

A Preliminary Analysis of Compassion Satisfaction and Compassion Fatigue With Considerations for Nursing Unit Specialization and Demographic Factors

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ABSTRACT

Compassion fatigue (CF), or vicarious traumatization, is a state of physical/emotional distress that results from caring for those experiencing pain. We sought to characterize levels of CF in intensive care unit (ICU) and oncology nursing populations with subanalyses comparing specific personal/professional demographic factors. The Professional Quality of Life (ProQOL) scale, a validated tool for assessing CF, burnout (BO), and compassion satisfaction (CS), was distributed to the ICU and oncology divisions of a community hospital. Demographic data and ProQOL scale scores were collected and compared within specialty and gender subgroups. Two-sample *t* tests and regression analyses were used to compare groups. Statistical significance was defined as $p < .05$. A total of 86 nurses submitted completed surveys able to be analyzed. Levels of CS were significantly lower ($p = .023$) and levels of BO were significantly higher ($p = .029$) in ICU nurses than in oncology nurses. Male nurses exhibited significantly higher CS ($p = .001$) and significantly lower BO ($p = .021$) and CF ($p = .014$) than female nurses. Intensive care unit nurses and female nurses from both ICU and oncology specialties may be at increased risk for developing a poorer overall ProQOL and CF.

Key Words

Burnout, Compassion Fatigue, Compassion Satisfaction, Professional Quality of Life

Repeated exposure to patients experiencing significant pain and suffering can induce a debilitating state, known as compassion fatigue (CF), in the care provider (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010; Potter et al., 2010; Stamm, 2010). Coined in 1992 by Joinson while investigating burnout (BO) in emergency department nurses, CF is a multifaceted phenomenon resulting in physical, emotional, and spiritual exhaustion (Joinson, 1992). Compassion fatigue comprises one component of the overall Professional Quality of Life (ProQOL) Scale score; other measures include compassion satisfaction (CS) and BO. Compassion satisfaction is defined as the pleasure found in the work one performs. Burnout is a progressively worsening condition whereby one has difficulties performing his or her job effectively due to feelings of hopelessness and a nonsupportive environment (Professional Quality of Life Elements Theory and Measurement, 2016). Both difficult to identify and even more difficult to combat, this cost of caring for others not only negatively impacts the personal/professional quality of life of nurses but also compromises patient care, as nurses may become desensitized toward future patient suffering (Joinson, 1992). As deteriorating job performance, insomnia, low morale, and a decline in quality of medical care have been associated with a poor professional quality of life (Maslach, Jackson, & Leiter, 1996; Sargent, Sotile, Sotile, Rubash, & Barrack, 2004), characterizing and addressing CF in nursing populations are necessary to ensure that both patients and nurses are receiving optimal care.

In 1995, an assessment tool known as the Professional Quality of Life Scale was developed to quantify levels of CF and CS in care providers. This 30-item self-report, which is the most widely used, validated measure of professional quality of life, is a common assessment tool for measuring levels CS, BO, and CF. The composite score for CF provides a measure of stress and exhaustion associated with job demands (Shanafelt et al., 2012; Stamm, 2010).

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Although many studies have examined levels of CF and CS in nursing populations using validated measurements tools (Aycock & Boyle, 2009; Coetzee & Klopper, 2010; Figley, 1995; Hooper et al., 2010; Joinson, 1992; Lombardo & Eyre, 2011; Potter et al., 2010; Wenzel, Shaha, Klimmek, & Krumm, 2011), few investigations have considered the implications of personal and professional demographic factors on these outcomes (Hunsaker, Chen, Maughan, & Heaston, 2015), specifically nursing unit specialization and gender. Joinson (1992) coined the term CF, with Figley (1995), Coetzee and Klopper (2010), and Lombardo and Eyre (2011) continuing to provide general descriptions of the condition over the succeeding two decades (Coetzee & Klopper, 2010; Figley, 1995; Joinson, 1992; Lombardo & Eyre, 2011); Hooper et al. (2010) reported that 82% of emergency nurses had moderate to high levels of BO, and 86% had moderate to high levels of CF. They did not find statistically significant differences in rates of CS, BO, and CF between nurses from emergency medicine, nephrology, oncology, and intensive care (Hooper et al., 2010). Potter et al. (2010) reported that inpatient nurses had significantly lower CS than their outpatient counterparts (Potter et al., 2010). Hooper et al. (2010) and Potter et al. (2010) both used ProQOL to conduct their studies (Hooper et al., 2010; Potter et al., 2010). Wenzel et al. (2011) investigated the prevalence of CF in oncology nurses whereas Aycock & Boyle (2009) analyzed potential interventions in this same population (Aycock & Boyle, 2009; Wenzel et al., 2011). Noticeably, current literature is relatively scattered and especially lacking in regard to aforementioned personal and professional demographic factors (Hunsaker et al., 2015).

