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ORIGINAL PAPER

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Compassion Fatigue and Compassion Satisfaction in Pediatric Intensive Care Professionals

Eleni Panagou¹, Evdokia D. Missouridou², Afroditi Zartaloudi², John Koutelekos², Evangelos Dousis², Chrisoula Dafogianni², Eugenia Vlachou², Eleni Evagelou²

¹Athens General Children's Hospital "P. and Aglaia Kyriakou", Athens, Greece

²Department of Nursing, University of West Attica, Athens, Greece

Corresponding author:

Evdokia Missouridou, Assoc. Prof., MSc, PhD, Department of Nursing, Faculty of Health and Caring Sciences, University of West Attica, E-mail: emis@uniwa.gr
ORCID ID: <https://orcid.org/0000-0002-0401-1749>.

ABSTRACT

Background: Paediatric ICU doctors and nurses' quality of professional life is influenced by the intense emotions and distress experienced when caring for suffering children and their families. **Objective:** The aim of this study was to examine the prevalence of compassion satisfaction (CS) and compassion fatigue (CF) in Paediatric Intensive Care Units in Greece. **Methods:** Out of 147 intensive care professionals in public hospitals in Greece completed the ProQOL-V scale as well as a socio-demographic and professional-life characteristics questionnaire. **Results:** Almost two thirds of participants reported medium-risk for CF (74.8%) while 23.1% and 76.9% of professionals expressed high or medium potential for CS respectively. More than half of doctors and nurses in paediatric ICUs report being overprotective towards members of the family as a result of their professional life and that their work-life affects their attitude towards life in general. **Conclusion:** Recognizing factors related to CF may support paediatric intensive care professionals in avoiding the costs of exposure to the trauma and loss experiences of patients and their families. A trauma-informed intensive care culture and continuing trauma-informed education may shield professionals from the erosive effects of lingering emotions which may trigger secondary traumatic stress symptoms and also facilitate adequate reflection on their emotional reactions in the landscape of intensive care.

Keywords: Paediatric intensive care unit, trauma, compassion fatigue, secondary post-traumatic stress.

1. BACKGROUND

Paediatric intensive and terminal care can be highly rewarding but at the same time overwhelmingly stressful or even traumatizing (1, 2). Paediatric intensive care has improved rapidly during the last decades due to advent of new means in medications, procedures and mechanical support (3, 4). Although mortality has been substantially reduced, many paediatric survivors experience long-term disabilities, poorer health status and higher readmission rates (5). Furthermore, a growing population of paediatric survivors suffer prolonged physical, cognitive, emotional, psychological, or social disabilities, an impact commonly described as *post-intensive care syndrome in paediatrics* (6). Children in ICU are hooked to machines and deprived of physical contact since they are rarely touched while children need to be hugged, loved, kissed or touched (7). A child's separation from his/her mother to whom he/she is attached, inflicts a characteristic trajectory of loss and grief reactions (protest, despair, apathy, withdrawal, generalized hostility) which in absence of a supportive environment may later cause proneness to transient and shallow relationships or alternating turning away with clinging behavior. Recently, the American Academy of Pediatrics (AAP) has emphasized the urgency and the necessary steps to foster the integration of trauma informed care into all paediatric contexts of care (1).

Within the context of intensive care units, paediatric patients and their families experience trauma in a many different ways such as

