 14, 2022

Collaboration Among Providers to Treat COVID-19 Patients at Home Opens Beds for Those with More Serious Illness

Lisa Kidd MSN, RN, NEA-BC

ARTICLE   March 17, 2022

Covid-19 Vaccines and mRNA Technology: Not as New as Many Believe

Chad Rittle DNP, MPH, RN FAAOHN; Lora Walter, DNP, RNC-NIC

ARTICLE   May 31, 2021

Impact of COVID-19 Pandemic on Nurses: Where is the Financial Safety Net?

Linda Millenbach, Ph.D, RN; Frances E. Crosby, Ed.D, RN; Jerome Niyirora, Ph.D, MS, RHIA; Kathleen Sellers, PhD, RN; Rhonda Maneval, DEd, RN; Jen Pettis, MS, RN, CNE, WCC; Noreen B. Brennan, PhD, RN-BC, NEA-BC; Mary Anne Gallagher, DNP, RN, Ped-BC; Nancy Michela, DAHS, MS, RN; Deborah Elliott, MBA, BSN, RN

ARTICLE   May 31, 2021

Rebuilding Community-Based and Public Health Nursing in the Wake of COVID-19

Patricia Pittman, PhD, FAAN; Jeongyoung Park, PhD

ARTICLE   May 31, 2021

Assessing Patient Ability to Exercise COVID-19 Transmission Based Precautions: A Proposed Clinical Tool

Joel Becker, PhD, HSPP

ARTICLE   August 01, 2022

Older Nurses' Perceptions of Workforce Retention Facilitators and Barriers During the COVID-19 Pandemic

Francine H. Sheppard, PhD, RN, CNE, CDP; R. Turner Goins, PhD; Ratchneewan Ross, PhD, RN, FAAN; Kathleen Conte, PhD; Nicole Zonin, MSN, RN

ARTICLE   December 17, 2021

In Service to Others: APRNs as Serving Leaders During the COVID-19 Pandemic

Andrew R. Benson, DNP, MSN, CRNA, FAAN; Jessica S. Peters, DNP, MS, RN, ACNP-BC; Colleen Kennedy, DNP, CNM; Michelle Patch, PhD, MSN, APRN-CNS, ACNS-BC

ARTICLE   May 31, 2021

The Impact of COVID-19 on the Nursing Workforce: A National Overview

Garrett K. Chan, PhD, APRN, FAEN, FPCN, FCNS, FNAP, FAAN; Jana R. Bitton, MPA; Richard L. Allgeyer, PhD; Deborah Elliott, MBA, BSN, RN; Laura R. Hudson, MSN, RN; Patricia Moulton Burwell, PhD

ARTICLE May 31, 2021

Post COVID-19 Reimbursement Parity for Nurse Practitioners

Alycia Bischof, MSN, APRN, PNP-BC; Sherry A. Greenberg, PhD, RN, GNP-BC, FGSA, FAANP, FAAN

ARTICLE May 31, 2021

Through the Looking Glass: Reflections from Three School Nurses Amid the COVID-19 Pandemic

Catherine A. Grano, MSN, RN, CSN-NJ; Eileen M. Gavin, MSN, FNP-BC, NCSN; Robin Cogan, MEd, RN, NCSN

ARTICLE May 31, 2021

Vaccination During the COVID-19 Pandemic: What Nurses Need To Know

Blima Marcus, DNP, RN, ANP-BC, OCN; Lindsey H. Danielson, MS, FNP-C; Tamar Y. Frenkel, BSN, RN

ARTICLE May 31, 2021

COVID-19 in Communities of Color: Structural Racism and Social Determinants of Health

Lakisha D. Flagg, DrPH, RN, PHNA-BC; Lisa A. Campbell, DNP, RN, PHNA-BC, FAAN