The purpose of this investigation was to add to the existing literature on this topic through a comprehensive analysis of professional quality of life in a combined population of intensive care unit (ICU) and oncology nurses. Utilizing the ProQOL survey assessment tool, the investigators sought to characterize levels of CS, BO, and CF in a community hospital nursing population using subanalyses to compare nursing specialty, gender, and other personal/professional demographic factors. It was hypothesized that ICU nurses would experience significantly higher levels of BO and CF and lower levels of CS than oncology nurses. In addition, the investigators hypothesized that female nurses from both specialties would exhibit higher levels of BO and CF than male nurses, with similar levels of CS.

METHODS

Following review and approval by the Institutional Review Board of Lancaster General Health, a link to a three-part, anonymous survey was distributed via employee electronic mail services to the intensive care and oncology nursing staff of a MAGNET-designated, community hospital. Part I provided prospective participants with

information on the purpose of the investigation, detailing the ProQOL Scale tool, and its subcomponents: CS, BO, and CF. Before proceeding to Part II, potential participants were prompted to complete a consent statement asking whether they wanted to participate in the investigation, with the understanding that participation is voluntarily and withdrawing from the study at any time, without penalty or consequence, is permitted. Nurses who chose to participate in the investigation were then directed to Part II of the survey that queried participant's demographic information including age, gender, number of children, education, unit specialization, employment status (full time, part time, per diem), years of experience, primary work shift, and availability of employer-provided emotional interventions. Part III administered the 30-item, validated ProQOL Scale tool (Version 5; Stamm, 2010) to quantify levels of CS, BO, and CF. Participants were instructed to respond on the basis of how frequently they experienced each ProQOL Scale item in the past 30 days. The survey remained accessible to potential participants for 2 months following the initial recruitment e-mail.

Data Collection and Statistical Analysis

Study data were collected and managed using REDCap (Research Electronic Data Capture) electronic data capture tool. Following the 2-month participant recruitment/data collection period, participant responses were extracted from REDCap and analyzed using statistical analysis software. Respondents who submitted incomplete surveys, missing one or more required fields of the ProQOL Scale tool, were excluded from analysis. Continuous variables were summarized as means and standard deviations and categorical variables as counts and percentages. Raw measures of CS, BO, and CF were calculated in accordance with the 2010 Concise ProQOL Manual guidelines (Stamm, 2010). Scores for each of the three measures ranged from 10 to 50 and were categorized into low (≤ 22), average (23–41), and high (≥ 42) group ranges (ranges established by ProQOL manual). Low levels of CS and high levels of BO and CF are associated with poorer professional quality of life, whereas high levels of CS and low levels of BO and CF result in enhanced professional quality of life. Following the preliminary population evaluation, subanalyses comparing ICU nurses versus oncology nurses and gender groups were performed. Subsequently, subanalyses accounting for nursing experience, time in current position, work shift, number of children, and use of employer-provided emotional interventions were performed. Two-sample *t* tests were used to determine whether means differed significantly between categorically defined groups, and linear regression analyses were used to model the relationship between continuous predictors and continuous responses. Statistical significance was defined as $p < .05$.

RESULTS

A total of 102 nurses participated in this investigation, of whom 86 (84%) submitted completed surveys able to be analyzed. The overall response rate was 43% (ICU: 68/165 [41%]; oncology 18/36 [50%]). Table 1 contains a demographic summary of the study population, including raw professional quality of life scoring ranges. The study population was predominantly full-time employed (80%), female (86%), ICU nurses (79%), who have been practicing nursing an average of 10.2 years, with an average of 7.95 years in their current position.

