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Secondary traumatic stress among pediatric nurses: Relationship to peer-organizational support and emotional labor strategies

Einat Yehene, Ph.D [a,b,*], Adi Asherman, M.A [a], Gil Goldzweig, Ph.D [a], Hadar Simana, RN, MSc [b], Amichai Brezner, M.D [b]

[a] School of Behavioral Sciences, the Academic College of Tel Aviv – Yaffo, Israel
[b] Edmond and Lily Safra Children's Hospital, Sheba Medical Center, Israel

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ABSTRACT

Background: Even though the cost of caring is acknowledged in multiple helping professions, research into secondary traumatic stress in pediatric nursing remains limited. This study aimed to determine the prevalence of secondary traumatic stress among pediatric nurses and examine its correlation with demographics, perceived organizational support, peer support, and emotional labor strategies.

Design and methods: A total of 186 nurses working in a pediatric hospital completed questionnaires addressing secondary traumatic stress, perceived organizational support, peer support, and emotional labor strategies. Through correlational and mediation analyses, we explored the relationships between the study variables.

Results: Approximately 77.8% of the pediatric nurses surveyed exhibited moderate to severe secondary traumatic stress. Notably, the level of secondary traumatic stress did not correlate with demographic variables. Increased peer support was significantly associated with a heightened use of all emotional labor strategies (surface acting, deep acting, and natural expression) and with elevated levels of secondary traumatic stress. However, surface acting was the sole mediator of this relationship. Conversely, greater perceived organizational support correlated with decreased levels of surface acting and secondary traumatic stress, with surface acting serving as the mediator.

Conclusions: Pediatric nurses are greatly impacted by secondary traumatic stress. Enhancing organizational support and carefully assessing peer support can reduce this, by decreasing nurses' need to suppress or feign genuine emotions.

Practice implications: To enhance nurses' psychological well-being, healthcare institutions should raise awareness of secondary traumatization and foster a supportive organizational environment that prioritizes effective team emotional support and evaluates collegial emotional labor.

Introduction

Although work-related stress can adversely affect a wide range of professionals, nurses appear to be at greater risk of suffering from such effects. Continuous workloads, diverse responsibilities, and constant exposure to traumatic experiences significantly contribute to reduced work satisfaction and high turnover rates - both key contributors to nurse shortage worldwide (Nursing Solutions Inc, 2021; Zaghini et al., 2020). Consequently, literature has focused mainly on nurses` compassion fatigue, primarily burnout (Buckley et al., 2020; Zhang et al., 2018). However, more studies are necessary to explore other sources of stress.

To that end, this study focuses on Secondary Traumatization Stress (STS) in pediatric nursing. Stamm (2010) defines STS as stress symptoms stemming from indirect trauma exposure encountered across general caring professions. McGibbon et al. (2010) describe STS as a major type of stress that nurses face, often referred to as "the cost of caring." Higher levels of STS are considered a risk factor for compassion fatigue (Stamm, 2010). While existing research has extensively studied STS among adult nurses, revealing varied prevalence across specialties such as intensive care, oncology, and psychiatric (Bock et al., 2020; Lykins et al., 2021), only a few studies have addressed its presence in pediatric nursing. Specifically, Berger et al. (2015) linked STS to compassion fatigue, and Kellogg et al. (2018) reported that 50.3% of the 338 pediatric nurse participants experienced moderate to severe STS.

* Corresponding author at: School of Behavioral Sciences, The Academic College of Tel Aviv – Yaffo, P.O.B 8401, Tel Aviv - Yaffo, 61161, Israel.
E-mail address: einat.yehene@gmail.com (E. Yehene).

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Given STS's significant repercussions, including heightened depression, anxiety, job strain, and turnover (Arnold, 2020; Bock et al., 2020; Kelly, 2020), it is evident that more research is required to identify the predictors of STS in pediatric nursing.

Pediatric nursing: unique challenges

Pediatric nurses face unique emotional challenges, not just from dealing with children experiencing severe illnesses or end-of-life scenarios, but also from the compounded stress of interacting with anxious and distressed parents (Christian, 2020; De Almeida Vicente et al., 2016; Rodríguez-Rey et al., 2019). Unlike their physician counterparts, pediatric nurses often spend more continuous time with patients, leading to a deeper emotional and therapeutic engagement. This extended patient interaction amplifies their vulnerability to STS (Günüşen et al., 2018; Hamama-Raz et al., 2021). Accordingly, current literature suggests that struggles with maintaining therapeutic boundaries and achieving emotional separateness are common, which can further intensify this stress (Cargill, 2018; Mendes, 2014; Yehene et al., 2022). Recently, Kleis and Kellogg (2020) identified themes that revolved around the pressure to perform despite emotional tolls and the difficulty in separating personal life from traumatic experiences, as potential STS contributors.

Emotional labor and secondary traumatic stress

Nurses work in an emotionally intense environment, which not only predisposes them to STS but also demands continuous emotional regulation and the practice of emotional labor (Kim, 2020; Zaghini et al., 2020). 'Emotional labor' is defined as the act of adjusting one's emotions to meet the expectations and requirements of patients (Delgado et al., 2017; Hochschild, 1983). Such regulation of emotions is deemed essential in providing care (Schmidt & Diestel, 2014). Hochschild (1983) seminal work introduced two primary emotional labor strategies. Surface Acting (SA) involves disguising internal feelings while presenting external emotions in line with the other person's emotional state. Deep Acting (DA), conversely, entails modifying one's emotions to align with role requirements, which includes mirroring the other person's feelings (Grandey, 2000; Smith & Cowie, 2010). Emotional labor theorists, including Diefendorff et al. (2005), later introduced the concept of expressing emotions that are naturally felt. While this idea has been termed in various ways, it is sometimes referred to as natural emotions (Brown, 2011), denoting a strategy where genuine feelings align with role expectations without the need for acting. For clarity and consistency in our study, we use the term 'Natural Expression' (NE). While SA was found to increase burnout, emotional depletion, stress, and work withdrawal, DA was correlated with more patient and job satisfaction, organizational commitment, and connection with patients (Humphrey et al., 2015; Kim, 2020; Wu et al., 2018).

Only a few studies have examined the relationship between emotional labor strategies and STS, primarily focusing on adult nurses. These studies indicate that emotional labor is a contributing factor to STS (Cho & Kim, 2019; Kwak et al., 2020). Kim and Kim (2017) found that emotional labor accounted for 13% of the variance in STS among long-term care nurses. Similarly, in pediatric nurses, Hong and Yang (2015) identified emotional labor as a prominent factor for job stress, although STS was not assessed. This underscores the need for quantitative research on the link between emotional labor and STS in pediatric nursing.

The role of peer-organizational support in coping

Nurses' intense emotional responses can be attributed to several factors. These include the challenges of being parents themselves, which might amplify their empathy towards pediatric patients, feelings of incompetence in conveying difficult patient information, and the perception of inadequate institutional support (Lima et al., 2018; McGibbon et al., 2010). To cope, nurses employ various strategies. Some might suppress their feelings or seek support from colleagues (Berger et al., 2015), while others may avoid getting too attached to patients or even contemplate changing their career (e.g., Günüşen et al., 2018; Mok et al., 2020).