day-to-day experiences of life-threatening symptomatology, painful treatments, inappropriate sensory stimuli from a disruptive physical and social environment, fragmented sleep, stressful eating patterns, limited mobility and restriction in bed (8). Maternal separation is the most significant trauma experienced by all mammals and the foundation for cumulative toxic stress exposures, increase in autonomic activity, reduction in quiet sleep, complete loss of sleep cycling during the separation period (8, 9). On the other hand, paediatric patients, consciously or unconsciously, have a talent in decreasing adult self-defenses and finding partners in their daily life journey and therefore increase professionals' over-involvement. Compassion for children which -unlike immune Achilles- are vulnerable to traumatizing and loss experiences can cause compassion fatigue or secondary traumatic stress to paediatric intensive care providers (10-13). Furthermore, parents' feelings of helplessness may induce dependence on healthcare professionals for hope and direction resulting in these relationships assuming great value for the parents often beyond the needs of their child (14). As a consequence, health care providers may feel that they were dishonest to parents who relied on them while normal grief emotions may be unacknowledged or repressed at a conscious level in order not to interfere with their duties. If this type of denial is protracted, caring for seriously ill children may be experienced as incompatible with the natural order in life (2). Limited awareness of the dynamics of trauma on the part of healthcare professionals may diminish their ability to engage in an attentive and knowledgeable way with paediatric patients and their families (15). Overall, secondary traumatic stress and compassion fatigue constitute terms which denote often interchangeably the "cost of caring" for the professionals exposed to suffering individuals in health and social care fields. Indeed, high percentages of secondary traumatic stress have been found in paediatric care (10-13). Jung (16) suggests that "the doctor is effective only when he himself is affected". During their professional journey, wounded healers discover in their own emotional wounds a source of healing for those they care for, a process facilitating personal and professional authentic identity development (17). Recently, several studies focus on the positive aspects of compassionate care and the satisfaction derived from it which facilitate the development of resilience and personal growth in many fields of care (18). Nonetheless, limited studies have investigated compassion fatigue and compassion satisfaction of paediatric intensive care professionals in the landscape of trauma and loss (10-13).

2. OBJECTIVE

The present study is timely due to a heightened international interest in the quality of professional life of intensive care professionals, including the ones working in paediatric contexts; Furthermore, this study is the first one to address this topic in Greece. The present study aimed: a) to examine the risk for secondary traumatic stress/compassion fatigue and burn-out for paediatric intensive care professionals; b) to investigate compassion

satisfaction among paediatric intensive care professionals; and c) to illuminate the effects of socio-demographic and professional life characteristics on compassion fatigue and compassion satisfaction.

3. MATERIAL AND METHODS

Participants

Participants were 147 medical and nursing care providers in Greek PICUs. They all worked full time, in rotating shifts at public sector hospitals.

Procedure and ethical considerations

The study protocol was approved by the Scientific Committee of each hospital. All participants were provided with information on their right to refuse or to discontinue their participation. An anonymous self-administered questionnaire was then distributed to paediatric intensive care professionals. Data were collected between June 2018 and August 2018.

Measures

The Professional Quality of Life Questionnaire (ProQOL-V) developed by Stamm (19) was distributed to participants of the study. The ProQOL-V contains 30 items on a 5-point scale (from never to very often) and consists of three sub-scales: compassion satisfaction, burnout and secondary trauma that do not produce a composite score (19). The ProQOL-V culturally adopted Greek version has been shown to be produce reliable and valid results among nurses in Greece (20-21). In this study, the Cronbach's α value was 0.865 for compassion satisfaction, 0.751 for burnout, and 0.75 for compassion fatigue.

Data analysis

A descriptive analysis was employed to examine samples' characteristics. One-way ANOVA, and t-tests were used to explore significant differences in means, while Pearson and Spearman correlations coefficients guided the investigation of the strength of linear rela-

Characteristics	Mean \pm SD/n (%)
Age	42.42 \pm 8.75
Sex	
Male	22 (15)
Female	123 (83.7)
Position	
Intensivist specialist	32 (21.8)
Intensivist resident	9 (6.1)
Pediatrics resident	3 (2)
Pediatrician	6 (4.1)
Registered ICU nurse	83 (56.5)
Nurse assistant	12 (8.2)
Marital status	
Single	47 (32)
Married	96 (65.3)
Widowed/ Divorced/Separated	2 (1.4)
Number of children	
One	20 (13.6)
Two	53 (36.1)
Three	3 (2.2)
None	67 (45.6)

Table 1. Demographic Characteristics (N = 147).

Characteristics	n (%)			
	Very Often	Often	Sometimes	Never/Rarely
Shift work	68 (46.3%)	11 (7.5%)	8 (5.4%)	55 (37.4%)
Work affects life-attitude	28 (19%)	61 (41.5%)	39 (26.5%)	19 (12.9%)
Individual patient outcome affects health professional (HP)	19 (12.9)	47 (32)	61 (41.5)	20 (13.6)
Individual patient outcome results in HP's overprotectiveness towards HP's family members	33 (22.4%)	57 (38.8%)	32 (21.8%)	25 (17 %)
Patient death affects HP during shift	36 (24.5)	52 (35.4)	42 (28.6)	13 (8.8)
Communication with patients' family after discharge	5 (3.4%)	9 (6.1%)	22 (15%)	11 (75.5%)

Table 2. Work-related characteristics and attitudes (N = 147).

