



Compassion Fatigue in Pediatric Nurses

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Compassion fatigue in nursing has been shown to impact the quality of patient care and employee satisfaction and engagement. The aims of this study were to determine the prevalence and severity of compassion fatigue among pediatric nurses and variations in prevalence based on respondent demographics using a cross-sectional survey design. Nurses under 40 years of age, with 6–10 years of experience and/or working in a medical–surgical unit had significantly lower compassion satisfaction and higher levels of burnout. Secondary traumatic stress from caring for children with severe illness or injury or end of life was a key contributor to compassion fatigue.

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CARING FOR CHILDREN who are sick or dying can be highly rewarding, and at the same time, emotionally exhausting or even traumatizing. Why is it that some nurses find satisfaction in caring for the sickest children for many years, while others experience chronic stress or burnout, become cynical or ineffective, or leave their positions? It is important for organizational leaders to understand what factors influence the pediatric nurse's ability to maintain compassion and professional commitment in the face of the helplessness, pain and sadness that they are likely to experience in caring for sick children and their families.

Background

The term “compassion satisfaction” (CS) describes the satisfaction nurses feel when caring for others and feeling competent. According to Stamm (2010), CS is a measure of the positive aspects of altruism or caregiving, the experience of “feeling good that you can do something to help”. In

contrast, compassion fatigue (CF) is described as physical, emotional and spiritual depletion when caring for patients (Lombardo & Eyre, 2011). CF was first applied to nursing by Joinson (1992) to describe nurses' responses of either emotional distancing to turn off their own feelings, or feeling helpless and angry as they watch patients go through trauma or devastating illness. The emotional effect of being indirectly traumatized by helping others who have experienced primary traumatic stress is called secondary traumatic stress (STS) (Figley, 2002).

CF occurs when the amount of compassion expended by the staff member exceeds their ability to cope or recover (Coetzee & Klopper, 2010). CF can have an insidious onset with physical, social, emotional, spiritual and intellectual effects upon nurses, which can have a negative impact on patient and organizational outcomes. Left unmanaged, CF can lead to burnout.

Nurses who care for children are at risk of developing CF due to routine exposure to traumatic aspects of child illness or death, injury or medical treatment, as well as the families' emotional responses to the illness. In one study of 314 healthcare providers in a children's hospital, the level of CF

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was similar to that of a group of trauma workers, with 39% at moderately high to extremely high risk of CF and 21% at moderate to high risk of burnout (Robins, Meltzer, & Zelikovsky, 2009). In another study of 240 nurses in a pediatric hospital, nurses in the surgical unit, especially those with 5–9 years of experience, reported the highest burnout and lowest CS, while nurses in hematology–oncology reported the lowest burnout and the highest CS (Sekol & Kim, 2014). However, in a review of the literature, Zander, Hutton, and King (2010) found that the aspects that pediatric oncology nurses often define as “rewards of the job” can also be a source of tension, i.e. building close relationships with patients and families while using self-preservation strategies for effective coping.

CF poses a significant risk for long-term health consequences in nurses including numerous emotional health issues (Hamer, Endrighi, Venuraju, Lahiri, & Steptoe, 2012) such as anxiety, depression and post-traumatic stress disorder (PTSD) (Czaja, Moss, & Mealer, 2012; Figley, 1995;). Subsequent physical health issues may also develop, including lack of energy and being accident prone (Coetzee & Klopper, 2010), increased inflammatory process (Goldman-Mellor, Brydon, & Steptoe, 2010), hypertension and coronary artery disease (Hamer et al., 2012; Cora, Partinico, Munafo, & Palomba, 2012), diabetes (Heraclides, Chandola, Witte, & Brunner, 2009; Heraclides, Chandola, Witte, & Brunner, 2012), obesity (Berset, Semmer, Elfering, Jacobshagen, & Meier, 2011; Fernandez, Su, & Winters, & PC, Liang, 2010), and gastrointestinal disorders (Konturek, Brzozowski, and Konturek (2011).