A notable finding from Cricco-Lizza's qualitative study (2014) is the emergence of the "sisterhood of nurses" as a focal source of camaraderie and mutual support, emphasizing its vital role in managing emotional labor in a pediatric setting. Such findings align with broader research, suggesting that both peer and organizational support are perceived as essential by pediatric nurses when navigating workplace emotional distress or second victim experiences (e.g., Berger et al., 2015; Finney et al., 2021). Moreover, developing supports has been suggested to decrease traumatic-events` stress among nurses (Busch et al., 2021; Mok et al., 2020) and other helping professions (e.g., Zhou et al., 2021). However, a quantitative study focusing on its effects in pediatric nursing is yet to be explored. Such an investigation should address both levels of support. The first, the team of peers as a resource for emotional expression (TREE), explores the extent to which nurses view their team as an avenue for sharing and processing difficult emotions from their professional roles. The second, perceived organizational support (POS), gauges the belief in how much the organization values their contributions and cares about their well-being (Allen et al., 2003; Rhoades & Eisenberger, 2002). Notably, the positive influence of POS on nurses' stressful challenges and organizational outcomes (increased job satisfaction, improved coping, and lower burnout) has been noted (e.g., Cao et al., 2016; Gab Allah, 2021; Zhou et al., 2021). However, peer support, especially the TREE construct, remains relatively uncharted despite nurses' expression of its need (Finney et al., 2021; Mok et al., 2020). Hence, this study introduces the TREE measure to quantitatively explore this concept, based on these themes.

The present study

In light of the intricate interplay suggested between nurses' STS, emotional labor strategies, and peer-organizational support, coupled with a notable scarcity in quantitative measures—particularly of supports such as POS and TREE in pediatric nurses—this study sought to: (1) explore STS among pediatric nurses who are highly exposed to trauma (prevalence and relationship to sociodemographics) and (2) examine the mediating role of emotional labor strategies within the relationship between STS and peer-organizational support (TREE and POS) across different pediatric wards. Understanding the interplay between these factors could help identify nurses' emotional regulation strategies and to formulate supportive interventions geared to enhance their well-being, as well as to cope with the negative organizational implications of such emotional depletion (e.g., numbness, turnover).

Method

In Yehene et al. (2022) cross-sectional study, we investigated pediatric nurses' approach towards working with children and families. This encompassed gathering data on professional quality of life, emotional labor, and peer-organizational support. The present paper conducts a secondary analysis of the data, introducing new variables not previously analyzed. Specifically, we focus on the prevalence of secondary traumatization and its relationship to emotional labor and peer-organizational support.

Setting, recruitment, and sample

Participants were recruited from the country's premier children's hospital situated in central Israel, part of the largest medical center in the Middle East. The hospital provides care to children ranging from infancy to adolescence, covering a vast spectrum of medical conditions—

from acute treatment of life-threatening ailments to comprehensive long-term rehabilitation.

The sample size determination was made using the "G*Power" computer software (Faul et al., 2007). The calculation was based on the maximum number of predictors in a single regression, encompassing both independent and mediator variables: STS, POS, TREE, SA, DA, and NE. Given a medium effect size, a power (1-Beta) of 0.95, and an alpha error probability of 0.05, the minimum required sample size for an expected medium effect size (F2) was determined to be 140 participants.

Registered nurses from all relevant departments were recruited on a voluntary and convenient basis. Out of the 215 nurses from 11 distinct units who participated in the study, 186 completed the questionnaires, reflecting a robust response rate of 86.5%. The breakdown of participants from pediatric departments was as follows: 33 from the general pediatric departments, specifically from units A and B (which are two sections of the same department), 9 from pediatric surgery, 19 from pediatric hemato-oncology (including outpatient clinic, day care unit, and inpatient ward), 31 from pediatric intensive care, 13 from the rehabilitation unit, 23 from pediatric cardiac critical care, 11 from the emergency room, 21 from the neonatal unit, and 26 from the premature unit.

Measures

Demographic questionnaire

We used a questionnaire with 11 items concerning age, gender, marital status, educational level, managerial and seniority role, as well as religious orientation.

Secondary Traumatization Stress (STS)- Professional Quality of Life Questionnaire – ProQoL-Version 5- Hebrew Language Version (Stamm, 2010)

The ProQoL is a 30-item measure designed to assess the positive and negative aspects of working in caregiving roles. It delineates the professional quality of life into two domains: Compassion Satisfaction and Compassion Fatigue. The latter is further subdivided into Burnout and Secondary Traumatic Stress (STS). Our research focused on the STS component, a 10-item subscale that quantifies the frequency of work-related secondary exposure to highly stressful or traumatic events. The STS subscale captures the symptoms of stress arising from witnessing others undergoing trauma or highly stressful events. Respondents rate their experiences over the previous 30 days on a 5-point Likert scale, ranging from 1 (never) to 5 (very often), with items such as, "I find it difficult to separate my personal life from my life as a nurse" and "I jump or am startled by unexpected sounds."

In this study, we adapted certain items to fit our research population better, replacing, for instance, "as a helper" with "nurse." The relevance and clarity of the items were further evaluated by a focus group of expert pediatric nurses representing five different hospital units. The final scores for each subscale are calculated by summing the item scores, yielding a range from 0 to 50; higher scores indicate greater levels of STS. These raw scores were then converted to z-scores and subsequently to t-scores. According to Stamm (2010), STS scores between 42 and 56 fall within the 25th to 75th percentiles, while scores above 57 indicate a risk for compassion fatigue necessitating further investigation. Stamm (2010) study reported a Cronbach's alpha of 0.81 for the STS subscale. In our study, the adapted scale yielded a Cronbach's alpha of 0.75, demonstrating good reliability.

Perceived Organizational Support (POS) - (Eisenberger et al., 1986)

The original POS scale consists of 30 items regarding the subjective perception of the support the respondent receives from the organization. Respondents indicate the extent of their agreement with each item on a 7-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Prior studies have provided evidence for high validity and high (0.93) reliability of the scale (e.g., Eisenberger et al., 1990). Based on Eisenberger et al. (2001) factor analysis, in the present study, we selected the six items related to the POS factor. For example, "The department takes pride in my accomplishments." The final score of each participant presents the mean score of the six items. A higher score indicates a higher level of POS. A trio of senior experts in pediatric healthcare—a physician, a nurse, and a psychologist—undertook the questionnaire's translation process. Each of them is proficient in both English and Hebrew and well-versed in pediatric nursing practices. They utilized a backward-forward translation method for utmost accuracy and also rephrased some items to better fit the current research population (for example, the word "organization" was replaced with the word "department"). Furthermore, the questionnaire items' clarity and relevance were further assessed by a focus group composed of experienced pediatric nurses from various hospital units. The adapted localized version had a Cronbach's alpha of 0.79.

Team as a Resource of Emotional Expression (TREE)

This two-item scale was constructed for the current study and aimed at assessing nurses' perceptions of their team as a context in which to share and express felt emotions stemming from their daily work. The measure consists of two questions, rated on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree): 1) "The staff in my department is a source of emotional support;" and 2) "If necessary, I know that I will always have a place to share difficult emotional experiences that arise during a shift." As part of the study tools' validation process, this scale was additionally reviewed for clarity and content by the focus group. We used the mean score of the two items, with a higher score indicating a higher level of TREE. For the two-item TREE scale, reliability was assessed using both Spearman-Brown and Pearson's correlation coefficients. The Spearman-Brown coefficient was 0.74, while Pearson's correlation was 0.78.