	Compassion Satisfaction	Burnout	Compassion Fatigue
M ± SD	37.22±5,78	25,38±5,08	25,47±5,19
High	34 (23.1%)	0 (0%)	0 (0%)
Moderate	113 (76.9%)	108 (73.5%)	110 (74.78%)
Low	0 (0%)	39 (26.5%)	37 (25.2%)

Table 3. Professional Quality of Life Scores and Frequencies (N = 147).

tions between variables. Additionally, linear regression analysis was employed to illuminate the relationship between personal and working-life variables and each of the three dependent variables: CS, BO, CF/STS. Statistical analyses were performed by the SPSS, Version 22.0. Variables with $p \leq .05$ were considered significant.

4. RESULTS

Overall, 147 nurses and doctors completed the questionnaires. Our sample was mostly female (83.7%) and married (65.3%). The mean age was 42.42 ± 8.75 years. Eighty-three nurses (56.5.1%) held a bachelor degree in nursing and twelve nurse assistants had completed a 2-year education in nursing care. Table 1 provides socio-demographic information for our sample.

The mean professional experience reported by participants was 17.78 ± 9.13 years while the mean professional experience in ICU was $12,27 \pm 9,13$ years. Table 2 provides further work-life characteristics and attitudes. Eighty-nine respondents (60.5%) thought that their work-life affected their attitude towards life in general, while 90 respondents reported being overprotective towards members of the family often (38.8%) or very often (22.4%). Eighty-eight respondents reported that patient death affected them during the shift often (35.4%) or very often (24.5%).

ProQOL-V scores

According to the norms provided by Stamm (19), the mean scores for our sample were "moderate to high" for CS ($37.22 \pm 5,78$) and "moderate to low" for BO ($25,38 \pm 5,08$) and STS ($25,47 \pm 5,19$). Most participants (based on t scores) expressed a moderate potential for CS (76.9%) and moderate risk for BO (73.5%) and STS (74.78%). None of participants expressed enhanced risk for CF and BO, respectively, while all participants reported moderate or high potential for CS. Table 3 presents ProQOL frequencies and descriptive statistics.

Correlations Between Demographic and Professional Characteristics and ProQOL scores

Overall, no statistical differences were found between

ProQOL scores and gender, age or years of working experience. Interestingly, paediatric intensivists reported higher levels of compassion satisfaction and lower levels of burnout than paediatric nurses working in ICUs. In contrast, our trainee intensivists presented higher levels of burnout. Shiftwork appeared to be associated with statistically significant higher levels of STS/CF ($p < 0.001$). Participants with higher education (doctorate degrees) experienced higher levels of compassion satisfaction and lower levels of burnout than did participants with lower education ($p < 0.001$).

5. DISCUSSION

The main aim of the present study was to examine compassion fatigue and compassion satisfaction of paediatric health professionals in intensive care units in Greece. Our findings suggest that most of our participants present moderate levels of secondary traumatic stress (74.8%) and moderate levels of burnout (73.5%), while they express high to average potential for CS (76.9%). Interestingly, almost two thirds of participants reported that their work-life affects their attitude towards life in general while being overprotective towards members of their family often or very often as a result of their work. In addition, one third of respondents reported that patient death affects them considerably during their shift.

Overall, our results are in line with previous literature reporting moderate levels of CF, STS and BO in combination to average levels of CS in paediatric respondents (10-13). Indeed, the concept of "compassion satisfaction" was presented by Stamm (19) as an important dimension of quality of a professional's life that should be always taken into consideration when deciding on the risk for compassion fatigue. However, the majority (60.5%) of our study participants reported that their experiences in the ICU environment often affected their attitude towards life and that they were affected by the severity and outcome of a paediatric patient during their shift. Paediatric intensive care providers are prone to experiencing CF without adequate time, space, and coping skills to deal with emotions emerging from unavoidable challenging clinical circumstances (10). Furthermore, health care providers emotional responses towards trauma and loss should be seen as both psychological and social processes prescribed, at least to some extent, by both explicit and implicit normative organizational rules regarding the ways team members are expected to cope with emotions at work and the type of contact a

professional has with a patient as well as the degree of emotional involvement in their relationship (2).

