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# COVID-19 Impact on Compassion Fatigue and Career Decisions among Registered Nurses

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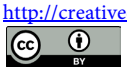



## Abstract

**Background:** Nurses have faced significant challenges related to coronavirus disease (COVID-19) and patient care. Compassion fatigue is of particular concern for registered nurses (RNs) as they are frequently exposed to tragedy in the workplace and are unable to remove themselves from their source of distress. **Aim:** The purpose of this study was to assess the impact of the COVID-19 pandemic on working newly licensed RNs, specifically focusing on compassion fatigue and career decisions. **Methods:** This descriptive, cross-sectional design used a convenience sample of newly licensed RNs and graduate student nurses. **Results:** Participants largely scored within moderate range under each ProQOL-5 subscale: compassion satisfaction (M = 34.4; SD = 8.4), burnout (M = 27.6; SD = 6.8), and secondary traumatic stress (M = 27.4; SD = 7.5). There was a statistically significant association between secondary traumatic stress and career decision ($p = 0.006$), such that participants with higher levels of secondary trauma more frequently indicated that they are considering or making active plans to resign or retire from the nursing profession. **Conclusion:** This study underscores the impact of COVID-19 on RNs' personal and professional lives. RNs were facing additional workplace stressors such as exposure to COVID-19 without correct protective equipment, understaffing, and high patient ratios. RNs may be vulnerable to secondary traumatic stress, which influences intentions to leave the profession in our study. **Implications:** Occupational health nurses should monitor and advocate for compassion fatigue prevention, safe patient ratios, and safe staffing to support and retain nurses in the workplace.

## Keywords

Compassion Fatigue, COVID-19, Registered Nurses, Career Decisions

## 1. Introduction

Since the onset of the coronavirus disease (COVID-19) pandemic, healthcare workers have faced significant challenges related to COVID-19 patient care, including detriments to their own physical and psychosocial health (Brahmi et al., 2020; Grossman & Choucair, 2019). Indeed, in the early months of the pandemic (January-April 2020) healthcare workers who cared for patients with COVID-19 in Italy reported higher levels of burnout, stress, anxiety, depression, and secondary trauma compared to healthcare workers without COVID-19 patients (Trumello et al., 2020). Compassion fatigue, is a cumulative process characterized by the exhaustion and emotional withdrawal experienced in relation to increased institutional workload and stress (American Institute of Stress, 2017; Lombardo & Eyre, 2011). Emotional, physical, and mental exhaustion all contribute to compassion fatigue (American Institute of Stress, 2017). Compassion fatigue may also produce debilitating and far-reaching consequences such as self-isolation and impaired behavior and judgment (American Institute of Stress, 2017). As healthcare workers are repeatedly exposed to suffering and experiences of patients and families, they are particularly prone to burnout (Peters, 2018).

Compassion fatigue is common in the nursing profession because nurses are frequently exposed to tragedy and because nurses are unable to remove themselves from their source of distress (Elshaer et al., 2018; Peters, 2018; Mason et al., 2014; Sorenson et al., 2016). Symptoms of compassion fatigue include decreased energy, lack of empathy, feelings of disconnectedness, headaches, and insomnia (Peters, 2018). Consequences of compassion fatigue, if left untreated, can impact an individual's health and well-being, lead to poor nursing judgement, and increase work errors (Peters, 2018; Talaee et al., 2020). To compound the issues surrounding compassion fatigue, the COVID-19 pandemic created increased amounts of stress and burden on nurses, especially those involved in direct patient care (Labrague & De Los Santos, 2021; Smart et al., 2022). The pandemic produced an increased risk for the development of compassion fatigue in nurses, thus compromising patient safety and quality of care.