The Emotional Labor Scale for Teachers (TELTS) – Brown (2011)

This 18-item scale was used to assess the degree to which nurses use "emotional labor" in their daily work. This scale was initially created for teachers by Brown (2011), who integrated two prominent instruments in organizational psychology: the Emotional Labor Scale (Brotheridge & Lee, 1998) and the Emotional Labor Strategies Scale (Diefendorff et al., 2005). The integrated scale comprises two main parts: emotional labor display rules and emotional labor of teaching. For each question, respondents are asked to indicate how much they agree with the item, from 1 (never) to 5 (always). Brown (2011) reported high validity for the scale. The aforementioned trio of senior pediatric healthcare experts once again undertook the task of translating the questionnaire from English to Hebrew and adapting it contextually for pediatric nurses, employing a backward-forward translation method. This adaptation included specific changes such as replacing the word "teacher" with "nurse" and "student" with "patient". As before, the same focus group of experienced pediatric nurses validated its clarity and applicability within their practice to enhance validity. Cronbach's alpha for the adapted and modified scale was 0.78.

Surface Acting (SA). This standard 5-item subscale measures the level at which one portrays emotions that are not felt internally. For example, "To do my job, I pretend to have emotions that I think I should display." The total subscale score is the mean score of the 5 items, wherein higher scores reflect a greater portrayal of different emotions than are actually felt. According to Brown (2011), the SA scale had a Cronbach's alpha of 0.80, while in the present study, the adapted scale yielded good reliability ($\alpha = 0.87$).

Deep Acting (DA). This 3-item subscale measures the extent to which emotions are modified to comply with the required emotional expressions as dictated by the organization. For instance, "I try to actually experience the emotions that are required of me." The total subscale score is the mean score of the 3 items, wherein higher scores reflect a greater change in emotions to meet the organizational demands. According to Brown (2011), the DA scale had a Cronbach's alpha of 0.70, while in the present study, the adapted scale obtained similar reliability ($\alpha = 0.65$).

Natural Expression (NE). This 3-item subscale measures the level at which one expresses emotions as they are felt, with no acting required. For example, "The emotions I express to patients are genuine." The total subscale score is the mean score of the 3 items, wherein higher scores reflect more authentic expressions of emotions. Brown (2011) reported a Cronbach's alpha of 0.73 for the NE, while in the present study, the adapted scale obtained similar reliability ($\alpha = 0.77$).

Data collection

Data collection took place between July and August 2018. In each department, the Head Nurse informed the nurses about the study, offering them an opportunity to volunteer to participate. Research assistants distributed the questionnaires to all nurses during both day and night shifts, accompanied by a cover letter that reassured their anonymity and emphasized voluntary participation. Nurses were instructed to deposit their completed questionnaires into boxes stationed throughout the hospital. Access to these boxes was limited strictly to the research team members.

Data analysis

Statistical analyses were conducted using SPSS version 25 (SPSS Inc., Chicago, USA). All tests undertaken were two-tailed with a significance level (α) set at 0.05. Descriptive statistics were employed to summarize survey responses and delineate sample characteristics. Scale scores were determined for each of the study's variables. The STS subscale scores' computation adhered to the SPSS-PC syntax detailed in the ProQoL manual (Stamm, 2010), inclusive of the division for cut-scores. Pearson and point bi-serial correlations assessed relationships between the variables. Mediation analysis was conducted using the PROCESS macro for SPSS model 4 (Hayes, 2018). The initial tested model identified TREE as the independent variable, with SA, DA, and NE functioning as parallel mediators and STS as the dependent variable. In the subsequent model, POS was the independent variable, SA acted as a mediator, and STS remained the dependent variable. For the indirect effects' confidence intervals (CI), we used 5000 bootstrap samples.

Ethical approval

Approval of the research protocol was obtained from the IRB of the Sheba Medical Center (no. 5066–18-SMC) and the ethics committee of the participating academic institution (no. 2019151).

Results

Missing data considerations

In the returned surveys, twelve had significant omissions in the STS or EL questionnaire. Following guidelines (Brown, 2011; Stamm, 2010), participants not meeting the response criteria (66% for Emotional Labor and 90% for ProQoL-STS) were excluded. This adjusted the effective response rate to 80–84% per questionnaire. While the study involved 186 nurses, the sample for individual questionnaires varied between 178 and 186. Missing values were not imputed for TREE and POS questionnaires.

Participants' characteristics

Table 1 summarizes the socio-demographic and professional characteristics of the nurses in this study. The majority were women (84.4%) with an average age of 36.53 years. Most participants were married (64.5%). On average, they had 10.11 years of nursing experience, of which 9.20 years were specifically in pediatric nursing.

Table 1
Sociodemographic and Professional Characteristics of the Study Sample.

Characteristics		n	%	Range	M	SD
Age				24–64	36.53	10.36
	18–35	110	59.1	–	–	–
	36	76	40.9	–	–	–
Gender				–	–	–
	Male	29	15.6	–	–	–
	Female	157	84.4	–	–	–
Marital Status				–	–	–
	Single	53	28.5	–	–	–
	Married	120	64.5	–	–	–
	Divorced	6	3.2	–	–	–
	Widower	1	0.5	–	–	–
	Single-Parent	3	1.6	–	–	–
	Other	3	1.6	–	–	–
Religion				–	–	–
	Religious	25	13.4	–	–	–
	Traditional	38	20.4	–	–	–
	Non-Religious	115	61.8	–	–	–
Managerial role				–	–	–
	yes	46	24.7	–	–	–
	no	140	75.3	–	–	–
Seniority in nursing				0.01–42	10.11	11.12
Seniority in pediatric nursing (years)				0.01–42	9.2	10.36
	0–5	102	54.8	–	–	–
	5.1–15	42	22.6	–	–	–
	15.1+	42	22.6	–	–	–

Notes: $N = 186$. Values are expressed as numbers (%). % do not add up to 100% due to rounding.

Prevalence of STS

Based on the questionnaire cut-off scores for STS severity level (Stamm, 2010), 20.3% ($n = 37$) of pediatric nurses scored low for STS, 49.5% ($n = 92$) scored moderate for STS, and 28.3% ($n = 53$) scored high for STS.

Correlational analysis

The complete correlation matrix for the study variables is displayed in Table 2, which also includes the mean and standard deviation (SD) of these variables.

As can be seen in Table 2, when considering sociodemographic variables, there was no significant correlation between age, gender, seniority in nursing, or seniority in pediatric nursing and pediatric nurses' STS levels. However, a significant negative correlation was observed with management, suggesting that nurses in managerial roles reported somewhat elevated STS levels compared to those in non-managerial roles.

Moreover, as Table 2 show, TREE had a significant positive correlation with STS, indicating that the higher the perception of the team as being a resource for emotional expression and sharing, the higher the levels of STS nurses reported. Conversely, POS had an inverse significant relationship with STS, indicating that the higher the perception of the department as being supportive, the lower the levels of STS nurses reported. Additionally, TREE had a stronger significant positive correlation with SA, DA, and NE, suggesting that a higher perception of TREE aligns with the utilization of all three emotional labor strategies. Notably, POS had a significant negative correlation only with SA, indicating that a higher perception of organizational support may be linked to reduced levels of SA. Finally, both SA and DA showed positive relationships with STS, with SA having a stronger relationship, indicating that the more these emotional labor strategies are employed, the higher the STS level nurses reported.

