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Compassion Fatigue as it Relates to Nurse Turnover in Oncology Nurses at an Urban Hospital

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Abstract

According to Stamm (2010), Compassion fatigue (CF) refers to the negative aspects of caring and compassion satisfaction (CS) refers to the positive aspects. Compassion fatigue is well documented in oncology nurses. It is a concept incorporating both burnout (BO) and secondary traumatic stress (STS). Nurses working with patients who have cancer are exposed to a multitude of stressors that may contribute to CF and ultimately high turnover rates. The purpose of this study is to explore the relationships between CS, STS, BO, and turnover intention in a sample of oncology nurses. The study is a correlational study utilizing survey methodology to examine the prevalence of CF and turnover risk in a sample of 94 oncology nurses at a metropolitan cancer center in the southern United States. The Professional Quality of Life (ProQOL-V) survey tool was used to determine CS, STS, and BO levels in the sample. The Turnover Intention Scale (TIS-6) was utilized to determine turnover intention in the sample. Secondary traumatic stress and burnout are positively correlated with turnover intention. Regression analysis showed that decreased CS and increased BO are significant predictors of turnover intention. To mitigate and prevent CF, it is imperative that organizations be proactive and implement measures to provide nurses with adequate resources at the institutional level as well as place high priority on the risk factors for CF.

Keywords: compassion fatigue, turnover intention, oncology nurses

Compassion Fatigue as it Relates to Nurse Turnover in Oncology Nurses at an Urban Hospital

Compassion fatigue (CF) is a phenomenon that has been addressed with increasing frequency in the healthcare literature (Potter, Deshields, Berger, et al., 2013). The phenomenon is well documented in oncology nurses. Because cancer involves suffering at the physical, emotional, and spiritual levels, oncology nurses are generally at high risk for developing CF. Nurses working with patients who have cancer are exposed to a multitude of stressors including coping with difficult disease processes, providing emotional, physical, and spiritual support, and engaging with grieving patients and families. These stressors may contribute to the development of CF. Although oncology nurses are at an increased risk for developing CF, it is not uncommon for them to be unfamiliar with the concept and its accompanying symptoms (Pierce, Dougherty, Panzarella, & Le, 2007).

The ongoing stress and burnout (BO) frequently experienced by nurses contributes to nurse job dissatisfaction, ultimately leading to increased rates of nurse turnover. Hospitals throughout the United States continue to face a diminishing nurse workforce, and significant resources are spent in recruitment of nurses and in developing programs for staff retention (Potter, Deshields, Divanbeigi, et al., 2010). Compassion fatigue takes a toll on the caregiving individual along with the workplace, leading to decreased productivity, increased use of sick days, and increased turnover rates (Pfifferling and Gilley, 2000). Gaining a better understanding of CF as it relates to nurse turnover is critical in improving overall job satisfaction for nurses and creating a positive healthcare environment. This study seeks to foster an improved understanding of CF prevalence in a group of oncology nurses to ultimately determine recommendations for the improvement and management of CF and nurse turnover in the healthcare setting.

Problem Statement

Compassion fatigue is a well-established clinical problem in nurses, particularly, oncology nurses. Generally, there are both positive and negative aspects of caring. According to Stamm (2010), compassion satisfaction (CS) refers to the positive aspects of caring, and CF refers to the negative aspects. Compassion fatigue is a concept that incorporates two elements: secondary traumatic stress (STS) and BO. Compassion fatigue is a problem that may contribute to nurse BO, job dissatisfaction, and increased turnover rates. This study seeks to answer the following question: In a sample of oncology nurses, does increased levels of CF lead to increased nurse turnover intention rates?

Purpose/Objectives

The aim of this study was to explore the relationship between nurse turnover intention and three variables: compassion satisfaction, STS, and BO. Compassion fatigue is represented by STS and BO. A sample of approximately 100 oncology nurses at an urban cancer center in the southern United States was recruited for this study. The objectives of this study were as follows:

- To identify CS, STS, and BO prevalence within the sample
- To measure the correlation between overall nurse experience and CS, STS, and BO
- To measure the correlation between oncology nursing experience and CS, STS, and BO
- To measure the correlation between CS, STS, BO, and turnover intention
- To suggest recommendations for further research and interventions to decrease and manage CF in oncology nurses

Review of Evidence

Nurses who work in the oncology setting play a vital role in the holistic care of patients and their families. Work-related stress resulting from close interpersonal relationships with cancer patients and their families may lead to increased risk for CF and nurse turnover. The shortage of nurses is a well-known problem in healthcare and is becoming a more urgent priority within institutions across the United States (Leiter and Maslach, 2009). Prior research has determined a positive correlation between BO and nurse turnover (Kiwol, Youngsook, & Hee, 2012; Leiter and Maslach, 2009; Perry et al., 2011; Zhang et al., 2014). Gaining a better understanding of what factors support nurse commitment and increase job satisfaction could influence policies and workplace practices (Leiter and Maslach, 2009).