Prior to the COVID-19 pandemic, 53% of nurses reported experiencing compassion fatigue (Zhang et al., 2018). With compassion fatigue already significantly impacting the nursing profession pre-pandemic, it is important to understand if COVID-19 has impacted the rates of burnout in the nursing profession. A recent study that aimed to examine the mental health of nurses working frontline during the COVID-19 pandemic in China revealed that nurses faced a variety of mental health challenges-two of the most prevalent being burnout and fear (Hu et al., 2020). Hu et al. (2020) also indicated that the COVID-19 pandemic has led to an increase in both admissions and presentations to hospitals, which increases the workload for nurses. Increases in workload only further exacerbate the everyday work-related stressors facing nurses. Research has also indicated that each additional patient added to a nurse's workload increases the incidence of burnout by 23 percent (Aiken et al., 2002). It is noted that direct

care registered nurses (RNs) indicated that they experiences high patient workloads and faced a lack of supplies (Lasater et al., 2021; Smart et al., 2022). Almost half of the nurses reported unfavorable patient and nurse outcomes at their hospitals (Lasater et al., 2021). Twenty-five percent of the nurses that completed the survey reported that they planned on leaving their job within a year and close to half were experiencing high levels of burnout (Lasater et al., 2021). In nursing, compassion fatigue is strongly associated with intentions to leave the profession (Sung et al., 2012). Added stressors associated with the pandemic, such as increased patient workload and a lack of supplies, are likely to increase the rates of compassion fatigue in the nursing profession as well as potentially influence nurses to resign or retire from their position. It is important to understand the prevalence of compassion fatigue among RNs during the COVID pandemic and to explore how employers can aid them in prevention and recovery.

The purpose of this study was to assess the impact of the COVID-19 pandemic on working newly licensed Registered Nurses, working RNs, and graduate student RNs, specifically focusing on compassion fatigue and career decisions and the intersection between these two factors. Our study is unique in that if newly licensed nurses are experiencing compassion fatigue and contemplating leaving the career field, then the impact of the COVID pandemic and future strains and stressors of epidemics on our health care system and its workers needs local, state, and national attention. Given the frequent work and life challenges facing RNs, along with additional stressors from the COVID-19 pandemic, we hypothesized that compassion fatigue would be amplified. We also expected to observe an association between compassion fatigue and career decisions.

## 2. Methods

This study implemented a descriptive, cross-sectional design using a convenience sample of licensed RNs who were pursuing a baccalaureate degree or graduate degree in nursing at a university in the Northwest region of the United States.

**Participants.** A survey was sent to 131 potentially eligible licensed RNs based on enrollment in an RN-BSN or graduate program over the past two years. Inclusion criteria was based on current or recent completion of baccalaureate or graduate nursing degree and currently employed as an RN or having been employed as an RN in the past two years.

**Ethical Approval.** The university's Institutional Review Board deemed this study as exempt from review. A consent form was included in the electronic survey which describes human subjects' rights, including the study purpose, activities, duration, risks, benefits, and other important information. Participants indicated their consent by clicking a statement that they agreed to participate and proceeded to the survey.

**Data Collection and Measures.** A 15-minute survey was developed about per-

sonal and workplace experiences of RNs during the COVID-19 pandemic to assess the impact of COVID-19 on working nurses, focusing on compassion fatigue and career decisions. The survey was deployed via email using the university-affiliated version of the Qualtrics© Core XM Survey platform (Qualtrics, 2020, Provo, UT). Respondents were sent three weekly reminders to complete the survey. Consent was obtained prior to participants beginning the Qualtrics survey with all results being anonymous and not linked to their university or personal emails.

The primary measure of compassion fatigue in this study was the Professional Quality of Life Scale-V (ProQOL-5) tool. The ProQOL-5 tool, developed in 1995 and last updated in 2021, provides a measure of the negative and positive effects of one's professional quality of life and is considered a valid and reliable measure of compassion satisfaction and compassion fatigue (Stamm 2005, 2009). The ProQOL-5 consists of 30 self-report items across three sub-scales (10 items each): 1) compassion satisfaction; 2) compassion fatigue-burnout; and 3) compassion fatigue-secondary traumatic stress. All items are evaluated using a 5-point Likert scale (1 = Never to 5 = Very often) and several questions are reverse-scored.

The survey also included questions related to self-care (3), career decisions (4), work and personal life stressors (2), COVID-19 safety concerns for self and family (3), direct care with COVID positive patients (4) and employer COVID policies for exposure and testing availability (6). Additional COVID-related questions pertained to vaccination status (3), and availability of PPE at work (1).