CF can lead to numerous negative outcomes within a healthcare organization (Boyle, 2011; Lombardo & Eyre, 2011) such as nurse burnout (Maytum, Heiman, & Garwick, 2004; Meadors, Lamson, Swanson, White, & Sira, 2009), apathy, a desire to quit, decreased productivity and staff turnover. CF can also lead to ineffective or deficient patient care, callousness and indifference toward patients and co-workers (Coetzee & Klopper, 2010), medical errors, poor patient outcomes and low patient satisfaction (Kutney-Lee et al., 2009; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004).

The purposes of this study were to determine:

- 1) The prevalence and severity of CS and CF among pediatric nurses working with various subspecialty populations.
- 2) Variations in prevalence and severity of CS and CF based on respondent demographics
- 3) Sources of CF in pediatric nurses and methods used to address CF

Methods

Design and Procedures

This cross-sectional survey of pediatric registered nurses (RNs) was conducted in a five-hospital system which included an urban pediatric tertiary care teaching hospital. The study was approved by the University of Louisville institutional review board (IRB) and the target institutions.

Survey packets (cover sheet, survey) were placed on pediatric units in areas frequented by RNs such as break rooms and cyber labs. A container was available on each unit for placement of completed surveys for a 2-week period in March, 2014. In addition, Web-based surveys using SurveyMonkey® were available during the same 2-week period. The Web-based survey opened with a cover page explaining the study, followed by screens with the survey questions. Surveys took approximately 10 minutes to complete. RNs were informed of the study primarily via emails and flyers.

Instruments

Participants completed the Professional Quality of Life Scale, Version 5 (ProQOL, V5) which assesses professional quality of life for those in the helping professions. Professional quality of life is a theoretical concept developed to analyze pathways of convergence between person environments (e.g. nurses), client environments (e.g. patients), and work environment (e.g. unit, hospital or system) (Stamm, 2010).

The ProQOL, V5 measures both CF and CS. CF includes both burnout and secondary traumatic stress (STS). Burnout can include feeling exhausted, frustrated, angry, or depressed. STS includes both direct trauma and secondary trauma from exposure to those who have directly experienced trauma. The ProQOL, V5 is a 30-item instrument assessing how often respondents experienced a particular situation in the workplace in the past 30 days. Each subscale includes 10 items that use a 5-point Likert type scale (1 = never, 5 = very often). Construct validity has been established. The Cronbach alpha reliabilities are: CS: .88; burnout: .75; and STS: .81. The items in each subscale are summed for a mean score. Higher scores on the CS indicate greater satisfaction in your ability to do your job. Higher scores on the burnout subscale indicate greater likelihood for burnout. Higher scores on the STS may indicate feeling overwhelmed with thoughts of the patients you have helped (Stamm, 2010). Demographic items concerning age, experience, work unit, position, education, race and ethnicity were gathered. In addition, two open ended questions asked respondents to describe a situation in which they experienced CF or burnout and the mechanisms used to deal with the situation (Yoder, 2010).

Sample

Participants were RNs, at least 18 years old, and worked in a pediatric setting in the target healthcare system. Of the approximately 700 pediatric RNs that were employed in the system, 239 completed the survey for a 34% response rate. Most participants were over 40 years old (52%), female (98%), Caucasian (95%), staff nurses (83%), and had over 5 years of experience as an RN (74%) (Table 1). The majority had at least a baccalaureate degree (70%), and worked in critical care (36%), medical/surgical units (18%), or surgical services (14%).

Data Management and Analysis

Hard copy surveys ($n = 53$) were entered into an SPSS-PC database. Online surveys ($n = 186$) were downloaded into SPSS-PC and merged with the hard copy SPSS-PC data base. The CS, burnout, and STS subscales were calculated using provided SPSS-PC syntax (Stamm, 2010). Five designated items were reverse scored, subscale items were summed, and raw scores were converted to z-scores and then to t-scores. Descriptive statistics describe the sample and summarized survey responses. Alpha level was set a priori at .05. Differences between demographic subgroups were analyzed using t-tests or ANOVA. Open ended questions were analyzed using content analysis techniques.