Compassion Fatigue

Throughout the CF literature, five themes emerge that are important to acknowledge when gaining a better understanding of the phenomenon. These themes include: The definition of CF and BO, causes of CF, factors that worsen CF, outcomes of CF, and managing CF.

Defining compassion fatigue and burnout.

Compassion fatigue is well defined in the literature, however, there remains some conceptual confusion regarding the phenomenon. Compassion fatigue was first defined by Joinson in 1992 to describe the distinct stressors that affect those in the helping professions (Perry, Toffner, Merrick, & Dalton, 2011). LaRowe (2005) defines CF as a devastating weariness resulting from continuous and empathetic responses to the suffering of others. Figley (1995) defines CF as a combination of STS and BO experienced by those in the caregiving professions. Furthermore, Stamm (2010) asserts that professional quality of life for healthcare providers is comprised of both positive and negative aspects of caring, thus formulating the

ideologies of CS and CF in the caring professions. The presence of CS, the positive aspects, and CF, the negative aspects, may influence the ability to provide quality care (Smart et al., 2014; Stamm, 2010). Compassion fatigue has been compared to, and used interchangeably with STS and BO (Joinson, 1992; Perry et al., 2011; Smart et al., 2013). While CF is synonymous with STS, it is not synonymous with BO. Burnout and CF can coexist together, however, CF differs from BO in that it is the behavioral response one has to providing ongoing care to those who are suffering (The American Institute of Stress, 2017; Gilmore, 2012; Perry et al., 2011).

Definitions of BO are centered on environmental stressors, whereas, definitions of CF address the relational nature of caring (Potter et al., 2010). Figley (2002) identifies CF as being a form of BO. While BO and CF are not identical, BO is a significant predictor of CF, making it an important subscale of the Professional Quality of Life Compassion Satisfaction-Compassion Fatigue Model to assess CF risk (Stamm, 2010).

Causes of compassion fatigue.

Various predictors of CF are evident throughout the literature. Lack of support was frequently found to be a causative factor of CF (Hunsaker, Chen, Maughan, & Heaston, 2015; Perry et al., 2011; Sacco, Ciurzynski, Harvey, & Ingersoll, 2015; Zhang et al., 2014). In addition, Sacco et al. (2015) determined that nurses who recently experienced a change in management had significantly lower CS scores than nurses who did not. Other causative factors include lack of knowledge regarding CF, and lack of time or ability to give quality care (Perry et al., 2011; Russel, 2016). Additionally, CF has been shown to be more prevalent in nurses with more years of nursing experience (Kelly, Runge, & Spencer, 2015; Potter et al., 2010; Yu, Jiang, & Shen, 2016). However, Hunsacker et al. (2015) and Kiwol, Younsook, and Hee (2012) found the opposite, concluding that nurses with increased years of experience had higher CS levels, and

lower CF levels. Overall, lack of colleague support remains the most frequent causative factor of CF.

Factors that worsen compassion fatigue.

Factors that worsen CF include physical and emotional stressors in the workplace, life stressors outside of the workplace, and working conditions (Mathieu, 2007; Mol, Kompanje, Benoit, Bakker, & Nijkam, 2015; Perry et al., 2011; Smart et al, 2014). Additionally, nurses felt increased levels of CF when they were not able ease suffering, undergoing their own personal health issues, experienced excessive attachment to a patient, or experienced an increased workload (Perry et al., 2011; Yoder, 2010). Mol et al. (2015) determined that emotional stressors in the workplace may range from communication with patients and families to ethical considerations, and when faced with these situations, nurses may experience an increase in CF.

Outcomes of compassion fatigue.

Several studies conclude that prevalent outcomes of CF include excessive fatigue and increased nurse turnover (Kelly, Runge, & Spencer, 2015; Kiwol et al., 2012; Leiter and Maslach, 2009; Zhang et al., 2014). Additionally, CF may lead to decreased quality of care as work-related stress may place time constraints on nurses causing them to spend less time with patients and search for shortcuts in their duties, which may even lead to medication errors (Beaulieu and Freeman, 2009; Hunsacker et al., 2015; Russel, 2016). Overall, CF contributes to emotional exhaustion, cynicism, and workplace stress for nurses, which may lead to decreased job satisfaction and increased nurse turnover (Leiter and Maslach, 2009; Morrison and Korol, 2014; Russel, 2016).

Managing compassion fatigue.

To properly address CF in nurses, organizations must provide improved working environments. Nurses report managing CF with personal coping strategies, and programs to assist nurses with coping strategies would likely be beneficial in CF management (Aycock and Boyle, 2009; Potter et al., 2013; Sacco et al., 2015; Yoder, 2010). Maintaining a healthy work-life balance is beneficial to CF management and has a positive impact on professional quality of life (Aycock and Boyle, 2009; Perry et al., 2011). Overall, identifying predictors of CF in nurses can be used to formulate interventions that address modifiable risks for CF (Aycock and Boyle, 2009; Hunsaker et al., 2015; Smart et al., 2013).