Respondents were also asked to recall and report their emotional status across four time periods that corresponded with COVID-19 infection and hospitalization surge rates. The first was the early pandemic phase when PPE and communication messages were changing rapidly, and much was unknown about the virus (March 2020-August 2020). Next, the mid-pandemic time period (September 2020-March 2021) occurred when the national focus was on hospitalizations and mortality rates and vaccines were being developed and then available. A third time period (April 2021-August 2021) correlated with the emergence of the Delta variant and portions of the country were vaccinated, PPE was more available, and more was known about treatments and nursing care. Finally, the fourth time period (September 2021-December 2021) corresponded with emergence of the Omicron variant, a percentage of the population remained unvaccinated due to age or vaccine hesitancy or resistance, misinformation was more prevalent, and promising medications were being identified to reduce mortality or hospitalizations. Participants could choose from the following list of emotions for each period of time: anxious, fearful, angry, hopeful, confused, frustrated, sad, or other. These emotion categories were based on reported responses in media, interviews featured on national news, and common human responses to any disaster of magnitude. Respondents could choose as many or as few emotions as they would like.

Demographic data collected in the survey included age (20 - 59 in 10 year in-

crements), gender identity (Man, Woman, Non-binary, Transgender, additional gender category/identity, prefer not to answer), number of years as an RN, years working as an RN, employment status (currently employed or having been employed over past two years), work setting (e.g., In-patient hospital; other), population working with (adults, pediatrics, both, other), area of specialty, and state of residence.

**Analysis.** Data were summarized using descriptive statistics including means, standard deviations, frequencies, and percentages. The primary outcomes for this study include the summed, total score for all items included in the ProQOL-5 and summed scores for each subscale. Associations between career decision and ProQOL-5 subscale scores were assessed using Fisher's Exact Test. Missing data was handled per the ProQOL-5 manual suggestion to enter zero for missing data on subscale items. All analyses were performed using Microsoft Excel, IBM SPSS (Version 27), and Stata MPv1. A $p$-value < 0.05 was considered statistically significant.

## 3. Results

Forty-eight (36.6%) of 131 RNs responded to the survey invitation over a four-week period from January through February 2022. Two respondents were deemed not eligible to participate from the screening questions and two did not begin the survey; these four were excluded. Five surveys were incomplete but included sufficient data to warrant inclusion in the final respondent sample. Thus, data from a total of 44 respondents were included in the analysis

Overall, most respondents were female (86.4%) and had less than five years of experience in the nursing field (93.2%) (Table 1). Seventeen (38.6%) respondents were between the ages of 22 - 29 and 30 - 39 years, equally. Most respondents (n = 34; 79.1%) worked in an inpatient hospital setting and reported residing in Washington (n = 40; 90.9%).

Regarding COVID-19 testing, vaccination and exposure (Table 2), 34 (77.3%) respondents stated that they had been exposed to a confirmed positive case of COVID-19 through work. Half of the respondents (n = 22) reported that they had been exposed to COVID-19 for longer than 15 minutes at work without proper personal protective equipment. Thirteen individuals reported testing positive for COVID-19 at some point, and of those, 6 (46.1%) participants could confirm that they acquired the infection through work. Thirty-eight (86.4%) respondents reported caring for patients who were currently being ruled out for COVID-19.

To examine the impact of the pandemic on personal and professional life, this study asked participants about having children, stable childcare, fears of bringing home the COVID-19 virus, work status, financial difficulties caused by the pandemic, and whether they considered resigning or retiring (Table 3). Among the 39 participants who responded to this section of the survey, 19 (48.7%) reported having children. Most (68.4%) respondents with children felt that they have had

**Table 1.** Self-reported demographic characteristics of survey respondents, Northwest, January 2022 (N = 44).

| | Count | % |
|---|---|---|
| Sex | | |
| Female | 38 | 86.4 |
| Male | 4 | 9.1 |
| Prefer not to answer | 2 | 4.5 |
| Age (years) | | |
| 20 - 29 | 17 | 38.6 |
| 29 - 39 | 17 | 38.6 |
| 40 - 49 | 7 | 15.9 |
| 50 - 59 | 3 | 6.9 |
| RN Experience (years) | | |
| <6 months | 2 | 4.5 |
| <1 year | 9 | 20.5 |
| 1 - 5 years | 30 | 68.2 |
| 6 10 years | 1 | 2.3 |
| >10 years | 2 | 4.5 |
| Employment Setting | | |
| Inpatient hospital | 34 | 79.1 |
| Other* | 9 | 20.8 |
| State of Residence | | |
| Washington | 40 | 90.9 |
| Oregon | 3 | 6.8 |
| Alaska | 1 | 2.3 |

*Long term care/outpatient/primary care. **Missing Data Excluded (N = 39).