Mediation analysis

First, we tested the mediating role emotional labor strategies (DA, SA, and NE) play in the relationship between TREE and STS (see Fig. 1).

Table 2
Descriptive Statistics and Correlations for Study Variables and Sociodemographic Factors.

		n	M(SD)	1	2	3	4	5	6	7	8	9	10
1	Age	186		–									
2	Gender[a]	186		0.06	–								
3	Management[b]	186		−0.08	−0.01	–							
4	Seniority in pediatric nursing	186		0.88**	0.03	−0.14	–						
5	Seniority in nursing	186		0.89**	−0.03	−0.15*	−0.97**	-					
6	Secondary Traumatic Stress	182	50.00 (10.00)	−0.08	0.05	−0.16*	0.03	−0.02	–				
7	Deep Acting	184	2.88 (0.82)	−0.09	−0.06	0.06	−0.08	−0.08	0.16*	–			
8	Surface Acting	182	2.12 (0.83)	0.04	−0.07	−0.11	0.03	−0.07	0.35**	0.32**	–		
9	Natural Expression	184	3.36 (0.94)	−0.03	−0.10	0.01	−0.08	0.03	0.12	−0.01	−0.06	–	
10	TREE	183	3.89 (0.62)	0.05	0.00	−0.03	0.05	0.07	0.17*	0.21**	0.28**	0.18*	–
11	POS	178	5.19 (0.93)	0.22**	0.01	−0.05	0.23**	0.21**	−0.16*	0.05	−0.15*	0.08	0.01

Note. POS = Perceived Organizational Support; TREE = Team as a Resourse of Emotional Expression. aCoded 1 = Male, 2 = Female. bCoded 0 = Managerial role; 1 = no managerial role.
***p < 0.01. *p < 0.05.*

As presented in Fig. 1, the analysis indicates that the path linking TREE to SA and the path linking SA to STS were both statistically significant. The path linking TREE and DA was statistically significant, but the path linking DA and STS was not. Lastly, the path linking TREE and NE and the path linking NE and STS were both statistically significant. The significant total effect of TREE on STS was reduced to non-significance in the direct model.

Bootstrapping showed a significant result for the total indirect effect [B = 1.11, SE = 0.30, 95% CI: 0.56, 1.75] as well as for SA [B = 0.79, SE = 0.27, 95% CI: 0.31, 1.39], but a non-significant effect for DA [B = 0.10, SE = 0.14, 95% CI: −0.15, 0.43] and NE [B = 0.22, SE = 0.15, 95% CI: −0.01, 0.57]. Approximately 17.3% of the variance in STS was explained by the model's variables [F(5, 172) = 7.19, $p < 0.0001$, $R = 0.416$].

Similarly, we first examined the mediating role of all three emotional labor strategies (DA, SA, and NE) in the relationship between POS and STS. Despite the significance of the model, bootstrapping for indirect effects was insignificant for the total indirect effect [B = −0.18, SE = 0.16, 95% CI: −0.50, 0.13] and significant only for SA [B = −0.27, SE = 0.13, 95% CI: −0.55, −0.03], suggesting that a model with SA alone as a mediator would be preferable. Therefore, in the next step, we tested the mediating role the emotional labor strategy of SA plays in the relationship between POS and STS (see Fig. 2).

As presented in Fig. 2, the analysis showed that the path linking POS to SA and the path linking SA to STS were both statistically significant. The significant total effect of POS on STS in the direct model was reduced to non-significant. Bootstrapping for the indirect effects of SA was significant [$B = -0.29$, $SE = 0.13$, 95% CI: −0.58, −0.03]. Lastly, approximately 14.5% of the variance in STS was explained by the model's variables [F(3, 166) = 9.42, $p < 0.0001$, $R = 0.381$].

Discussion

Studies addressing STS in pediatric nursing rarely exist. In this study, we explored the prevalence of STS, its relationship to nurses' demographics, and the impact of peer-organizational support and emotional labor strategies on STS.

Prevalence of secondary traumatization

The majority of our sample, 77.8% of the nurses, faced a moderate-to-high level of STS, which puts them at risk for compassion fatigue (Stamm, 2010). These rates align with other studies on pediatric nurses. Using the same questionnaire, Berger et al. (2015) reported a 78.2% moderate-to-severe STS rate, Günüşen et al. (2018) reported 40.6% of high-risk levels of STS, while Kellogg et al. (2018) found a rate of 50.3% using a different tool. Importantly, these STS rates surpassed those reported in other nursing specialties (e.g., Arimon-Pagès et al., 2019; Bock et al., 2020; Lykins et al., 2021).

The heightened prevalence of STS in pediatric nursing can be attributed to various factors. Due to the distinct nature of their role, pediatric

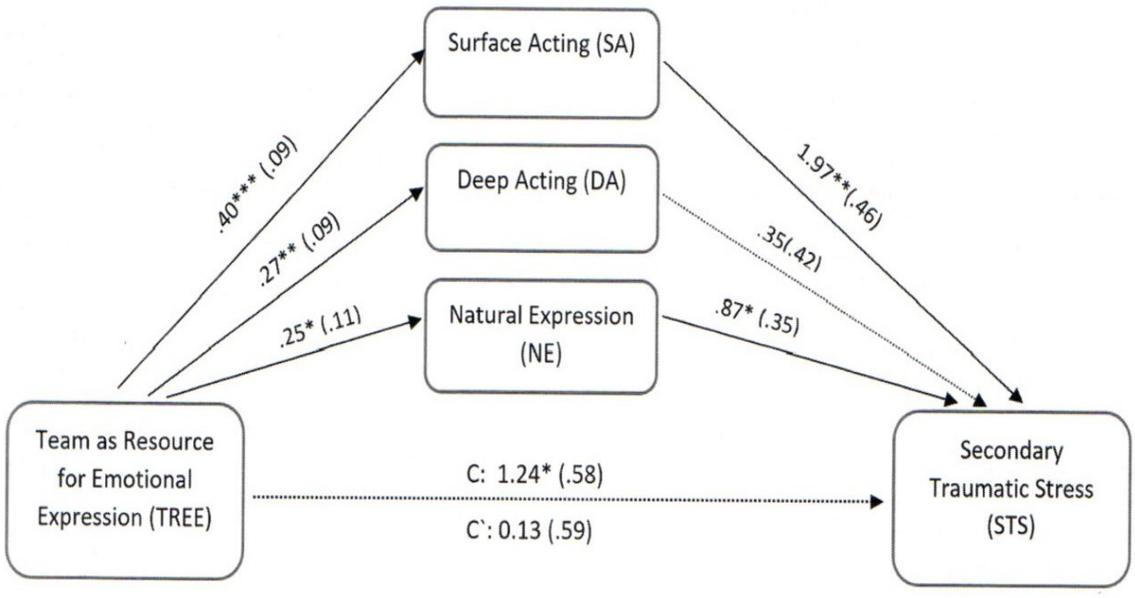

Fig. 1. Mediation model of the relationship between TREE and STS as mediated by SA, DA and NE.
Note: $N = 178$. Mediation model of the relationship between TREE and STS as mediated by SA, DA, and NE. Values are the regression coefficients after controlling for managerial role. SE are noted in parentheses. $p < 0.001$ ***, $p < 0.01$ **, $p < 0.05$*.