Results

Prevalence and Differences in CS, Burnout, and STS Among Pediatric Nurses

Of the 239 participants, 71.5% had moderate to high CS (Table 1). However, over one-quarter had low CS (28.5%), high burnout (29%), and high STS (27%). Characteristics of the nurses were analyzed to identify differences in subscale scores. Nurses aged 18 to 39 years had significantly lower levels of CS [$F(1, 23) = 15.00, p < .01$], higher levels of burnout [$F(1, 23) = 4.4, p < .05$] and STS [$F(1, 23) = 4.6, p < .05$] than those 40 years of age and older (Table 2). There were no differences on subscale scores based on education level. Caucasians had significantly higher CS scores [$F(1, 23) = 4.13, p < .05$] compared to other races. Staff nurses had significantly lower levels of CS [$F(1, 24) = 8.34, p < .05$] compared to nurses reporting their current position as "other". Nurses with 6–10 years of experience had significantly lower CS scores [$F(3, 23) = 3.7, p < .05$] compared to nurses with over 20 years of experience. There were statistically significant differences on CS [$F(8, 23) = 4.1, p < .01$] and burnout [$F(8, 23) = 2.26, p < .05$] scores when comparing nurses working on different hospital units. Nurses working in medical/surgical units had significantly lower CS scores compared to nurses working in pediatric ICU, surgical services, oncology, and other non-specified areas. Nurses working on medical/surgical units also had higher burnout scores compared to nurses working in pediatric ICU ($p < .05$).

Table 1 Distribution of compassion satisfaction, burnout, and secondary traumatic stress scores ($N = 239$).

	Compassion Satisfaction, n (%)	Burnout, n (%)	Secondary traumatic stress, n (%)
Low	68 (28.5)	55 (23.0)	52 (21.8)
Moderate	105 (43.9)	114 (47.7)	122 (51.0)
High	66 (27.6)	70 (29.3)	65 (27.2)

Note: Low, moderate, and high cut scores were set at the 25th and 75th percentile as determined by Stamm (2010).

Analysis of Comments

Nurses were asked to recount a situation in which they experienced compassion fatigue or burnout, and about half ($n = 117$) responded. Their stories and comments were analyzed for themes. Many nurses relayed stories of secondary traumatic stress due to frequent traumatic patient situations, including child abuse. One nurse said, "After working in the PICU for the majority of my career I experienced burnout from all the abuse victims that I cared for and so many I was unable to help save." Another noted, "Working in the ED on trauma has resulted in many experiences that have left me feeling this way. One time it was during a code for three children at the same time, none of them lived and later we found out that it was child abuse."

End of life situations, whether sudden or anticipated, are particularly difficult for pediatric nurses. The same empathy that makes them excellent caregivers can become an emotional burden. One nurse explained, "It has really bothered me (and still does) when we have patients expire and have to experience the emotions with the family. I have children myself and I put myself in the parents' position." Another recalled, "When I found out a patient I had taken care of a lot passed away at home after only being home 2 days, I was very heartbroken for his family and for that sweet boy. Then a few weeks later another baby I had taken care of at the same time passed away as well. The second loss was even harder because I was still grieving from the first loss."

Workload was a common concern with nurses citing patient acuity, difficult assignments, a large number of newer nurses, short staffing due to vacations, and fast pace as elements of workload stress. Taking care of very critical patients day after day was also a frequent trigger of CF and burnout. One nurse said, "I am trained in bone marrow transplant. This past winter, we had four kids here for over 100 days in very critical condition. Two have since passed. One is still here being cared for. The constant critical needs and status with minimal change became very stressful. I would wake up dreaming about patients."