**Table 2.** Occupational COVID-19 exposures and prevention practices among licensed, employed RN students in the Northwest, January 2022 (N = 44).

| | Count | % |
|---|---|---|
| Ever tested positive for COVID-19? | | |
| Yes | 13 | 29.5 |
| No | 28 | 63.6 |
| N/A (never tested) | 2 | 4.6 |
| Prefer not to answer | 1 | 2.3 |
| Tested for COVID-19 at work | | |
| Yes | 12 | 27.3 |
| No | 30 | 68.2 |
| Prefer not to answer | 2 | 4.5 |

**Continued**

| | | |
|---|---|---|
| Infected with COVID-19 at work* | | |
| Yes | 6 | 46.1 |
| No | 4 | 30.8 |
| Unknown | 3 | 23.1 |
| Employer requirement to self-quarantine* | | |
| Yes, only if symptomatic | 4 | 30.8 |
| Yes, regardless of COVID symptoms | 8 | 61.5 |
| No | 0 | - |
| Prefer not to answer | 1 | 7.7 |
| Offered COVID vaccine/booster by employer | | |
| Yes | 40 | 90.9 |
| No | 3 | 6.8 |
| Prefer not to answer | 1 | 2.3 |
| Received vaccine/booster from employer** | | |
| Yes | 19 | 51.4 |
| No | 15 | 40.5 |
| Prefer not to answer | 1 | 2.7 |
| Missing | 2 | 5.4 |
| Received vaccine/booster from non-employer source*** | | |
| Yes | 14 | 70.0 |
| No | 6 | 30 |
| Exposure to confirmed positive cases at work | | |
| Yes | 34 | 77.3 |
| No | 9 | 20.5 |
| N/A | 1 | 2.2 |
| Exposed to COVID > 15 minutes without proper PPE | | |
| Yes | 22 | 50.0 |
| No | 17 | 38.6 |
| Unknown | 5 | 11.4 |
| Currently working with patients not infected with COVID | | |
| Yes | 41 | 93.2 |
| No | 3 | 6.8 |
| Currently working with patients being ruled out for COVID | | |
| Yes | 38 | 86.4 |
| No | 4 | 9.1 |
| Prefer not to answer | 2 | 4.6 |

*Responses pertain only to participants who indicated they had tested positive for COVID-19 (n = 13). **Responses pertain only to participants who indicated they were offered COVID vaccine/booster from employer (n = 37). ***Responses pertain only to participants who indicated they were not offered COVID vaccine/booster from employer or selected prefer not to answer (n = 20).

Table 3. Impact of COVID-19 on personal & professional life of licensed, employed RN students in the Northwest, January 2022 (N = 39).

| | Count | % |
|---|---|---|
| Has children | | |
| Yes | 19 | 48.7 |
| No | 20 | 51.3 |
| Stable childcare* | | |
| Yes | 11 | 57.9 |
| No | 8 | 42.1 |
| Less time with children* | | |
| Yes | 13 | 68.4 |
| No | 5 | 26.3 |
| Missing | 1 | 5.3 |
| Fear of bringing COVID-19 home | | |
| Yes | 30 | 76.9 |
| No | 8 | 20.5 |
| N/A | 1 | 2.6 |
| Since pandemic: Maintain FT/PT work | | |
| Yes | 36 | 92.3 |
| No | 3 | 7.7 |
| Considered resigning/retiring | | |
| Yes | 13 | 33.3 |
| No | 24 | 61.5 |
| Prefer not to answer | 2 | 5.2 |
| Made active preparations to resign or retire** | | |
| Yes | 6 | 46.2 |
| No | 7 | 53.8 |
| Changed Position or Units | | |
| Yes | 9 | 23.1 |
| No | 30 | 76.9 |
| Spent time addressing emotional/physical health | | |
| Yes | 19 | 48.7 |
| No | 20 | 51.3 |
| Sought counseling from licensed professional for work-related stressors | | |
| Yes | 8 | 20.5 |
| No | 31 | 79.5 |