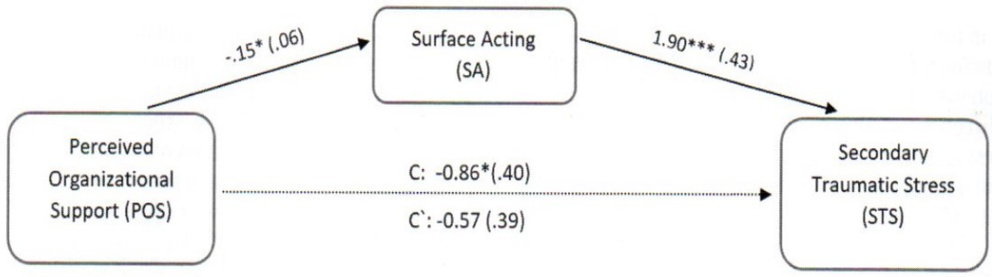

Fig. 2. Mediation model of the relationship between POS and STS as mediated by SA.
Note: $N = 170$. Values are the regression coefficients, controlling for managerial role, with SE in parentheses. $p < 0.001$ ***, $p < 0.01$ **, $p < 0.05$*.

nurses often confront emotionally challenging situations, such as witnessing children's suffering and the subsequent distress of their parents (e.g., De Almeida Vicente et al., 2016; Rodríguez-Rey et al., 2019). The inherent vulnerability of children, who represent innocence and potential, enduring physical and emotional pain can deeply unsettle nurses and might disrupt their assumptive worlds (Janoff-Bulman, 1989). While all nurses are predisposed to STS due to consistent exposure, empathy, bonding, and personal factors (Arnold, 2020), pediatric nurses encounter added stress from the often-extended duration of children's illnesses or treatments. The family-child-centered (FCC) approach in their care frequently results in deeper engagement, occasionally blurring the boundaries between professional responsibility and emotional involvement (Yehene et al., 2022), thereby potentially heightening susceptibility to STS.

Secondary traumatization and demographics of nurses

We found no correlation between STS and pediatric nurses' demographics, consistent with Kellogg et al. (2018). Similarly, in Günüşen et al. (2018) study, STS levels did not differ according to demographic variables among nurses working with chronically ill children, but it was found that nurses over the age of 40 years were at greater risk. However, in a meta-analysis conducted by Cavanagh et al. (2020) on health care providers, the relationship between compassion fatigue and most demographic variables, such as years of experience and specialty, was either not statistically significant or unclear. These equivocal findings underscore the need for deeper exploration, especially considering the high nurse dropout rate impacting age diversity. For instance, our study's age distribution reveals that approximately 48% of nurses fall between 24 and 34 years, 24% between 35 and 44 years, and the remaining 28% are aged 45 to 64 years. The notable decline in nurse representation after 34 years suggests a potential high dropout from the profession, possibly linked to STS. Younger nurses, who form the majority, might be more susceptible to STS due to their relative inexperience, limited coping strategies, or heightened emotional response to patient adversities. While the older age groups are less represented, they still demonstrate significant STS levels, underscoring the profession's persistent emotional challenges across different career stages.

Notably, in this study, nurses with managerial positions showed a higher level of STS than those in non-managerial positions. Examining the STS distribution, managers in our study reported nearly equal counts for medium STS levels ($n = 19$) and high STS levels ($n = 19$), whereas non-managers predominantly fell into the medium STS category. A smaller proportion of managers (17%) indicated low STS compared to non-managers (25%). Their multifaceted roles, from handling administrative tasks to managing patient trauma, combined with team welfare responsibilities, could heighten their STS. However, this finding might be specific to our sample and requires further exploration.

The role of team-based emotional support versus organizational support

Additionally, TREE and POS were examined as peer-organizational supports. This study quantified TREE for the first time. The results showed no association between these two constructs and demonstrated different impacts on STS, as will be further discussed below. This may suggest that distinguishing between these two types of support might prove beneficial in practice. However, more studies that quantify team and organizational support among pediatric nurses are needed to further validate this direction.

The interplay of team-based emotional support, emotional labor strategies, and secondary traumatization

The significant positive correlation between TREE and all three emotional labor strategies - SA, DA, and NE - suggests that the more nurses perceive their peers as a source of emotional support, the more they mask genuine feelings, adjust their inner emotions to comply with the required ones, or simply express their natural feelings. Notably, despite the ability of peer support platforms to encourage nurses to "let their hair down," such mirroring platforms can evoke comparisons to peers. Hearing how others cope can teach a nurse the rules of right and wrong, causing the nurse to either suppress their true emotions or encouraging them to delve inward to genuinely modify their emotions to align with the expected ones, thereby resulting in elevated levels of surface and deep expressions. This exemplifies the argument of Theodosius (2008), who posited that nurses also engage in emotional labor with their colleagues ("collegial emotional labor"), as well as with patients and their families ("therapeutic emotional labor") or when performing various professional procedures ("instrumental emotional labor") (McQueen, 2004; Theodosius, 2008). Additionally, this finding is consistent with studies suggesting that peer interactions can be more demanding (Glasø & Einarsen, 2008) and that peer emotional labor strategies play a significant role in nurses' turnover intentions (Becker et al., 2017).

Moreover, the significant positive correlation between TREE and STS suggests that either peer support may enhance STS or that nurses who experience a higher initial level of traumatic stress will seek their teams' emotional support more often. Kellogg et al. (2018) also indicated that emotional support positively predicted STS among pediatric nurses. Peer support, while offering emotional solace and camaraderie (Finney et al., 2021), can be a double-edged sword in managing trauma exposure. The mutual rumination peers engage in, due to shared stressors, might amplify negative emotions, potentially exacerbating STS. This duality could explain the varied utilization of such support by nurses (Berger et al., 2015) and explain why some nurses opt for breaks from emotionally charged discussions (Cricco-Lizza, 2014), questioning the consistent benefits of emotional venting (Rodríguez-Rey et al., 2019). Either way, more research is needed to understand this complex dynamic to further validate the direction of our findings.

Notably, the correlation found in the present study between STS and emotional labor strategies was consistent with previous studies, indicating that higher identification and empathic feelings (DA) but mostly the higher need to suppress true emotions (SA) may contribute to higher vulnerability to STS (Kim, 2020; Kim & Kim, 2017). However, mediation analysis indicated that only SA mediated the relationship between TREE and STS, whereas higher TREE was associated with higher

use of SA, which, in turn, was associated with higher STS. This finding highlights the prominent role SA plays compared to DA in this context. Masking true emotions can be psychologically taxing and heighten vulnerability to STS. In contrast, deep acting seeks genuine emotional alignment, making it less exhausting. The consistent facade of SA can lead to emotional burnout, and this inauthenticity can create a feedback loop with patients and colleagues, amplifying the strain on well-being. It also confirms prior findings that associate SA but not DA with negative events and emotions (Zapf et al., 2021) and a high turnover rate among employees due to resource depletion (Fouquereau et al., 2019).

