

The Relationship Between Hope, Meaning in Work, Secondary Traumatic Stress, and Burnout Among Child Abuse Pediatric Clinicians

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ABSTRACT

Introduction: Child abuse pediatricians continuously encounter trauma experienced by abused children, putting them at risk of secondary traumatic stress (STS), a syndrome with symptoms similar to those of posttraumatic stress disorder.

Objective: To examine the relationship between secondary trauma, hope, meaningful work, and burnout in child abuse pediatric clinicians.

Methods: Participants were solicited from the Helfer and Special Interest Group on Child Abuse for Medical Professionals listservs. They were sent a link to a Web-based survey consisting of the Oldenburg Burnout Inventory, the STS Scale, the Dispositional Hope Scale, and the Work as Meaning Inventory.

Results: A total of 151 participants completed the survey. Correlational analyses showed strong positive associations between the STS score and burnout ($R^2 = 0.47$; $F_{3,140} = 40.64$; $p < 0.001$). Hope and meaning in work demonstrated negatively moderate associations with STS and burnout ($\Delta R^2 = 0.07$, $p < 0.001$).

Conclusion: A national sample of child abuse pediatric clinicians shows that STS is associated with burnout. Meaning in work and hope can mitigate these effects.

INTRODUCTION

According to the *2017 Child Maltreatment Report* from the US Department of Health and Human Services, child protection services responded to 4.1 million referrals involving 7.5 million children.¹ The Centers for Disease Control and Prevention has identified child maltreatment as a major public health concern, and adult survivors of child maltreatment are at significant risk of chronic disease and premature mortality.² Studies looking at adult functioning and mental illness among child abuse survivors have documented the long-term psychological consequences of abuse.³ The impact of child abuse and neglect represents a long-term challenge for communities and a major public health crisis for the US.⁴

In 2006, recognizing the pervasive phenomenon of child maltreatment the American Board of Medical Specialties approved child abuse pediatrics as a subspecialty,⁵ with the first certification granted by the American Board of Pediatrics in 2009.⁶ Child abuse pediatricians (CAPs) receive specific training so they can serve as a resource to children, families, health care clinicians, child advocates, child protective services, and members of law enforcement, and they serve on multidisciplinary teams in cases of child maltreatment.⁵ Although general practitioners, emergency medicine physicians, generalist pediatricians, and other health care clinicians may encounter abused and neglected children in

their practices, CAPs are uniquely focused on and equipped to identify child abuse and neglect.

As a result, CAPs continuously encounter exposure to the trauma that abused children experience. This constant exposure to child maltreatment makes these health care practitioners uniquely vulnerable to stressors associated with burnout. Following the job demands-resources model, the purpose of the current study was to examine the relationship between secondary trauma, hope, meaningful work, and burnout. The recent recognition of child abuse as a medical subspecialty of pediatrics makes the study of burnout important as fellowship training evolves.

Burnout

A characteristic of job burnout is the long-term psychological response to chronic emotional and interpersonal stressors associated with the demands of work.⁷ Maslach⁸ asserted that burnout manifests in 3 ways: Emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion refers to feelings that other people drain a person psychologically.⁸ Depersonalization manifests as callous responses toward patients.⁸ Finally, reduced personal accomplishment is the decline of self-efficacy and a sense of accomplishment in working with others.⁸ Demerouti et al⁹ introduced a model of burnout called the job demands-resources model that describes the context of work in terms of demands and resources. When employees feel continuously overextended by job demands, they can experience exhaustion.⁹ Additionally, the lack of job resources reduces the capacity to buffer job demands, which can lead to withdrawal behavior and ultimately to disengagement.⁹ Conceptually, the job demands-resources model argues that sustained exhaustion and disengagement result in burnout.⁹

Burnout is linked with a variety of workplace and personal problems.¹⁰⁻¹³ Lee and Ashforth,¹⁰ in a meta-analytic study, found a significant association between burnout and “turnover intentions,” organizational commitment, and coping. Other studies have shown a connection with reduced performance and increased absenteeism.¹¹⁻¹³ Results of studies of physicians suggested that high levels of burnout are associated with poor mental health