A breakdown of the individual components of the ProQOL Scale tool for the study population characterized the majority of nurses (65% [56]) as exhibiting average levels of CS (raw score: 23–41), with only one respondent reporting low levels of CS (raw score <22). Thirty-four percent of nurses were classified as exhibiting high CS (Table 1). The mean CS score for the study population was 38.7 ± 5.86 . A subanalysis comparing the ICU specialty with the oncology revealed that ICU nurses report significantly lower levels of CS than their oncology counterparts (ICU CS: 38.3 ± 6.12 , oncology CS: 41.2 ± 4.15 ; $p = .023$; $t = 2.38$; Table 2). A further subanalysis comparing male and female nurses from combined ICU and oncology units found that male nurses report significantly higher levels of CS than female nurses (male CS: 43.8 ± 4.34 , female CS: 38.1 ± 5.70 ; $p = .001$; $t = -4.07$; Table 3).

An analysis of BO based on the responses to the ProQOL Scale tool revealed that 57 (66%) nurses exhibited average levels of BO and 29 (34%) exhibited low levels of BO. No participants were found to have high levels of BO. The mean BO score of participants was 25.0 ± 5.82 . When comparing ICU nurses with oncology nurses, ICU nurses were found to exhibit significantly higher levels of BO (ICU BO: 25.5 ± 5.90 , oncology BO: 23.3 ± 2.80 ; $p = .029$; $t = -2.24$). Comparing gender groups, male nurses were found to report significantly lower levels of BO than their female counterparts (male BO: 21.4 ± 5.18 , female BO: 25.6 ± 5.31 ; $p = .021$; $t = 2.58$).

Examining the final component of the ProQOL Scale tool, the majority of respondents (69% [59]) were characterized as exhibiting low levels of CF, and 31% average levels. No respondents were found to have high levels of CF. The mean CF score for the study population was 20.5 ± 5.82 . Unlike CS and BO, the difference in levels of CF between ICU and oncology nurses was not statistically significant (ICU CF: 20.5 ± 6.13 , oncology CF: 20.2 ± 4.61 ; $p = .817$; $t = -0.23$). Comparing gender groups, however, revealed that male nurses reported significantly lower levels of CF than female nurses (male CF: 17.3 ± 4.14 , female CF: 21.0 ± 5.91 ; $p = .014$; $t = 2.71$).

TABLE 1 Nursing Population Demographics and ProQOL Compassion Fatigue Subscales Scores

<i>N</i> = 178	<i>N</i> (%)
Age, y	
Mean: 35.9 ± 9.71	
<30	30 (34.9)
30–39	28 (32.6)
>40	28 (32.6)
Gender	
Female	74 (86.1)
Male	12 (13.9)
Unit specialty	
Oncology	18 (21.0)
Intensive care	68 (79.1)
Employment status	
Full time	69 (80.2)
Part time	17 (19.8)
Compassion satisfaction score	
Mean: 38.7 ± 5.86	
Median: 38.0 (36.0–43.0)	
Low (≤ 22)	1 (1.16)
Average (23–41)	56 (65.1)
High (≥ 42)	29 (33.7)
Burnout score	
Mean: 25.0 ± 5.46	
Median: 25.0 (21.0–28.0)	
Low (≤ 22)	29 (33.7)
Average (23–41)	57 (66.3)
High (≥ 42)	0 (0.00)
Compassion fatigue score	
Mean: 20.5 ± 5.82	
Median: 19.5 (16.0–24.3)	
Low (≤ 22)	59 (68.6)
Average (23–41)	27 (31.4)
High (≥ 42)	0 (0.00)

When considering other demographic factors besides gender and unit specialty, linear regression analyses found that years of nursing experience did not impact levels of CS ($F = 0.77$; $R^2 = 0.9\%$; $p = .383$) and BO ($F = 1.20$;

TABLE 2 Comparison of Professional Quality of Life Subscale Scores in ICU Nurses Versus Oncology Nurses

<i>N</i> = 86	ICU Nurses, Mean ± <i>SD</i> (Median; Range)	Oncology Nurses, Mean ± <i>SD</i> (Median; Range)	<i>p</i>
N (%)	68 (79.1%)	18 (20.9%)	
Compassion satisfaction	38.3 ± 6.12 (38.0; 35.0–42.8)	41.2 ± 4.15 (41.5; 38.0–45.3)	.023
Burnout	25.5 ± 5.90 (25.0; 21.0–28.8)	23.3 ± 2.80 (23.0; 21.0–25.3)	.029
Compassion fatigue	20.5 ± 6.13 (20.0; 16.0–24.8)	20.2 ± 4.61 (19.0; 16.0–22.8)	.817