The interplay of organizational support, emotional labor strategies, and secondary traumatization

The significant negative correlation between POS and STS suggests that POS serves as a mitigating factor against STS, a finding consistent also with prior studies (e.g., Gab Allah, 2021; Zhou et al., 2021). When nurses perceive their contributions and well-being are recognized by their organization, it nurtures feelings of belonging and visibility, potentially establishing a protective shield around them. Such acknowledgment might foster a heightened sense of psychological safety, encouraging open communication about stressors. Being valued in this way could provide them with crucial coping resources, reducing feelings of isolation often linked with STS. Moreover, enhanced POS might amplify a nurse's sense of empowerment and validation, countering feelings of helplessness. This combination of acknowledgment and resources potentially equips nurses for better trauma processing, possibly decreasing the onset or intensity of STS. This also resonates with the idea that coping techniques, other than emotion-focused coping such as "venting," prove more beneficial (Hamama-Raz et al., 2021).

The correlational analysis also indicated that a higher POS was significantly linked to a reduced use of SA. Mediation analysis further validated SA as a mediator between POS and STS, suggesting that as nurses experience more POS, they rely less on surface acting, subsequently reporting lower STS. Several interpretations can be drawn from this finding. Although our study focused on organizational support, considering the broader context of workplace support is essential, especially given the limited direct literature on POS. Social support at work is widely regarded as a significant protective factor under stressful conditions (Günüşen et al., 2018; Liao et al., 2022). People who perceive stronger support often possess the emotional tools to engage in emotional processing, navigating their feelings more adeptly (Hawkley & Cacioppo, 2010). While POS and general social support are distinct, similarities exist. An enhanced sense of visibility, empathic care, and belonging, possibly nurtured by POS, can enhance commitment, promote safe communication, and reduce forced emotional expression. In its absence, there might be an increased need to align with emotional norms, heightening emotional pretense. Persistent inauthentic emotions can lead to emotional blunting or numbing (Grandey, 1999), depleting resources for emotional processing and coping with indirect trauma, thereby raising the odds of STS manifestation. In essence, SA might function as a protective mechanism, faking emotions without internalizing them, but organizational protection allows nurses to express and process the emotional challenges they face (see also Peng et al., 2022), which may stave off STS.

In this study, TREE and emotional labor strategies accounted for 17.3% of the variance in STS, while POS and emotional labor strategies accounted for 14.5%. These figures align with Kim and Kim (2017), who found that emotional labor strategies explained 13.5% of the variance in STS.

Limitations

Despite its importance, our study has some limitations. Kellogg et al. (2018) found that social desirability negatively predicted STS, indicating that the nurses' answers were presumed to be correct, which could cause STS levels to be underestimated. In this study, STS prevalence does not suggest such bias, but future studies should measure social desirability to gain more accurate estimates and assess its impact on organizational support. While our study encompassed various hospital departments, the representation of nurses from each department was not proportionate to their actual sizes within the hospital. Some departments were notably overrepresented in our sample. Additionally, there were insufficient participants from certain departments to conduct a department-specific analysis. We translated the TELTS (i.e., emotional labor) scale and POS for this research, and both may benefit from additional validation in the future, especially as the reliability of DA was on the lower threshold at 0.65. Moreover, the limited research on natural expression (Brown, 2011) challenges the precise characterization of this strategy, especially with respect to STS, suggesting a deeper investigation is required. Lastly, our study uniquely attempts to quantify the different levels of support nurses can receive in their workplace. However, the complexity of peer support and its distinction from organizational support in relation to STS should be further explored in future studies, also using quantitative methods.

Practice implications

The high prevalence of secondary traumatic stress in pediatric nurses underscores the need for targeted interventions. Addressing this form of stress is vital for nurses' well-being, care quality, and staff retention. Left unaddressed, it can lead to compassion fatigue, deteriorate care quality, and prompt experienced nurses to reconsider their career. The study has several implications for nursing practice aimed at mitigating this stress:

1. Pediatric nurses may benefit from more organized peer support, either through professional assistance or formalized programs. These interventions should cultivate an "open but safe" environment, free from self-criticism and peer judgment.
2. Increased focus should be directed towards the emotional labor within teams, often termed as "collegial emotional labor," and the significance of genuine emotional responses. This is particularly crucial considering their positive effect on the challenges associated with secondary traumatic stress (Becker et al., 2017; Fisk & Friesen, 2012).
3. As inauthentic emotional displays have been shown to be the sole mediator in the relationship between peer-organizational support and secondary traumatization, psycho-education interventions should focus on increasing awareness of the costs of suppressing/hiding true emotions. They should also assist nurses in finding the inner boundaries they need to avoid faking emotions, and help them work through their feelings deeply—but not so deeply as to overidentify with them.
4. Departments should continually promote perceived organizational support due to its positive effect on inauthentic emotional displays, secondary traumatization, and its potential to reduce dropout rates. Enhancing perceived organizational support can be pursued in several ways. First, regular feedback sessions offer nurses an opportunity to voice their experiences and concerns. When paired with specific training programs, like those focused on trauma-informed care and emotional intelligence, these sessions can strengthen nurses' skills and resilience. Additionally, ensuring access to specialized counseling and mental health services is pivotal, giving nurses a safe environment to process trauma and stress. To further instill a sense of appreciation and acknowledgment, it's essential for organizations to regularly recognize nurses' achievements and contributions. Flexible work arrangements can play a vital role in preventing compassion fatigue, while open communication channels can help nurses feel heard and validated. Lastly, incorporating nurses in decision-making processes taps into their invaluable insights and augments their sense of belonging and significance within the organization.

Conclusions

By examining secondary traumatization in pediatric nursing, our study demonstrates the substantial challenges this profession faces, as evidenced by the pronounced prevalence of STS. The intricacies associated with demographics, especially managerial positions, require further elaboration. While team-based emotional support might appear as a protective buffer, we suggest it can paradoxically exacerbate traumatic distress by increasing the pressure to mask true emotions. Most notably, perceived organizational support emerges as a decisive factor. Its presence or absence can significantly influence the challenges of expressing genuine emotions, emphasizing the critical role of institutional support and the perceived protective shield in efforts to provide relief to pediatric nurses. Future studies should engage in assessing the efficacy of the suggested interventions for promoting nurses' satisfaction and well-being in both the short and long term.

Credit statement

Einat Yehene: Conceptualization, Formal Analysis, Methodology, Resources, Writing - original draft; **Adi Asherman:** Formal Analysis, Writing - review & editing. **Gil Goldzweig:** Formal Analysis, Validation; Writing - review & editing; **Hadar Simana:** Conceptualization, Methodology, Resource, Writing - review & editing; **Amichai Brezner:** Conceptualization, Methodology, Writing - review & editing.

Declaration of Competing Interest

None.

References

Allen, D. G., Shore, L. M., & Griffeth, R. W. (2003). The role of perceived prganizational support and supportive human resource practices in the turnover process. *Journal of Management, 29*(1), 99–118. https://doi.org/10.1177/014920630302900107.

Arimon-Pagès, E., Torres-Puig-Gros, J., Fernández-Ortega, P., & Canela-Soler, J. (2019). Emotional impact and compassion fatigue in oncology nurses: Results of a multicentre study. *European Journal of Oncology Nursing, 43*, Article 101666. https://doi.org/10.1016/j.ejon.2019.09.007.

Arnold, T. C. (2020). An evolutionary concept analysis of secondary traumatic stress in nurses. *Nursing Forum, 55*(2), 149–156. https://doi.org/10.1111/nuf.12409.

Becker, W. J., Cropanzano, R., Van Wagoner, P., & Keplinger, K. (2017). Emotional labor within teams: Outcomes of individual and peer emotional labor on perceived team Ssupport, extra-role behaviors, and turnover intentions. *Group & Organization Management, 43*(1), 38–71. https://doi.org/10.1177/1059601117707608.