Nurses were also asked what strategies they used to deal with the situations they described. One nurse said, "Overly dramatic teenagers burn me out. I do what I have to do then get out of their room." A few spoke of burying their feelings, like one nurse who explained, "You try to bury it or tell yourself that it's just fate. It's hard to deal with it sometimes because in the ED things happen so fast that you can't deal with it at the time and later you do not have the energy to. So it stays buried until it comes out at a later date, usually with tears, and you grieve, and then you just move on." A few others described somewhat risky strategies such as overeating, spending money, or remaining connected to families via social media after discharge. A few changed jobs. Many cried.

The majority of respondents reported positive coping strategies. Many nurses said they sought support from family, friends, coworkers and hospital chaplains and talked

Table 2 Participant characteristics, compassion satisfaction, burnout, and secondary traumatic stress T-scores (N = 239).

Characteristic	N (%)	Compassion satisfaction (M, SD)	Burnout (M, SD)	Secondary traumatic stress (M, SD)
Age				
18–39 years	112 (47.9)	47.3 (10.3)*	51.5 (9.8)*	51.5 (10.5)*
>40 years	122 (52.1)	52.1 (8.7)*	48.8 (9.9)*	48.7 (9.3)*
Sex				
Females	231 (97.9)	50.0 (10.0)	49.9 (10.0)	49.8 (10.1)
Males	5 (2.1)	45.9 (6.6)	56.1 (8.9)	53.0 (6.3)
Education				
Associate degree	72 (30.4)	50.8 (8.2)	49.9 (9.6)	48.3 (8.4)
Bachelors/Masters degree	165 (69.6)	49.4 (10.6)	50.1 (10.2)	50.7 (10.5)
Race				
Caucasian	222 (95.3)	50.3 (9.7)*	49.7 (9.7)	50.1 (10.1)
Other	11 (4.7)	44.0 (8.9)*	55.5 (11.4)	49.0 (8.8)
Current position				
Staff nurse	198 (83.5)	49.1 (10.2)*	50.2 (10.4)	50.1 (10.3)
Other	39 (16.5)	54.1 (7.6)*	48.9 (7.0)	49.9 (8.6)
Experience				
≤ 5 years	61 (25.7)	48.3 (11.3)	51.2 (10.7)	52.5 (11.0)
6–10 years	49 (20.7)	46.9 (8.6)*	51.9 (8.8)	51.0 (8.6)
11–20 years	45 (19.0)	51.8 (10.3)	48.2 (11.3)	48.8 (10.8)
≥ 21 years	82 (34.6)	51.8 (9.0)*	49.3 (9.2)	48.5 (9.2)
Work unit				
Pediatric ICU	52 (22.0)	50.4 (7.2) ^b	48.1 (10.1) ^b	51.6 (9.0)
Medical/Surgical units	43 (18.2)	44.0 (10.6) ^a	54.7 (8.9) ^a	51.9 (10.2)
Neonatal ICU	33 (14.0)	49.8 (10.3)	49.6 (10.4)	49.3 (9.0)
Surgical services	32 (13.6)	51.9 (8.6) ^b	47.7 (8.8)	47.6 (9.1)
Oncology	22 (9.2)	53.2 (10.2) ^b	51.4 (12.3)	50.3 (13.0)
Emergency department	19 (8.1)	50.4 (7.2)	50.4 (10.9)	49.9 (9.7)
Mother–Baby/Nursery	15 (6.4)	52.4 (7.9)	46.1 (7.3)	42.9 (11.5)
Psychiatry	6 (2.5)	45.0 (10.0)	51.4 (10.0)	52.0 (7.0)
Other	14 (5.9)	53.8 (6.9) ^b	49.0 (7.4)	51.7 (10.1)

Participants working in medical/surgical^a units had significantly different scores than those working in comparison units^b.

Notes: Subscale scores are presented as t-scores with a mean (M) = 50 and standard deviation (SD) = 10. ICU = intensive care unit.

* $p < .05$.

about their feelings with fellow nurses. Some used prayer to find peace or sought counseling, while others used exercise, humor and distraction. Many said they took one or more days off or requested a change of assignment. Some sought closure by attending the child's funeral. One nurse reported, "I run A LOT. Working out helps me relieve stress."