$R^2 = 1.4\%$; $p = .276$), however, was negatively associated with CF. The more years of experience nurses in the study population accrued, the lower their levels of CF ($F = 5.06$; $R^2 = 5.7\%$; $p = .027$). Similar trends were observed when considering participants' raw age, with CF levels significantly decreasing with increasing age ($F = 5.99$; $R^2 = 6.7\%$; $p = .016$). Concordantly, years in current position revealed the same outcome, with no relationship to levels of CS ($F = 0.26$; $R^2 = 0.3\%$; $p = .612$) and BO ($F = 1.25$; $R^2 = 1.5\%$; $p = .266$), but a significant reduction in CF with more time in current position ($F = 4.11$; $R^2 = 4.7\%$; $p = .046$). The more children nurses in the study population had, the lower their levels of BO ($F = 4.62$; $R^2 = 5.3\%$; $p = .035$) and CF ($F = 9.97$; $R^2 = 10.8\%$; $p = .002$). No association was found between number of children and CS ($F = 1.96$; $R^2 = 2.3\%$; $p = .166$).

Sixty-four percent of respondents reported that their employer provides interventions, programs, and/or services designed to provide social or emotional support to the nursing staff; however, only 47% of this subgroup claimed to have taken advantage of any such support. A subanalysis comparing nursing populations who use these resources with those who do not revealed no difference in levels of BO (use interventions BO: 23.8 ± 4.80 , no interventions BO: 24.6 ± 6.32 ; $p = .623$; $t = 0.49$), or CF (use interventions CF: 20.2 ± 6.02 , no interventions CF: 19.4 ± 6.19 ; $p = .655$; $t = -0.45$), but a significant increase in CS with nurses who do take advantage of such resources (use interventions CS: 41.2 ± 4.15 , no interventions CS: 38.3 ± 6.12 ; $p = .022$; $t = -2.36$).

DISCUSSION

As low professional quality of life (defined by high CF and low CS) has been associated with a decline in patient care (Maslach et al., 1996; Sargent et al., 2004), there has been extensive interest regarding the characterization of this phenomenon in nursing populations. The purpose of this study was to preliminarily evaluate levels of CS, BO, and CF in ICU and oncology nursing units with considerations for demographic variables. To combat the issue of CF in care providers through tailored intervention programs, nursing administration must have a clear understanding of unit and demographic specific implications of this debilitating state. Although previous studies have examined levels of CS and CF in nursing populations, this is the first study, to the authors' knowledge, that has considered unit-specific comparisons in addition to the impact of demographic factors on overall professional quality of life.

Using cutoffs established by the ProQOL Scale guidelines (Stamm, 2010), this investigation found that the majority of study population nurses experienced average levels of CS (65%), average levels of BO (66%), and low levels of CF (69%). The work of Hunsaker et al. (2015) revealed similar findings when examining a population of emergency department nurses, with the majority of their participants exhibiting low to average levels of BO and average to high levels of CS. Conversely, a study by Hooper et al. (2010), which investigated levels of CF and CS in a combined population of emergency department, oncology, nephrology, and ICU nurses, found that approximately 82% of nurses exhibited moderate to high

TABLE 3 Comparison of Professional Quality of Life Subscale Scores in Male Versus Female Nurses From Both Specialties

<i>N</i> = 86	Male Nurses, Mean ± <i>SD</i> (Median; Range)	Female Nurses, Mean ± <i>SD</i> (Median; Range)	<i>p</i>
N (%)	12 (14.0%)	74 (86.1%)	
Compassion satisfaction	43.8 ± 4.34 (44.5; 36.0–48.3)	38.1 ± 5.70 (38.0; 35.0–42.0)	.001
Burnout	21.4 ± 5.18 (20.5; 16.3–25.8)	25.6 ± 5.31 (25.0; 22.0–28.0)	.021
Compassion fatigue	17.3 ± 4.14 (16.5; 14.3–21.5)	21.0 ± 5.91 (20.0; 16.0–26.0)	.014

levels of BO and 86% moderate to high levels of CF (Hooper et al., 2010). It is possible that the addition of emergency department and nephrology nurses to this analysis could have resulted in the increased levels of BO and CF observed, although more research into characterizing professional quality of life scores by nursing specialty is necessary to confirm this conjecture.