Nurse Turnover Intention

Nurse turnover has been widely acknowledged as a significant outcome of CF in nurses. According to the literature, nurses are more likely to leave their current position, or even the nursing profession, when they experience CF or BO (Kiwol et al., 2012; Leiter and Maslach, 2009; Morrison and Korol, 2014). This has significant implications for healthcare in regard to financial burden and quality of care. Intention to leave has been shown to be a predictor of leaving (Derycke et al., 2012; Zhang et al., 2014). Furthermore, leaving has shown to contribute to a nursing shortage and increased costs for healthcare organizations (Leiter and Maslach, 2009; Luu and Hatstrup, 2010; Zhang et al., 2014). Compassion fatigue has clear implications for nursing retention and overall quality of care, and organizations willing to invest in reducing CF have the potential to improve costs by reducing turnover rates (Kelly et al., 2015; Kiwol et al., 2012; Luu and Hatstrup, 2010).

Theoretical Framework

Stamm's Professional Quality of Life Compassion Satisfaction-Compassion Fatigue Model provided the theoretical foundation for this study. According to Stamm (2010), professional quality of life is the satisfaction one feels in regard to their work as a helper. The model is based on the balance between both the positive and negative aspects of caring. Compassion satisfaction refers to the positive aspects, and CF refers to the negative aspects (Stamm, 2010). Stamm notes that there exists controversy over the various terms used to describe the negative aspects of caring. The terms "compassion fatigue" and "secondary traumatic stress" are synonymous and both refer to the negative aspects of caring. For the purpose of the study, the term "compassion fatigue" is used as an umbrella term that incorporates both the STS and BO subscales of Stamm's Professional Quality of Life Compassion Satisfaction-Compassion Fatigue Model.

According to the model, CF breaks into two parts: Burnout and STS. Burnout includes exhaustion, frustration, anger, and depression (Stamm, 2010). Secondary traumatic stress measures work-related trauma (Stamm, 2010). It is important to remember that work-related trauma may be primary or secondary in nature. Burnout and STS are both important elements to CF as a whole. The Professional Quality of Life Compassion Satisfaction-Compassion Fatigue Model can be seen in Figure 1.

The driving force behind CF is fear and work-related trauma (Stamm, 2010). According to the model, work environment, client (person helped) environment, and the helper's environment all play a role in CF and CS (Stamm, 2010). Additionally, CF is influenced by exhaustion, frustration, depression, anger, or work-related trauma (Stamm, 2010). For example, a poor environment in the workplace may increase CF level, however, simultaneously, an

individual may have CS in that he or she can help those suffering, despite the poor workplace environment (Stamm, 2010). The theoretical path analysis of the model can be seen in Figure 2.

The model makes several assumptions. Primarily, the model assumes that work environment, client environment, and helper environment directly influence CF and CS. Secondly, the model assumes that CF consists of only two subscales: Burnout and STS. In addition, the model assumes that these variables have a uni-directional relationship. For example, work environment contributes to CF, but CF does not contribute to work environment. However, the model does assume one bi-directional relationship, and this includes the relationship between depression and trauma in the work environment. Simply put, the model assumes that depression can cause trauma in the work environment, and conversely, trauma can cause depression in the work environment (Stamm, 2010). Overall, the model assumes a comprehensive ability to capture all the variables that influence CF and CS.

Application

Compassion fatigue has been widely acknowledged as a contributing factor in nurse turnover (Kiwol et al., 2012; Leiter and Maslach, 2009; Morrison and Korol, 2014). Therefore, the project leader proposes there to be significant relationships between CS, BO, STS, and turnover intention within the population sample. Based on Stamm's Professional Quality of Life Compassion Satisfaction-Compassion Fatigue Model, the project leader hypothesizes that higher levels of CS will correlate with decreased turnover intention. The project leader also hypothesizes that higher levels of BO will increase turnover intention, and higher levels of STS will increase turnover intention. Additionally, the project leader hypothesizes that nurses with more total experience and more oncology experience will have greater levels of STS and BO.

Project Design

This scholarly project was a cross-sectional, self-report study, utilizing survey methodology to examine the prevalence of CF and turnover intention in a sample of oncology nurses. Compassion satisfaction, STS, and BO were determined in the sample utilizing the Professional Quality of Life (ProQOL-V) survey tool. A six item Turnover Intention Scale (TIS-6), created by Bothma and Roodt (2013), was utilized to determine turnover intention. Both scales have been widely used, and their psychometric properties have been established and have shown satisfactory validity and reliability (Bothma and Roodt, 2013; Stamm, 2010). Additional demographic questions were asked including age, gender, unit, years of overall nursing experience, years of oncology nursing experience, and whether each nurse worked full-time, part-time, or per diem. The utilization of both the ProQOL-V and the TIS-6 provided correlational data between CS, STS, BO, and nurse turnover intention. The demographic questions provided additional data.