Additionally, we found that married paediatric health professionals reported a higher level of secondary traumatic stress and overprotective attitudes towards their own family. Married participants may have become parents or consider the possibility of becoming parents more often than single participants. Providers may be unprepared to deal with end-of-life issues when caring for children with chronic illness similar in age or gender to their own children. They also have to face invasive procedures and painful treatments necessary for the survival of children and the overwhelming feelings often experienced by their parents (14). Paediatric health providers may imagine themselves in the shoes of the patient in pain or the family. This process of empathic concern may result in increased anxiety and personal distress, and, consequently, may be positively correlated with STS (22).

Paediatric intensivists reported higher levels of compassion satisfaction and lower levels of burn-out than paediatric nurses working in ICUs. Nurses have expressed low job security, dissatisfaction with low wages and working conditions, which may contribute to decrease in compassion satisfaction (18). Nurses' risk for compassion fatigue is unique because they provide both initial and sustained response to patients and their families. However, the continuing stress of addressing the demanding care of patients and families without receiving adequate rewards may result in poor self-care and self-sacrifice beyond personal limits, which in turn can result in decreased compassion satisfaction (23, 24).

On the other hand, our trainee intensivists presented higher levels of burnout. This is an interesting finding, which may be attributed to limited professional experience and identification with patients. The particular finding may support the claim that health providers' repeated exposure to patient suffering may result in their becoming desensitized toward future suffering. This may lead to the belief that compassion fatigue decreases as years of job experience increase (25-26) and that it may be inversely related to an adaptive ability of experienced professionals with the paediatric ICU challenges and normative rules, that is not yet so noticeable in less experienced health providers. This may be also due to the fact that nurses experiencing psychological distress may refuse to participate in studies or may have abandoned their profession.

Participants with higher education (doctorate degrees) reported higher levels of compassion satisfaction and lower levels of burn-out than participants with lower education. Although previous research (11-13) did not report significant differences in proQOL scores in relation to the educational level, we speculate that higher levels of education may be associated with enhanced expectations for job satisfaction. Participants with a doctorate degree may also be able to fulfil their expectations for professional development or acquire knowledge and adequate coping skills in order to manage traumatic events and care challenges in the complex ICU environment without

being emotionally exhausted. This finding may, also, be due to the fact that participants with a doctorate degree, according to the results of the present study are mainly medical school graduates who have had higher levels of compassion satisfaction and lower levels of burnout than paediatric nurses working in ICUs.

This study did not find any statistical differences between compassion satisfaction, burnout or secondary traumatic stress and gender, age or years of working experience. Stamm (19) did not find any statistically significant relationship between proQOL scores and gender. Other studies examining the relationship between compassion satisfaction and the above variables reported inconsistent findings (12-13).

However, some limitations of the study need to be considered before generalizing the results. The study measured professional quality of life dimensions at a single point in time and it is possible that perceptions vary over time due to changes in personal and professional circumstances. The self-report questionnaire methodology introduced possible biases, including social desirability responding, individual differences in questionnaire items comprehension and differences in participants' emotional awareness. Furthermore, due to the subjective nature of the questions, it is possible that some participants may have been inclined to ignore compassion fatigue signs according to what they believed was socially desirable responding.

6. CONCLUSION

Although the risk for compassion fatigue in the present study was moderate, it clearly indicates a potential for enhanced CF scores if it is not promptly addressed. Screening intensive care professionals and brief interventions for those with high CF scores may prove to be protective shields for both 'wounded healers' and health care organizations (17). Acute stress and severe depressive symptoms associated with unacknowledged CF should be assessed. In addition, supportive organizational strategies and a trauma-informed professional milieu are necessary to support intensive care providers to express their experiences of frustration and loss in intensive care settings. Continuing trauma-informed education may help paediatric intensive care professionals to understand trauma dynamics, avoiding thus to absorb or internalize lingering emotions which may result in compassion fatigue (15). Trauma-informed care in the emotionally burdened contexts of paediatric ICUs may be a source of stress and grief for health care providers but also an arena of professional fulfillment and quality of life.

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