**Continued**

| | | |
|---|---|---|
| Financial hardships as a result of the pandemic | | |
| Yes | 12 | 30.8 |
| No | 25 | 64.1 |
| Prefer not to answer | 2 | 5.1 |

*Responses pertain only to participants who indicated they had children (n = 19). **Among respondents who indicated that they were considering resigning/retiring from RN position (n = 13).

less time to spend with their children since the pandemic started. Thirty (76.9%) participants expressed the fear of bringing the COVID-19 virus from work into their home and potentially infecting their families. Of 13 (33.3%) nurses who stated that they have thought about resigning or retiring due to the pandemic, 6 (46.2%) had actively made plans to pursue this change in career. Nine (23.1%) of nurses had already changed positions or units because of the pandemic. Since the pandemic, 20 (51.3%) nurses felt that they have not had time to address their physical and emotional needs and 8 (20.5%) nurses actively sought counseling from a licensed professional for work-related stressors.

Participants completed the ProQOL-5 tool which evaluates compassion fatigue via three subscales: compassion satisfaction, burnout, and secondary trauma (Table 4). Participants largely scored within moderate range under each subscale. Nearly one quarter of respondents scored in the high range for compassion satisfaction. For burnout and secondary trauma, few if any respondents scored in the high range (Table 4). Subscale scores are not mutually exclusive in that nurses can have compassion satisfaction, but also experience levels of burnout and secondary trauma.

An examination of the association between career decisions and ProQOL-5 subscale scores indicated no statistically significant difference between career decision and compassion satisfaction, nor between career decision and burnout (Table 5). However, there was a significant association between secondary trauma and career decision such that thirty percent of participants experiencing low to moderate secondary trauma have considered leaving the career field. Among respondents who indicated they considered resigning or retiring, all had moderate scores for the ProQOL-5 burnout subscale, compared to 56.5% of respondents who did not consider resigning or retiring (Fisher's Exact Test, $p = 0.006$).

This study also asked participants to respond to a series of reactions or responses to the pandemic over time that reflected pivotal points for frontline workers. Figure 1 displays respondents' recollection of emotional responses during each period of time. From March 2020 to December 2021 anxiety and fear trended down, then increased slightly again during the omicron surge. Participants stated that as the pandemic progressed, they felt more anger. The data highlights the peak of participants feeling angry was during the September 2021-December 2021 period. Feelings of frustration seemed to increase as the pandemic continued.

**Table 4.** Distribution of ProQOL-5 subscales of licensed, employed RN students in the Northwest, January 2022.

| | Count | % | Mean | Standard Deviation |
|---|---|---|---|---|
| **Compassion Satisfaction** | | | | |
| Overall | 39 | - | 34.4 | 8.4 |
| Low (≤22) | 3 | 7.5 | 17.3 | 3.8 |
| Moderate (23 - 41) | 28 | 70.0 | 32.8 | 5.1 |
| High (≥42) | 9 | 22.5 | 45.2 | 2.4 |
| **Burnout** | | | | |
| Overall | 41 | - | 27.6 | 6.8 |
| Low (≤21) | 10 | 24.4 | 18.9 | 3.4 |
| Moderate (23 - 41) | 31 | 75.6 | 30.5 | 4.9 |
| High (≥42) | 0 | 0 | 0 | 0 |
| **Secondary Trauma** | | | | |
| Overall | 36 | - | 27.4 | 7.5 |
| Low (≤22) | 12 | 33.3 | 18.4 | 2.8 |
| Moderate (23 - 41) | 23 | 63.9 | 31.5 | 3.8 |
| High (≥42) | 1 | 2.7 | 42 | 0 |

**Table 5.** ProQOL-5 subscale by resignation/retirement of licensed, employed RN students in the Northwest, January 2022.