Berger, J., Polivka, B., Smoot, E. A., & Owens, H. (2015). Compassion fatigue in pediatric nurses. *Journal of Pediatric Nursing, 30*(6), e11–e17. https://doi.org/10.1016/j.pedn.2015.02.005.

Bock, C., Heitland, I., Zimmermann, T., Winter, L., & Kahl, K. G. (2020). Secondary traumatic stress, mental state, and work ability in nurses—Results of a psychological risk assessment at a university hospital [original research]. *Frontiers in Psychiatry, 11*. https://doi.org/10.3389/fpsyt.2020.00298.

Brotheridge, C. M., & Lee, R. T. (1998). On the dimensionality of emotional labor: Development and validation of an emotional labor scale. *First conference on emotions in organizational life* San Diego.

Brown, E. L. (2011). *Emotion matters: Exploring the emotional labor of teaching.* University of Pittsburgh.

Buckley, L., Berta, W., Cleverley, K., Medeiros, C., & Widger, K. (2020). What is known about paediatric nurse burnout: A scoping review. *Human Resources for Health, 18*, 1–23. https://doi.org/10.1186/s12960-020-0451-8.

Busch, I. M., Scott, S. D., Connors, C., Story, A. R., Acharya, B., & Wu, A. W. (2021). The role of institution-based peer support for health care workers emotionally affected by workplace violence. *The Joint Commission Journal on Quality and Patient Safety, 47*(3), 146–156. https://doi.org/10.1016/j.jcjq.2020.11.005.

Cao, X., Chen, L., Tian, L., & Diao, Y. (2016). The effect of perceived organisational support on burnout among community health nurses in China: The mediating role of professional self-concept. *Journal of Nursing Management, 24*(1), E77–E86. https://doi.org/10.1111/jonm.12292.

Cargill, J. T. (2018). Exploring professional boundaries in AYA nursing care. In P. Olsen, & S. S (Eds.), *Nursing adolescents and young adults with Cancer* (pp. 63–78). Springer. https://doi.org/10.1007/978-3-319-73555-9_5.

Cavanagh, N., Cockett, G., Heinrich, C., Doig, L., Fiest, K., Guichon, J. R., ... Doig, C. J. (2020). Compassion fatigue in healthcare providers: A systematic review and meta-analysis. *Nursing Ethics, 27*(3), 639–665. https://doi.org/10.1177/0969733019889400.

Cho, K. S., & Kim, Y. (2019). Emotional labor, job stress and professional quality of life of public health nurses according to the employment type. *Journal of Korean Academy of Nursing Administration, 25*(5), 467–477. https://doi.org/10.11111/jkana.2019.25.5.467.

Christian, B. J. (2020). Translational research-pediatric nursing: Caring for children *Journal of Pediatric Nursing, 54*, 103–105. https://doi.org/10.1016/j.pedn.2020.08.002

Cricco-Lizza, R. (2014). The need to nurse the nurse: Emotional labor in neonatal intensive care. *Qualitative Health Research, 24*(5), 615–628. https://doi.org/10.1177/1049732314528810.

De Almeida Vicente, A., Shadvar, S., Lepage, S., & Rennick, J. E. (2016). Experienced pediatric nurses' perceptions of work-related stressors on general medical and surgical units: A qualitative study. *International Journal of Nursing Studies, 60*, 216–224. https://doi.org/10.1016/j.ijnurstu.2016.05.005.

Delgado, C., Upton, D., Ranse, K., Furness, T., & Foster, K. (2017). Nurses' resilience and the emotional labour of nursing work: An integrative review of empirical literature. *International Journal of Nursing Studies, 70*, 71–88. https://doi.org/10.1016/j.ijnurstu.2017.02.008.

Diefendorff, J. M., Croyle, M. H., & Gosserand, R. H. (2005). The dimensionality and antecedents of emotional labor strategies. *Journal of Vocational Behavior, 66*(2), 339–357. https://doi.org/10.1016/j.jvb.2004.02.001.

Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology, 86*(1), 42–51. https://doi.org/10.1037/0021-9010.86.1.42.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology, 75*(1), 51–59. https://doi.org/10.1037/0021-9010.75.1.51.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*(3), 500–507. https://doi.org/10.1037/0021-9010.71.3.500.

Faul, F., Erdfelder, E., Lang, A. -G., & Buchner, A. (2007). G*power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175–191. https://doi.org/10.3758/BF03193146.

Finney, R. E., Czinski, S., Fjerstad, K., Arteaga, G. M., Weaver, A. L., Riggan, K. A., ... Rivera-Chiauzzi, E. Y. (2021). Evaluation of a second victim peer support program on perceptions of second victim experiences and supportive resources in pediatric clinical specialties using the second victim experience and support tool (SVEST). *Journal of Pediatric Nursing, 61*, 312–317. https://doi.org/10.1016/j.pedn.2021.08.023.

Fisk, G. M., & Friesen, J. P. (2012). Perceptions of leader emotion regulation and LMX as predictors of followers' job satisfaction and organizational citizenship behaviors. *The Leadership Quarterly, 23*(1), 1–12. https://doi.org/10.1016/j.leaqua.2011.11.001.

Fouquereau, E., Morin, A. J., Lapointe, É., Mokounkolo, R., & Gillet, N. (2019). Emotional labour profiles: Associations with key predictors and outcomes. *Work and Stress, 33*(3), 268–294. https://doi.org/10.1080/02678373.2018.1502835.

Gab Allah, A. R. (2021, July). Challenges facing nurse managers during and beyond COVID-19 pandemic in relation to perceived organizational support. *Nursing Forum, 56*(3), 539–549. https://doi.org/10.1111/nuf.12578.

Glasø, L., & Einarsen, S. (2008). Emotion regulation in leader–follower relationships. *European Journal of Work and Organizational Psychology, 17*(4), 482–500. https://doi.org/10.1080/13594320801994960.

Grandey, A. A. (1999). *The effects of emotional labor: Employee attitudes, stress and performance.* Colorado State University.

Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology, 5*(1), 95–110. https://doi.org/10.1037/1076-8998.5.1.95.

Günüşen, N. P., Wilson, M., & Aksoy, B. (2018). Secondary traumatic stress and burnout among muslim nurses caring for chronically ill children in a Turkish hospital. *Journal of Transcultural Nursing, 29*(2), 146–154. https://doi.org/10.1177/1043659616689290.

Hamama-Raz, Y., Hamama, L., Pat-Horenczyk, R., Stokar, Y. N., Zilberstein, T., & Bron-Harlev, E. (2021). Posttraumatic growth and burnout in pediatric nurses: The mediating role of secondary traumatization and the moderating role of meaning in work. *Stress and Health, 37*(3), 442–453. https://doi.org/10.1002/smi.3007.

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine, 40*(2), 218–227. https://doi.org/10.1007/s12160-010-9210-8.

Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs, 85*(1), 4–40. https://doi.org/10.1080/03637751.2017.1352100.

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling.* University of California Press.

Hong, E., & Yang, Y. -J. (2015). Factors affecting job stress of pediatric nurses: Focusing on self-efficacy, emotional labor, pediatric nurse-parent partnership. *Child Health Nursing Research, 21*(3), 236–243. https://doi.org/10.4094/chnr.2015.21.3.236.