Clinical Setting

A large 90 bed metropolitan for-profit cancer center in the southern United States was utilized for data collection. The clinical setting was strictly inpatient acute care and consisted of four separate oncology units. These units included medical oncology, hematology oncology, thoracic oncology, and obstetrics-gynecological oncology. At the time of data collection, the turnover rate for the facility was 20% (D. E. Sutherland, personal communication, October 3, 2017)

Project Population

There were roughly 150 staff nurses working in the inpatient cancer center at the time of data collection, including float nurses and agency nurses. Eligibility for the study included

registered nurses working in acute care who worked either day shift or night shift, full-time, part-time, or per diem, and with any level of experience. Exclusion criteria included nurses who worked in the accompanying outpatient oncology clinic, healthcare personnel who were not registered nurses, and nurses working in any area of the hospital outside of the cancer center. Agency nurses were included in the study due to lengthy contractual agreements with the cancer unit. However, float nurses were excluded as they do not typically have significant experience with oncology patients, therefore, cannot qualify as oncology nurses.

Sources of Data/Instruments/Measurements

This study utilized anonymous paper surveys, per request of the cancer center, that consisted of two tools, the ProQOL-V and the TIS-6. The ProQOL-V is a widely used tool to measure CF and is frequently found in the literature. The tool consisted of a 30 item self-report Likert scale measure with three subscales to assess CS and CF, with CF being divided into two subscales: Burnout and STS. The reliability of the ProQOL-V is well documented with its use being in over 200 published articles, ensuring satisfactory construct validity (Stamm, 2010). The three scales of the ProQOL-V measure separate constructs (Stamm, 2010). The CF scale is distinct, and “the inter-scale correlations show 2% shared variance with STS and 5% shared variance with BO” (Stamm, 2010, p.13). The shared variance between BO and STS is 34% (Stamm, 2010). The STS and BO scales differ in that BO does not address fear and the STS scale does (Stamm, 2010). In previous studies, Cronbach Alphas range from .7 to .91 (Sacco et al, 2015; Stamm, 2010). Of the 30 items, 10 items measure CS, another 10 items measure BO, and the remaining 10 items measure STS. Raw CS, BO, and STS scores were obtained from the sample and converted into standardized t scores per the ProQOL manual z-score transformation.

The TIS-6 scale was utilized to measure turnover intention. The TIS is a 15 item Likert-scale questionnaire, however, a shortened 6 item version, has shown satisfactory psychometric properties. Bothma and Roodt (2013) found the TIS-6 to have a Cronbach Alpha reliability coefficient of .8, confirming the validity and reliability of the scale. An exploratory factor analysis established the TIS-6 as a single-dimensional construct, thereby confirming the factorial validity (Bothma and Roodt, 2013). For each item, scores greater than 3 indicate intention to leave, whereas, scores less than 3 indicate intention to stay. To score the overall survey, a summation of all 6 item scores must be established. Summation of scores greater than 24 indicate overall intention to leave, and scores less than 24 indicate intention to stay.

Data Collection Process

Convenience sampling, self-reported, survey methodology was utilized for this study. Data was collected interpersonally via paper surveys between August 2017 and November 2017. To optimize response rate, the project leader conducted frequent visits to each unit and brought donuts for nurses on both day shift and night shift to encourage participation. Per hospital policy, nurses were required to work three weekend shifts per month, therefore, to reach as many nurses as possible, the project leader conducted visits to each unit on the weekends during both shifts. Additionally, to reach a greater number of nurses, the project leader attended staff meetings. Surveys were directly handed to nurses, anonymity was ensured, and the purpose of the study was shared. After completion, nurses returned the surveys to the project leader where they were stored in a locked box only accessible to the project leader. After data collection, each survey was numbered, and data was carefully transferred from paper to a password protected Microsoft Excel spreadsheet where it was organized and scored appropriately. To prevent data entry error, data was periodically spot checked to ensure accuracy.

Data Analysis Plan

This study sought to determine correlations between several variables and turnover intention. The independent variables in the study included CS, BO, STS, age, gender, total nursing experience, oncology nursing experience, and full-time, part-time, or per diem. The dependent variable was turnover intention. To determine correlations between the variables, a multivariate linear regression analysis was conducted in the IBM® Statistical Packages for Social Sciences (SPSS) 24.0 software with an alpha level of .05. According to Plitcha Keller and Kelvin (2013), multivariate linear regression models assess the effects of the independent variable on the dependent variable and overall demonstrate whether the independent variable adequately predicts the dependent variable. In conducting a multivariate linear regression analysis, correlations were determined between CS, BO, STS, turnover intention, and the demographics.

Results

In total, 4 hospital units participated in the study with 94 nurses completing the survey, making the overall response rate 62% (gynecology-oncology 20%; medical-oncology 29%; hematology-oncology 31%, and thoracic-oncology 20%). Table 1 contains a demographic summary of the study population. The study population was predominantly female (92%), full-time employees (83%). There were 5 missing values for age, however, the mean age of participants was 33 years and the majority had 0-4 years of total experience (56%) and 0-4 years of oncology experience (70%). The ProQOL manual reported that no statistical differences in mean t-scores across demographics such as gender, age, unit experience, and nursing experience are to be expected (Stamm, 2010).