| | Did not consider resigning/retiring | | Considered resigning/retiring | | *p*-value |
|---|---|---|---|---|---|
| | Count | % | Count | % | |
| **Compassion Satisfaction** | | | | | 0.313 |
| Low (≤22) | 1 | 4.6 | 1 | 7.7 | |
| Moderate (23 - 41) | 14 | 63.6 | 11 | 84.6 | |
| High (≥42) | 7 | 31.8 | 1 | 7.7 | |
| Total | 22 | 100.0 | 13 | 100.0 | |
| **Burnout** | | | | | 0.248 |
| Low (≤22) | 10 | 43.5 | 0 | 0 | |
| Moderate (23 - 41) | 13 | 56.5 | 13 | 100.0 | |
| High (≥42) | 0 | 0 | 0 | 0 | |
| Total | 23 | 100.0 | 13 | 100.0 | |
| **Secondary Trauma** | | | | | 0.006 |
| Low (≤22) | 9 | 42.9 | 2 | 18.2 | |
| Moderate (23 - 41) | 12 | 57.1 | 9 | 81.8 | |
| High (≥42) | 0 | 0 | 0 | 0 | |
| Total | 21 | 100.0 | 11 | | |

P-value represents results from Fisher's Exact Test. Columns may not sum to totals presented in Table 4 due to item non-response for resignation/quitting question.

| Start | March 2020 | September 2020 | April 2021 | September 2021 |
|---|---|---|---|---|
| End | August 2020 | March 2021 | August 2021 | December 2021 |
| Anxious | ↑ 64.1% | ↑ 64.1% | ↘ 41.0% | ↗ 48.7% |
| Fearful | ↗ 56.4% | ↘ 33.3% | ↓ 20.5% | ↓ 25.6% |
| Angry | ↓ 23.1% | ↓ 30.8% | ↘ 35.9% | ↘ 43.6% |
| Hopeful | ↘ 38.5% | ↗ 48.7% | ↗ 46.2% | ↘ 38.5% |
| Confused | ↘ 35.9% | ↓ 28.2% | ↓ 30.8% | ↓ 28.2% |
| Frustrated | ↗ 51.3% | ↑ 58.9% | ↑ 69.2% | ↑ 64.1% |
| Sad | ↓ 28.2% | ↘ 38.5% | ↘ 33.3% | ↓ 25.6% |

**Figure 1.** Heatmap illustrating emotional responses associated with four time periods of the COVID-19 pandemic among licensed, employed RN students in the Northwest, January 2022 (N = 39). Values indicate percentage of respondents endorsing the emotion at each time period. Columns do not sum to 100% as emotional categories were not mutually exclusive. Colors and arrows indicate trends.

Confusion relatively maintained the same throughout the pandemic. Participants' feelings of sadness peaked during the middle of the pandemic.

## 4. Discussion

The purpose of this study was to examine the impacts of the COVID-19 pandemic on RNs' levels of compassion fatigue as well as to explore if the pandemic has resulted in nurses making decisions to resign or retire from the nursing profession. Nurses make up the largest component of healthcare workers and play a critical role in patient care (Shah et al., 2021). Healthcare is already facing a nursing shortage, which is likely to exacerbated by the pandemic (Turale & Nantsupawat, 2021) as nurses continue to experience additional stressors., The present study found that COVID-19 has placed immense stress on nurses, leading to a moderate level of compassion fatigue, inclinations to leave the nursing profession, insufficient time for self-care practices, under-staffing issues, and many other stressors.

Survey participants were 44 currently employed RNs who were either students or former graduates of an RN-baccalaureate or graduate nursing program. Study data were collected at a marked period of time during theCOVID-19 pandemic where RNs had experienced a Delta variant surge in the summer and fall of 2021 and an omicron variant surge in late fall 2021 and winter 2021/2022. These RNs were likely to have been impacted with long shifts, additional work hours, vulnerable to exposure to the COVID-19 virus or managing family member's exposure, and coping with disruptions in normal life routines.

The predominantly female sample (86.4%) of nurses in this study reflects the composition of nurse's both state and nation-wide. With over 4.1 million nurses in the workforce, women make up 88% - 90% and 68.4% are White (Non-Hispanic) (U.S. Department of Health & Human Services, 2019; National Council of State Boards of Nursing, 2020).