Discussion

According to [Bush \(2009\)](#) compassion is the core value of caregiving that provides nurses with passion, stamina, soulfulness and hopefulness in the face of illness and despair. However, continually dealing with the physical and emotional needs of others is stressful, and sometimes nurses ignore the signs of stress and do not attend to their emotional needs. This can lead to the insidious onset of compassion fatigue. Furthermore, after prolonged exposure to trauma and loss, nurses may begin to integrate their patients' suffering, increasing their stress and emotional pain. This can result in STS with symptoms similar to post-traumatic stress disorder

(PTSD). STS symptoms may include a change in perspective, recurrent memories, anxiety, insomnia, loss of control, and feelings of fear and helplessness.

Continual changes in the workplace as well as increased demands due to high census, high acuity and cost-containment pressures, can lead to burnout. Burnout brings about feelings of failure and exhaustion and leads to diminished caring, cynicism, decreased efficacy and demoralization ([Bush, 2009](#)). This, of course, impacts the quality of care provided to patients.

Given the personal, professional and organizational consequences of CF, STS and burnout, it was concerning to learn that nearly 30% of our nurse participants had low CS, high burnout and high STS. A few nurses described the impact CF was having on them and their capacity to care for others. One nurse said, "Every time I have had a patient die...this carried over into my life at home. I was able to function at work but when I got home I was completely exhausted and depressed for days and sometimes weeks, i.e. crying, not wanting to go

about my normal routines at home and withdrawing.” Another admitted, *“I started feeling burned out after 5 years in child psychiatry, began looking for a job change. [I was] unable to find new job despite interviews. In the 3 years since, I feel a steady decline in interest, compassion, and energy for my patient population. I am less engaged in therapeutic activities, teaching, unit morale, activities, etc.”* The implications for nurse health and safety, patient quality and satisfaction, and organizational outcomes such as engagement and turnover are potentially significant and demand a response.

While the results indicated that CS was significantly greater in Caucasians than those who self-reported as “other” race, the number of “other” race respondents was very low (n = 11) compared to the number of Caucasians (n = 222) making it difficult to draw conclusions regarding the clinical significance of this finding. Further research specifically targeting “other” races is needed to explore this in greater detail.

The nurses with the lowest CS and highest STS were those in the medical/surgical units and psychiatry, and medical/surgical nurses had significantly higher burnout. Nurses in oncology and mother/baby/nursery had the highest CS. This is consistent with findings of a similar study by [Sekol and Kim \(2014\)](#). This variation in results by work area may be due to differences in patient type, nurse characteristics, workload, unit culture, environment of care, or available support. A more in-depth study of each unit’s characteristics could provide a better understanding of the precursors to CF so that more focused strategies for prevention and management could be developed.

Our findings, and those of a similar study ([Sekol & Kim, 2014](#)), indicate that pediatric nurses with 4–10 years’ experience may be at greatest risk for burnout, while nurses with over 20 years’ experience and over 40 years of age had the highest CS. This may be suggestive of development of resilience as nurses mature and become seasoned in their practice. Resilience is the ability of individuals to bounce back or adapt successfully despite adverse circumstances. It is both an optimistic view on life and the ability to undergo personal change to survive and thrive ([Hart, Brannan, & Chesnay, 2014](#); [Zander et al., 2010](#)). [Wei and Taormina \(2014\)](#) identified four facets of resilience: determination, or firmness of purpose; endurance, defined as personal strength and fortitude along with the ability to withstand adversity without giving up; adaptability, which is the ability to be flexible and resourceful as well as the ability to cope and adjust; and recuperability, or the ability to recover and return to one’s previous condition. Resilience is characterized by hope, hardiness, coping, control, flexibility, adaptability, and a sense of competence, self-efficacy and coherence. The development of resilience by nurses has been linked to improved quality of life, better health and effective coping strategies ([Hart et al., 2014](#)) and may be protective against emotional exhaustion ([Garcia & Calvo, 2012](#)). Resilience is not necessarily dependent on age, education or experience ([Hart et al., 2014](#)), however experience contributes critical incidents to reflect upon, fosters changes in perception over