Throughout this investigation, the study population was separated into a variety of subgroups to compare levels of CS, BO, and CF. Separating the total nursing population into ICU and oncology subgroups revealed both some expected and unexpected findings. As the investigators hypothesized, ICU nurses exhibited significantly lower levels of CS and significantly higher levels of BO. Compassion fatigue, however, was statistically indistinguishable between the two groups. These finding(s) partially mirror the work of Hooper et al. (2010), who found no statistically distinguishable differences between four separate nursing populations (including intensive care and oncology nurses) on measures of CS, BO, or CF (Hooper et al., 2010). Critical care and oncology nurses cope with suffering patients on a daily basis. This may partially explain why CF did not differ on the basis of specialty; however, this requires further investigation.

When comparing male and female gender subgroups, the investigators found that male nurses exhibited significantly higher CS and lower BO and CF than female nurses as was hypothesized. These results are contradictory to the work of Hunsaker et al. (2015), who found no statistical difference between male and female emergency department nurses on any ProQOL Scale measure (Hunsaker et al., 2015). Although more research is necessary, these preliminary results suggest that female nurses may be more susceptible to developing CF than male nurses, and that male nurses generally experience a higher overall professional quality of life than their female counterparts.

In terms of other demographic characteristics, the authors found similarities and differences between the results of this investigation and the existing literature. Whereas previous studies such as that by Hunsaker et al. (2015) found increases in the levels of CS and a decrease in the levels of BO with years nursing experience, this study found no association between these variables (Hunsaker et al., 2015). Conversely, levels of CF were found to decrease with years of nursing experience. This is an interesting finding, which could support the claim that following repeated expose to patient suffering, nurses may become desensitized toward future suffering.

Perhaps one of the most interesting findings pertaining to this investigation relates to the availability and use of intervention programs and/or services designed to provide social and emotional support for the nursing staff. Although 64% of participants claimed that their organization provided such services, only 47% of these respondents

reported using these resources. Although the reasoning behind this low support-seeking rate remains to be determined, one thing is certain: although current programs impact parts of professional quality of life (CS), other facets (BO, CF) remain unaffected. This finding speaks to the need for a tailored intervention program specifically designed to combat the three components of professional quality of life. Future research should aim to explore the efficacy of interventions designed to increase the overall professional quality of life of nurses.

As part of this future research, stronger research designs are needed in this area of science. Before interventions can even be developed, these stronger multisite studies are needed to further investigate CF, BO, and CS. Specifically, need more information is needed regarding gender differences in the experience of CF, BO, and CS. Qualitatively, it must determine why nurses are not utilizing support programs at higher rates. Following these studies, interventional studies may begin to explore the efficacy of interventions designed to increase the overall professional quality of life of nurses.

Limitations

As this investigation was survey-based and conducted at a single institution, a number of limitations are present. First, this study is limited by its small sample size. Consequently, the generalizability of our study is also limited as our sample comprised specialty nurses from a single institution. Our sample was also predominantly female. These limitations prevent us from making any conclusions regarding causation. In addition, nonresponse bias could have impacted the results. As participation in the survey was optional, and participants were not required to answer all components of the survey, it is possible that those who chose not to participate/chose to end the survey prematurely were those most un/affected by the professional quality of life components being examined.

CONCLUSION

Although some similarities in professional quality of life were found between this study and previous investigations, a host of differences suggest that more research is necessary to characterize this multifaceted phenomenon. This study examined levels of CS and CF in a sample of intensive care and oncology nurses from a MAGNET-designated community hospital. Overall levels of CS and BO were found to be average, with levels of CF classified as low. Intensive care unit nurses exhibited lower CS and higher BO than oncology nurses. Male nurses were found to exhibit higher CS and lower BO and CF than female nurses. Demographic factors including age, years of experience, and years in current position were found to be negatively associated with CF. It is prudent that future

efforts aim to address nursing professional quality of life through tailored intervention programs.

KEY POINTS

- Low professional quality of life measures (compassion satisfaction, compassion fatigue, burnout) may be more prevalent in certain nursing specialties than others.
- Male nurses may be less prone to developing the negative components of the Professional Quality of Life Scale (compassion fatigue; burnout) than male counterparts.
- Time in nursing practice is inversely related to compassion fatigue. More years of experience resulted in lower levels of CF.

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