A breakdown of the individual components of the ProQOL tool for the study population

characterized the majority of nurses as either exhibiting average levels of CS (raw score 23-41) or high levels of CS (raw score 42 or higher). Only one participant exhibited a low level of CS (raw score 22 or less). Overall, 50% of participants exhibited average levels of CS, and 48% exhibited high levels of CS. The mean raw score for CS was 40. For the BO subscale, 40% of respondents exhibited low levels of BO (raw score 22 or less), and 60% of respondents exhibited average levels of BO (raw score 23-41). No respondents exhibited high levels of BO. There was one missing value for the BO subscale. The average raw score for BO was 23. For the STS subscale, 60% of respondents exhibited low levels of STS (raw score 22 or less) and 40% of respondents exhibited average levels of STS (raw score 23-41). No respondents exhibited high levels of STS. The average raw score for STS was 21. The breakdown of the individual components of the ProQOL scale tool can be seen in Table 2. Correlations of the means and standard deviations are presented in Table 3.

Two linear regression models were constructed and executed to assess the impact of CS and BO and CS and STS on turnover intention (See Table 4 and 5). Burnout and STS were highly correlated at .577 with one another causing concern for the independence of these two measures, therefore, two models are appropriate. The BO regression results indicate significant relationships ($F(2,90) = 58.43, p < 0.001$) with a R squared of .555. Compassion satisfaction ($\beta = -.23, p = 0.016$) is a significant predictor of turnover intention, supporting the project leader's first hypothesis. Burnout ($\beta = .57, p < 0.001$) is a significant predictor of turnover intention, supporting the project leader's second hypothesis.

The STS regression results indicate significant relationships ($F(2,91) = 27.42, p < 0.001$) with a R squared of .362. Compassion satisfaction ($\beta = -.57, p < 0.001$) is a significant predictor of turnover intention further supporting the project leader's first hypothesis. Secondary traumatic

stress ($\beta = .12, p < 0.164$) is not a significant predictor of turnover intention, not supporting the project leader's third hypothesis. All VIF statistics in both regression models were below 2.0. Total experience was not significantly correlated with BO ($R = -.026, p = .81$) or STS ($R = .004, p = .97$), and oncology experience was not significantly correlated with BO ($R = -.116, p = .267$) or STS ($R = -.044, p = .677$), not supporting the project leader's hypothesis.

Discussion

Data analysis revealed several correlations within the sample. Overall, with increased BO, there was increased turnover intention, and with increased CS, there was decreased turnover intention. As CS increased, turnover intention, BO, and STS decreased. Burnout was positively correlated with turnover intention and STS, and negatively correlated with CS. As turnover intention scores increased, BO increased, STS increased, and CS decreased. Age, gender, and experience did not have significant relationships with turnover intention. There are inconsistencies in the literature regarding the influence of these variables on turnover, however, the generalizability and diversity in any given sample may affect these results. While there are multiple similarities between the results of this study and results found in the literature, there are also some differences. The limitations of this study may account for some of these differences.

This study was conducted at only one institution with a sample size of 94 with a mean age of 33, with roughly 65% of the participants being age 35 or younger. The results of this study revealed a positive correlation between BO and turnover intention. This is consistent with findings within the literature (Kiwol, Youngsook, & Hee, 2012; Leiter and Maslach, 2009; Perry et al., 2011; Zhang et al., 2014). Several prior studies found there to be higher levels of CF in nurses with more years of experience (Kelly, Runge, & Spencer, 2015; Potter et al., 2010; Yu, Jiang, & Shen, 2016). However, the results of this study showed no significant relationship

between years of total or oncology experience and CF level within the sample. A significant relationship between STS and turnover intention is highly prevalent within the literature (Kiwol et al., 2012; Leiter and Maslach, 2009; Morrison and Korol, 2014). However, while data analysis showed a positive correlation between these two variables in this sample, STS was not shown to be a significant predictor of turnover intention. One explanation for this finding may be that despite the high levels of stress and BO associated with oncology nursing, oncology nurses generally report their jobs as being highly rewarding, spiritually motivating, and overall meaningful (Raingruber and Wolf, 2015; Perry, 2008). This is reflected by the average to high levels of CS in this sample, a measure that reflects pleasure in caring for oncology patients. Simply put, the rewarding aspect of oncology nursing may outweigh the trauma experienced, thereby, motivating oncology nurses to stay at their jobs.

Overall, this sample had high levels of CS, with average levels of BO and STS, indicating that nurses were experiencing these variables simultaneously. The Professional Quality of Life Compassion-Satisfaction Compassion Fatigue Model accurately depicts the constructs of CF and CS within the sample. The model assumes three contributing factors to the development of CS and CF: work environment, client environment, and person environment (Stamm, 2010). Physical and emotional stressors in the workplace and poor working conditions have been correlated with increased levels of CF (Mathieu, 2007; Mol, Kompanje, Benoit, Bakker, & Nijkam, 2015; Perry et al., 2011; Smart et al, 2014). In a qualitative study by Raingruber and Wolf (2015), nurses reported that they were motivated to provide good care to oncology patients by the grateful attitudes of these patients. Nurses reported that the vulnerability they felt working with oncology patients taught them to maintain a sense of thankfulness in life and reminded them to live in the present (Raingruber and Wolf, 2015). Overall, nurses in this study

reported that the vulnerability and nondemanding nature of oncology patients enabled them to focus on the patients and truly live in the present (Raingruber and Wolf, 2015).