Participants were asked questions related to COVID-19 and the workplace in-

cluding vaccines, exposure, and testing. Over 75% (77.3% had cared for patients who had been confirmed positive for COVID-19. Concerningly, half (50%) of participants were exposed for longer than 15 minutes to a patient who had tested positive for COVID-19 without the proper personal protective equipment. Of nurses who had ever experienced a positive COVID-19 test result at the time of the survey, nearly half (46.1%) identified that they contracted COVID-19 from their place of employment. These data reinforce existing evidence that nurses are incurring additional and unique workplace stressors due to the pandemic. Not only are nurses caring for patients who have contracted COVID, but they have been continuously exposed to the virus, often without the correct protective equipment. Pandemic specific workplace stressors represent factors that may contribute to compassion fatigue in nurses. Most (90.9%) employers did offer the COVID-19 vaccine to employees as a measure of safety.

Predicting when and why nurses intend to quit their employment has been a steady subject of research worldwide (Nashwan et al., 2021). Recent studies have suggested that between 17-54% of all U.S. nurses have an intention of leaving the workplace and that there are direct correlations between intentions and actual quitting (Viklund, 2017). Since the pandemic additional stressors like fear and safety concerns have increased the growing shortage of nurses. Data from a recent study showed that 31.5% of nurses identified burnout as being the main factor for leaving their job (Shah et al., 2021). This study also identified that overtime, under-staffing, and a stressful work environment were three of the main factors that contributed to nurse's desire to leave their profession (Shah et al., 2021). Many of the nurses in the present study have only been in the profession for five years or less, yet more than a third (35.1%) had considered resigning or retiring due to the pandemic. And of those individuals, almost half (46.2%) had actively made plans to resign or retire, such as interviewing for another position or meeting with a financial advisor. These results suggest that pandemic-related workplace stressors have placed such immense pressure on nurses that they are accelerating career decisions or contemplating career decisions early. Further, half (51.3%) of study participants stated that they have not had time to address their own emotional and physical needs during the pandemic, indicating that nurses are having to push their own needs to the side to accommodate work demands. The major themes that were identified as professional stressors because of the pandemic were under-staffing, lack of PPE, high patient load, and a lack of consistency with protocol. The data from the present study suggests an increase in nurse's desire to leave the nursing profession compared to current research which stated that pre-pandemic, one in four nurses were planning to leave their job within a year due to high patieint care loads, and lack of supplies (Lasater et al., 2021; Galanis et al., 2021).

The ProQOL-5 was used as a measure of compassion fatigue in the present study. Compassion satisfaction, one of the ProQOL-5 subscales, is related to the pleasure that one obtains from their profession (Stamm, 2005, 2009). Higher scores on the compassion satisfaction scale represent a greater satisfaction from

being a nurse and providing care to patients, thus nearly all study participants appear to be satisfied in the professional role of nursing as 92.5% scored moderate to high (23 - 42) on compassion satisfaction. Participants who scored in the low range (≤22; 7.5%) likely experience difficulty in their jobs (Stamm, 2005, 2009). These results are encouraging as they suggest most of the RNs surveyed still receive satisfaction from their professional role as a nurse overall, despite stressors of the pandemic.

Burnout, the second subscale of the ProQOL-5, is associated with worse job performance as well as feelings of hopelessness (Stamm, 2005, 2009). The higher a participant scores on the burnout scale the more at risk they are for experiencing burnout. Scoring high on burnout (≥42) can indicate a need for an individual to reflect on why they do not feel effective in their position (Stamm, 2005, 2009). Conversely, scoring low on burnout (≤22) indicates participants having positive feelings about their workplace, thus they are at lower risk for experiencing burnout (Stamm, 2005, 2009). Although no participants scored highly on the burnout scale in this study; the majority (75.6%) of participants scored moderately, putting them at a moderate risk for experiencing burnout in their role as a nurse. As some study participants reported gaps in safety and support in the workplace, this result aligns with the contributing factors to burnout identified by the ProQOL-5 manual: high-workload and not receiving proper support in their work environment (Stamm, 2005, 2009).