Humphrey, R. H., Ashforth, B. E., & Diefendorff, J. M. (2015). The bright side of emotional labor. *Journal of Organizational Behavior, 36*(6), 749–769. https://doi.org/10.1002/job.2019.

Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition, 7*(2), 113–136. https://doi.org/10.1521/soco.1989.7.2.113.

Kellogg, M. B., Knight, M., Dowling, J. S., & Crawford, S. L. (2018). Secondary traumatic stress in pediatric nurses. *Journal of Pediatric Nursing, 43*, 97–103. https://doi.org/10.1016/j.pedn.2018.08.016.

Kelly, L. (2020). Burnout, compassion fatigue, and secondary trauma in nurses: Recognizing the occupational phenomenon and personal consequences of caregiving. *Critical Care Nursing Quarterly, 43*(1), 73–80. https://doi.org/10.1097/CNQ.0000000000000293.

Kim, H. J., & Kim, H. Y. (2017). Emotional labor, job stress and professional quality of life among nurses in long-term care hospital. *kjan*, *29*(3), 290–301. https://doi.org/10.7475/kjan.2017.29.3.290.

Kim, J. -S. (2020). Emotional labor strategies, stress, and burnout among hospital nurses: A path analysis. *Journal of Nursing Scholarship*, *52*(1), 105–112. https://doi.org/10.1111/jnu.12532.

Kleis, A. E., & Kellogg, M. B. (2020). Recalling stress and trauma in the workplace: A qualitative study of pediatric nurses. *Pediatric Nursing*, *46*(1), 5–10.

Kwak, Y., Han, Y., Song, J. S., & Kim, J. S. (2020). Impact of emotional labour and workplace violence on professional quality of life among clinical nurses. *International Journal of Nursing Practice*, *26*(1), Article e12792. https://doi.org/10.1111/ijn.12792.

Liao, H., Liang, R., He, H., Huang, Y., & Liu, M. (2022). Work stress, burnout, occupational commitment, and social support among Chinese pediatric nurses: A moderated mediation model. *Journal of Pediatric Nursing*, *67*, e16–e23. https://doi.org/10.1016/j.pedn.2022.10.009.

Lima, L., Gonçalves, S., & Pinto, C. (2018). Sudden death in paediatrics as a traumatic experience for critical care nurses. *Nursing in Critical Care*, *23*(1), 42–47. https://doi.org/10.1111/nicc.12326.

Lykins, A. B., Seroka, N. W., Mayor, M., Seng, S., Higgins, J. T., & Okoli, C. T. C. (2021). Compassion satisfaction, burnout, and secondary traumatic stress among nursing staff at an Academic Medical Center: A cross-sectional analysis. *Journal of the American Psychiatric Nurses Association*, *0*(0). https://doi.org/10.1177/10783903211066125.

McGibbon, E., Peter, E., & Gallop, R. (2010). An institutional ethnography of nurses' stress. *Qualitative Health Research*, *20*(10), 1353–1378. https://doi.org/10.1177/1049732310375435.

McQueen, A. C. H. (2004). Emotional intelligence in nursing work. *Journal of Advanced Nursing*, *47*(1), 101–108. https://doi.org/10.1111/j.1365-2648.2004.03069.x.

Mendes, A. (2014). Caring inside the lines: Connecting within professional boundaries. *British Journal of Nursing*, *23*(19), 1041. https://doi.org/10.12968/bjon.2014.23.19.1041.

Mok, W. Q., Chin, G. F., Yap, S. F., & Wang, W. (2020). A cross-sectional survey on nurses' second victim experience and quality of support resources in Singapore. *Journal of Nursing Management*, *28*(2), 286–293. https://doi.org/10.1111/jonm.12920.

Nursing Solutions Inc (2021). National Health Care Retention and RN staffing report. http://www.nsinursingsolutions.com/Files/assets/library/retention-institute/2019%20National%20Health%20Care%20Retention%20Report.pdf.

Peng, C., Chen, Y., Zeng, T., Wu, M., Yuan, M., & Zhang, K. (2022). Relationship between perceived organizational support and professional values of nurses: Mediating effect of emotional labor. *BMC Nursing*, *21*(1), 142. https://doi.org/10.1186/s12912-022-00927-w.

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, *87*(4), 698–714. https://doi.org/10.1037/0021-9010.87.4.698.

Rodríguez-Rey, R., Palacios, A., Alonso-Tapia, J., Pérez, E., Álvarez, E., Coca, A., ... Llorente, A. (2019). Burnout and posttraumatic stress in paediatric critical care personnel: Prediction from resilience and coping styles. *Australian Critical Care*, *32*(1), 46–53. https://doi.org/10.1016/j.aucc.2018.02.003.

Schmidt, K. -H., & Diestel, S. (2014). Are emotional labour strategies by nurses associated with psychological costs? A cross-sectional survey. *International Journal of Nursing Studies*, *51*(11), 1450–1461. https://doi.org/10.1016/j.ijnurstu.2014.03.003.

Smith, P., & Cowie, H. (2010). Perspectives on emotional labour and bullying: Reviewing the role of emotions in nursing and healthcare. *International Journal of Work Organisation and Emotion*, *3*(3), 227–236. https://doi.org/10.1504/ijwoe.2010.032923.

Stamm, B. H. (2010). *The concise ProQOL manual* (2nd. ed.).

Theodosius, C. (2008). *Emotional labour in health care: The unmanaged heart of nursing*. Routledge.

Wu, X., Li, J., Liu, G., Liu, Y., Cao, J., & Jia, Z. (2018). The effects of emotional labor and competency on job satisfaction in nurses of China: A nationwide cross-sectional survey. *International Journal of Nursing Sciences*, *5*(4), 383–389. https://doi.org/10.1016/j.ijnss.2018.08.001.

Yehene, E., Goldzweig, G., Simana, H., & Brezner, A. (2022). "Mind the gap": Exploring pediatric nurses perceptions of the theory and practice of caring for children and families. *Journal of Pediatric Nursing*, *64*, e84–e94. https://doi.org/10.1016/j.pedn.2021.12.024.

Zaghini, F., Biagioli, V., Proietti, M., Badolamenti, S., Fiorini, J., & Sili, A. (2020). The role of occupational stress in the association between emotional labor and burnout in nurses: A cross-sectional study. *Applied Nursing Research*, *54*, Article 151277. https://doi.org/10.1016/j.apnr.2020.151277.

Zapf, D., Kern, M., Tschan, F., Holman, D., & Semmer, N. K. (2021). Emotion work: A work psychology perspective. *Annual Review of Organizational Psychology and Organizational Behavior*, *8*, 139–172. https://doi.org/10.1146/annurev-orgpsych-012420-062451.

Zhang, Y. -Y., Han, W. -L., Qin, W., Yin, H. -X., Zhang, C. -F., Kong, C., & Wang, Y. -L. (2018). Extent of compassion satisfaction, compassion fatigue and burnout in nursing: A meta-analysis. *Journal of Nursing Management*, *26*(7), 810–819. https://doi.org/10.1111/jonm.12589.

Zhou, T., Guan, R., & Sun, L. (2021). Perceived organizational support and PTSD symptoms of frontline healthcare workers in the outbreak of COVID-19 in Wuhan: The mediating effects of self-efficacy and coping strategies. *Applied Psychology. Health and Well-Being*, *13*(4), 745–760. https://doi.org/10.1111/aphw.12267.