Strengths and Limitations

This study sample was recruited from a highly respected cancer center in the southern United States. While the sample size (n=94) was moderate, a limitation to this study was the utilization of convenience sampling. Additionally, the sample was largely a homogenous population. Generalizability of the sample is concerning due to the large percentage of inexperienced nurses compared to the small percentage of very experienced nurses. Likewise, over 65% of the population was age 35 or younger, jeopardizing generalizability. Therefore, future studies should include multiple locations. In addition, this study only used the ProQOL-V tool to measure CF as it relates to turnover intention, while other studies used additional tools to measure other factors such as job satisfaction and BO alone. Because turnover intention is multi-factorial, we cannot conclude that CF is the main contributing factor to turnover intention.

Practice Implications

It is widely accepted in the literature that CF is a contributing factor to increased nurse turnover rates. To mitigate CF, organizations must provide improved working environments. Several studies found that nurses report a need for programs to assist them with personal coping strategies (Aycock and Boyle, 2009; Potter et al., 2013; Sacco et al., 2015; Yoder, 2010). To retain and recruit nurses into oncology nursing, it is essential to recognize what motivates them. Organizations should actively engage nurses in sharing motivating experiences in order to emphasize the caring art of oncology nursing (Raingruber and Wolf, 2015). Implementation of a nurse resiliency program focused on education about management of CF may also be beneficial. In a study by Potter et al. (2013), implementation of a resiliency program in a sample of oncology

nurses resulted in immediate decreased levels of CF as well as continued decreased levels 3 months after the program. Organizations should provide counseling or debriefing programs for nurses who need guidance in coping skills. Because work environment plays a role in the development of CF, organizations should place a high importance on ensuring that nurses have adequate assistance in completing tasks and caring for patients holistically. Decreasing nurse to patient ratios and offering adequate support staff may help relieve the BO that is associated with poor work environments. To mitigate high levels of CF, thereby lessening the financial burden of high turnover rates, it is vitally important for organizations to adequately identify risk factors for CF, provide nurses with an environment in which their input is valued, and offer support physically and emotionally through challenging situations in the workplace.

Conclusion

Compassion fatigue is a contributor to nurse turnover intention. As BO and STS increase, turnover intention increases. Turnover has a financial impact on institutions and has overall implications for patient care. Because work environment is a contributing factor in the development of CF, it is imperative that organizations be proactive and implement measures to provide nurses with adequate resources at the institutional level. Organizations must place high priority on recognizing the risk factors for CF. Larger, multi-site, studies are needed to explore other contributing factors to CF and turnover intention and effective ways to mitigate CF. In addition, qualitative studies are needed to adequately evaluate the input of nursing staff and gain a clearer understanding of the factors that contribute to both CF and turnover intention.