Secondary traumatic stress, the third subscale of compassion fatigue, is an indicator of feelings that are associated with exposure to traumatic or stressful events in the workplace (Stamm, 2005, 2009). Though not a diagnostic tool, higher scores on the secondary traumatic subscale may indicate symptoms of trauma and that individuals may want to examine their feelings about their work and the stressful and traumatic events that they have faced (Stamm, 2005, 2009). Symptoms of secondary traumatic stress can include fear, insomnia, and avoidance of triggers related to work stressors (Stamm, 2005, 2009). Approximately two-thirds (63.9%) of participants scored moderately on secondary traumatic stresses, and one participant (2.7%) even scored in the high range of this scale. Coupled with the moderate level of burnout that our sample reported, these results illustrate the psychosocial stress that nurses are experiencing during the pandemic, and underscore the importance of implementing safety and supportive measures for RNs in the workplace to prevent compassion fatigue.

This study also aimed to determine if there was an association between compassion fatigue and career decisions and ProQOL-5 subscales. Based on the results, there was a statistically significant association between career decision and secondary traumatic stress ($p = 0.006$). These results suggest that nurses who are experiencing burnout are considering, or making active plans, to resign or retire from the nursing profession. Burnout significantly increases medical errors as well as decreases the quality of healthcare provided (Talaee et al., 2020). Patient safety is of foremost importance, and with burnout significantly decreasing the quality of care, it is crucial to prevent burnout in the nursing profession. Patient

safety also suffers because of burnout. Burnout has been linked to poorer patient safety and increased errors, which also jeopardizes the safety of patients (Hall et al., 2016). Currently, healthcare is experiencing a nursing shortage (Haddad et al., 2020) and with the added workload of the pandemic, it is likely that the stability of the nursing workforce will decline (Shah et al., 2021). With burnout contributing to nurses deciding to resign or retire from their RN positions, it is necessary to further prevent burnout in nurses to retain nurses in the workforce.

Another aspect of this research examined the emotional responses throughout the different phases of the pandemic. From March 2020 to December 2021, the results of this study suggested that the participants feelings shifted from feeling fearful to feeling angry as the pandemic continued. Participants also reported feelings of hopefulness at the beginning of the pandemic, which then shifted to feelings of frustration. These findings are supported by a recent study that established that emotions like anger and disappointment increased after the initial period of the pandemic (Su et al., 2021). Another study found that feelings of fear were common at the beginning of the pandemic, but decreased as the pandemic continued (Chew et al., 2020).

A limitation to this study was the small sample size. Although there were 131 potential participants, 44 responded to the survey, even with multiple weeks of notification reminders. Due to the final sample size, the analysis may be underpowered. Another limitation to this study was the lack of representative data, being the sample size only included nurses in three states in the Northwest and mostly included nurses who had less than five years' experience. Future research should be conducted to examine the impact of COVID-19 on the prevalence of compassion fatigue as well as how the pandemic has influenced career decisions with a more substantial sample size. Future research should also aim to understand what strategies employers could implement that could potentially minimize compassion fatigue in RNs during a pandemic or other disaster situations.

## 5. Conclusion

With nurses and other healthcare workers on the front line of care, it is important to address their ability to provide compassionate care during a pandemic, as well ensuring that they feel safe at work. Overall, this study suggests that COVID-19 has impacted participants significantly in both their personal and professional lives. Results of this study suggest that nurses have been facing additional workplace stressors due to the pandemic such as being exposed to COVID-19 without correct protective equipment, under-staffing, and high patient ratios. Another finding of this study was that many participants scored moderately on the burnout section of the ProQOL-5, placing them at a moderate risk for experiencing burnout in their role as a nurse and likely contributes to their desire to leave the nursing profession.

Overall, the results of this study highlight the significance of preventing compassion fatigue and ensuring that nurses, and other healthcare workers, can provide care in a safe and supportive environment during a pandemic or other dis-

aster situations. Nurses should be aware of the complication of compassion fatigue and its impact on their career and watch for warning signs in themselves and their co-workers. Employers of nurses should continue to monitor and advocate for compassion fatigue prevention, safe patient ratios, and safe staffing to retain nurses in the workplace. The pandemic has significantly impacted the nursing profession, so it is crucial to provide support and prevent compassion fatigue for nurses.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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