time, and provides knowledge of personal limitations and available resources for support ([Zander et al., 2010](#)). Resilient nurses acknowledge needing effective support from a range of resources, including family, friends, colleagues or organizational resources. They use their lived experiences and support from others to gain insight into themselves and their circumstances, helping them accept and acknowledge lessons and facts related to their work ([Zander, Hutton, & King, 2013](#)). Several of our nurses described resilient behavior. One nurse said, *“Sometimes I cry but I have just learned to move on and care for my own family at home. They make me happy and help me get over any bad situation at work. I have a very supportive husband who makes me laugh all the time.”* Another said, *“I try to take care of myself through diet and exercise, but frequently humor is the most helpful. I cannot allow myself to get wrapped up in every single case, or I would not have lasted this long.”* These comments and others demonstrate an ability to bounce back from difficult situations.

Implications

Various organizational approaches to assist nurses in dealing with STS and burnout are discussed in the literature. Educational programs designed to teach nurses about stress and coping and help them learn and practice self-care strategies have been summarized in the literature ([Medland, Howard-Ruben, & Whitaker, 2004](#)). [Mealer et al. \(2014\)](#) described a 12-week multimodal resilience training program for ICU nurses consisting of a 2-day workshop, expressive writing sessions, counseling sessions, mindfulness-based stress reduction, and an aerobic exercise regimen. Evaluation of the program demonstrated significant improvement in anxiety and depression, post-traumatic stress disorder, and resilience scores. In an Australian hospital, psychiatry nurse-run reflective practice groups have provided support for nurses, improved team cohesiveness and helped nurses develop reflective thinking skills ([Dawber, 2013](#)). One nurse in our study reported on the benefit of having a purposeful intervention on her behalf to help her cope with the death of a patient near her own age. She said, *“The day I was at work and found out about the patient’s death I was sought out by the Chaplin for our unit. She informed me she was going to have lunch with me and we were going to talk things out. This was one of the first patients I had known to pass away and I hadn’t had time to reflect quite yet. I think this intervention from the Chaplin was crucial in preventing me from burnout at that time and also started me on a path to figuring out my own coping mechanisms for the future.”*

Organizations may also want to invest in strategies that prevent or mitigate workplace-related burnout. Shared governance models, for example, empower nurses to have control over their practice, develop collaborative, supportive working relationships and establish trust. Building trust into the organizational culture improves job satisfaction and engagement, role clarity and empowerment. ([Hart et al., 2014](#)). The American Nurses Credentialing Center provides guidance on

enhancing the work environment through the Pathways to Excellence[®] and Magnet Recognition Program[®] (<http://www.nursecredentialing.org>), as does the American Association of Critical Care Nurses through their Healthy Work Environments Initiative (<http://www.aacn.org>).

Limitations

Findings from this study cannot be generalized beyond the respondents. While having surveys available both in hard copy and electronic forms increased our response rate, it is possible that participants completed more than one survey or that a non-RN healthcare provider completed a survey. While neither survey data nor anecdotal information supported this possibility, we cannot completely rule it out. To generalize to the population of pediatric nurses in this facility, a random sample survey should be completed in the future.

Conclusion

CF, burnout, and STS can negatively affect individual nurse quality of life and job satisfaction which can negatively impact patient care and organizational outcomes. Additional research is needed to better identify elements in the workplace that lead to CF, to develop effective interventions to reduce CF-related health issues (Meadors & Lamson, 2008), and to disseminate the findings in a manner that opens the discussions along the continuum from individual nurse interventions to systemic levels of policy-making. Analysis of consistencies and variations in CF and CS among nurses working with the same patient populations within the same work environment can help identify variables of risk and resiliency to be addressed in future research (Zander et al., 2010).

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