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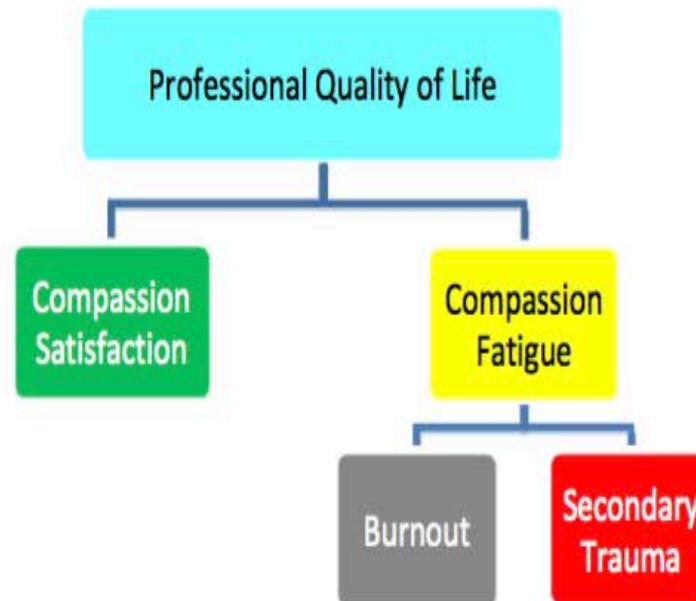
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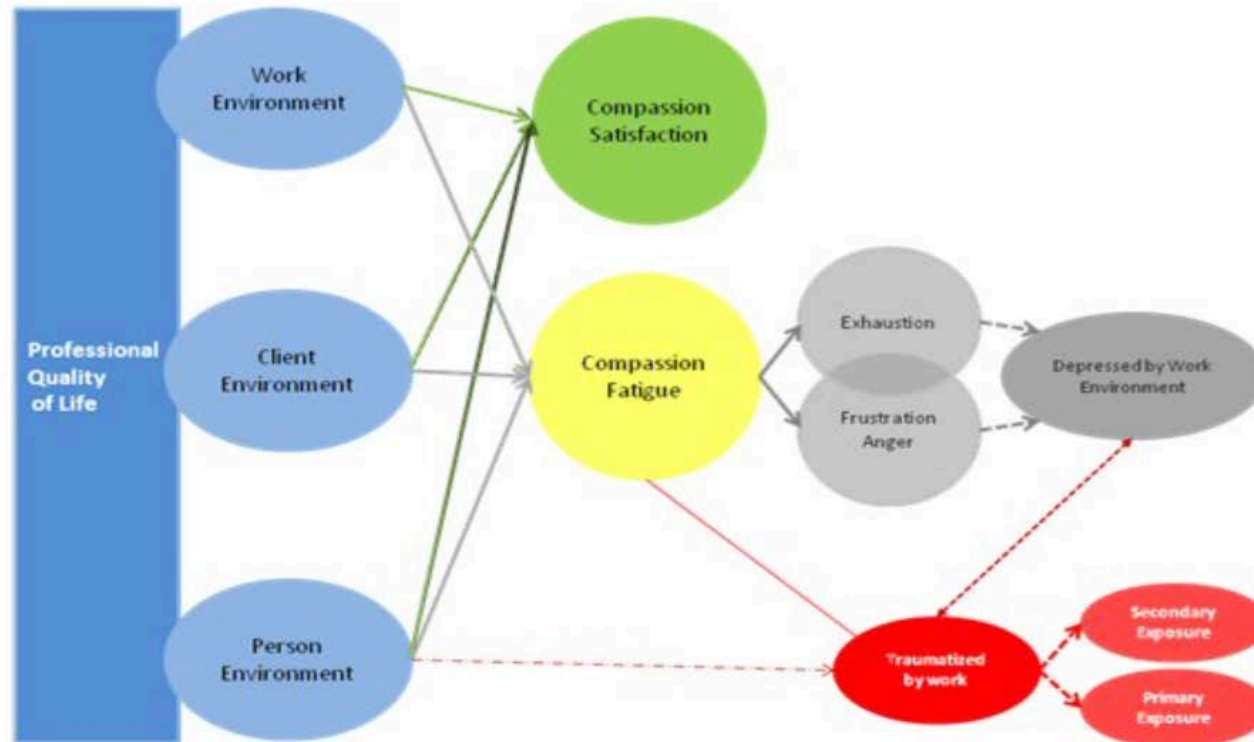
Appendix

FIGURE 1: DIAGRAM OF PROFESSIONAL QUALITY OF LIFE



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FIGURE 2: THEORETICAL PATH ANALYSIS



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Table 1. Demographics

| N= 94 | N (%) |
|---------------------------------|--------------|
| Age (Mean: 33, SD:2.254) | |
| 21-25 | 30 (31.9%) |
| 26-30 | 20 (21.3%) |
| 31-35 | 11 (11.7%) |
| 36-40 | 6 (6.4%) |
| 41-45 | 7 (7.4%) |
| 46-50 | 8 (8.5%) |
| 51-55 | 2 (2.1%) |
| 56-60 | 1 (1.1%) |
| 61-65 | 4 (4.3%) |
| Gender | |
| Female | 86 (91.5%) |
| Male | 8 (8.5%) |
| FT/PT/PRN | |
| FT | 80 (85.1%) |
| PT | 2 (2.1%) |
| PRN | 12 (12.7%) |
| Total Experience | |
| 0-4 years | 53 (56.4%) |
| 5-9 years | 16 (17.0%) |
| 10-14 years | 13 (13.8%) |
| 15+ years | 12 (12.8%) |
| Oncology Experience | |
| 0-4 years | 66 (70.2%) |
| 5-9 years | 18 (19.1%) |
| 10-14 years | 4 (4.3%) |
| 15+ years | 6 (6.4%) |
| Unit Specialty | |
| Gynecologic-Oncology | 19 (20.2%) |
| Medical-Oncology | 27 (28.7%) |
| Hematology-Oncology | 29 (30.9%) |
| Thoracic-Oncology | 19 (20.2%) |

Table 2. PROQOL Moments

| Raw Scores | | | |
|------------------------|--------|--------|--------|
| | CS | STS | BO |
| N | 94 | 94 | 93 |
| Mean | 40.1 | 21.9 | 23.7 |
| Std. Error of the Mean | .640 | .542 | .528 |
| Std. Deviation | 6.21 | 5.26 | 5.09 |
| Variance | 38.513 | 27.618 | 25.921 |
| Skewness | -1.204 | .666 | -.005 |
| Std. Error of Skewness | .249 | .249 | .250 |
| Kurtosis | 2.497 | .534 | -.397 |
| Std. Error of Kurtosis | .493 | .493 | .495 |
| Range | 36 | 25 | 23 |
| Minimum | 14 | 12 | 13 |
| Maximum | 50 | 37 | 36 |
| | | | |
| Low 22 or less | 1% | 60% | 40% |
| Average 23-41 | 50% | 40% | 60% |
| High 42 or more | 49% | 0.0% | 0.0% |

| t Scores | | | |
|------------------------|--------|--------|--------|
| | CS | STS | BO |
| N | 94 | 94 | 93 |
| Mean | 50.00 | 50.00 | 50.00 |
| Std. Error of Mean | 1.03 | 1.03 | 1.04 |
| Std. Deviation | 10.00 | 10.00 | 10.00 |
| Variance | 100.00 | 100.00 | 100.00 |
| Skewness | -1.20 | .666 | -.005 |
| Std. Error of Skewness | .249 | .249 | .250 |
| Kurtosis | 2.5 | .534 | -.397 |
| Std. Error of Kurtosis | .493 | .493 | .495 |
| Range | 58.01 | 47.57 | 45.18 |
| Minimum | 7.92 | 31.11 | 28.94 |
| Maximum | 65.93 | 78.68 | 74.12 |
| | | | |
| Low 43 or less | 26.6% | 25.6% | 24.7% |
| Average 44-56 | 46.8% | 52.1% | 52.7% |
| High 57 or more | 26.6% | 22.3% | 22.6% |

*t-score calculations using z-score conversion

Table 3. Correlations

| | M(std) | Turnover | CS | BO |
|----------|---------------|----------|---------|---------|
| Turnover | 17.56 (5.518) | | | |
| CS | 40.09 (6.232) | **-.624 | | |
| BO | 23.72 (5.091) | ** .732 | **-.681 | |
| STS | 21.86 (5.245) | ** .275 | **-.308 | ** .577 |

*p ≤ 0.05, **p ≤ 0.01

Table 4. Regression

| | β | t | p | F | P | 95%CI |
|----------|--------|--------|-------|--------|-------|--------------|
| Constant | 11.126 | 2.077 | .041 | 58.425 | <.001 | |
| CS | -.234 | -2.459 | .016 | | | -.374, -.040 |
| BO | .573 | 6.030 | <.001 | | | .416, .825 |

*Dependent Variable: TIS-6 score

Table 5. Regression Secondary Traumatic Stress

| | β | t | p | F | P | 95%CI |
|----------|--------|--------|-------|--------|-------|--------------|
| Constant | 35.279 | 8.324 | <.001 | 27.416 | <.001 | |
| CS | -.566 | -6.517 | <.001 | | | -.665, -.354 |
| STS | .122 | 1.403 | 1.64 | | | -.054, .313 |

*Dependent Variable: TIS-6 score

Professional Quality of Life Scale (ProQOL)

When you *[help]* people you have direct contact with their lives. As you may have found, your compassion for those you *[help]* can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a *[helper]*. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1= Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

- 1- ____ I am happy.
- 2- ____ I am preoccupied with more than one person I *[help]*.
- 3- ____ I get satisfaction from being able to *[help]* people.
- 4- ____ I feel connected to others.
- 5- ____ I jump or am startled by unexpected sounds.
- 6- ____ I feel invigorated after working with those I *[help]*.
- 7- ____ I find it difficult to separate my personal life from my life as a *[helper]*.
- 8- ____ I am not as productive at work because I am losing sleep over traumatic experiences of a person I *[help]*.
- 9- ____ I think that I might have been affected by the traumatic stress of those I *[help]*.
10. ____ I feel trapped by my job as a *[helper]*.
11. ____ Because of my *[helping]*, I have felt "on edge" about various things.
12. ____ I like my work as a *[helper]*.
13. ____ I feel depressed because of the traumatic experiences of the people I *[help]*.
14. ____ I feel as though I am experiencing the trauma of someone I have *[helped]*.
15. ____ I have beliefs that sustain me.

16. ____ I am pleased with how I am able to keep up with *[helping]* techniques and protocols.
17. ____ I am the person I always wanted to be.
18. ____ My work makes me feel satisfied.
19. ____ I feel worn out because of my work as a *[helper]*.
20. ____ I have happy thoughts and feelings about those I *[help]* and how I could help them.
21. ____ I feel overwhelmed because my case [work] load seems endless.
22. ____ I believe I can make a difference through my work.
23. ____ I avoid certain activities or situations because they remind me of frightening experiences of the people I *[help]*.
24. ____ I am proud of what I can do to *[help]*.
25. ____ As a result of my *[helping]*, I have intrusive, frightening thoughts.
26. ____ I feel "bogged down" by the system.
27. ____ I have thoughts that I am a "success" as a *[helper]*.
28. ____ I can't recall important parts of my work with trauma victims.
29. ____ I am a very caring person.
30. ____ I am happy that I chose to do this work.

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Turnover Intention Scale (TIS-6)

Email Gerhard Roodt at grootd@uj.ac.za for access to the Turnover Intention Scale

Bothma, C. & Roodt, G. 2013. *Turnover Intention Scale (TIS-6)*.