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and reduced quality of patient services.¹⁴⁻²⁰ Burnout is also tied to poor physical and psychological health.²¹

Secondary Traumatic Stress

Secondary traumatic stress (STS) results from the exposure to others' trauma and includes symptoms of intrusion, avoidance, and arousal.²² More specifically, individuals experiencing STS are likely to go through sudden reexperiencing of the event (intrusion), diminished affect (avoidance), and/or difficulty concentrating (arousal).²² Although it is relatively normal to experience a visceral reaction to the secondary traumatic event, it is only when these reactions last longer than a month that it becomes STS.²² These symptoms are nearly identical to posttraumatic stress disorder even though sufferers have not experienced trauma directly.²² Studies involving health care clinicians such as hospice nurses, palliative care nurses,²³ pediatric palliative care nurses,²⁴ and emergency medicine nurses²⁵ show that the risk of STS in health care settings is high and that STS contributes to burnout.^{26,27} By virtue of the medical subspecialty, CAPs are also at risk of STS. Although, to our knowledge, no research exists on burnout in CAPs specifically, findings of the available literature on health care clinicians and the effects of sustained exposure to the trauma of child abuse and neglect suggest that secondary exposure to trauma is a job demand that can contribute to burnout.¹¹ We tested the following hypothesis:

Hypothesis (H) 1: The 3 dimensions of STS (intrusion, avoidance, and arousal) will be positively associated with burnout.

Hope

The cognitive base model of hope by Snyder²⁸ argues that desirable goals drive people. Hope requires the individual to have the capacity to establish specific mental strategies (pathway thinking) toward goal attainment and to possess motivation, commitment, and so on (agency thinking), to follow the pathways to the goal.²⁸ Hope may combat the effects of STS; individuals with high hope function at a more optimal level than do their low-hope counterparts.²⁹ Research findings show that hope has a positive influence on health and well-being, and hopeful individuals are less reactive to stressful situations.²⁸⁻³¹ Hopeful individuals are also able to identify productive paths toward reaching their identified goals and to manage and overcome stress easier, and they report overall low levels of daily stress.^{28,30,32-34} Given the positive effects of hope, the following hypotheses were tested:

H2: Hope will have a negative association with the 3 dimensions of secondary stress.

H3: Hope will have a negative association with burnout.

Meaning in Work

The capacity to find meaning in life is paramount in the human capacity to flourish.³⁵ The subjective experience of finding importance and value in work is an important domain of meaning.³⁵ When individuals find meaning in their work, they tend to experience higher levels of confidence and work engagement,³⁶ heightened job satisfaction, increased positive mood, decreased turnover intentions,³⁷ and overall improved health and well-being.^{38,39} Meaning in work is an important buffer to burnout

in the field of medicine.^{40,41} Given this body of literature, the following hypotheses were tested:

H4: Meaning in work will have a negative association with the 3 dimensions of STS.

H5: Meaning in work will have a negative association with burnout.

H6: The 3 dimensions of STS—intrusion, avoidance, and arousal—will account for significant variance in burnout.

H7: Meaning in work and hope will account for significant variance in burnout over and above STS.

METHODS

Subjects and Procedure

Before conducting this study, the university's institutional review board reviewed and approved the protocol and survey. All participants provided consent before completing the survey. Prospective study participants were members of the Helper listserv associated with the Ray E Helper Society and the Special Interest Group on Child Abuse (SIGCA) for Medical Professionals listserv of The Physicians Network on Child Abuse and Neglect. On the survey distribution date, Helper had 347 members and SIGCA had 383. Together, the listservs totaled 730 members. These listservs provided a platform for communication among health care professionals who specialize in the diagnosis and treatment of child abuse and neglect. Any health care professional who is engaged in the health care aspects of child abuse and neglect may register to SIGCA; Helper includes only physicians in this field. Therefore, physicians are able to be members of both listservs, and the listservs' memberships may overlap to an unknown degree. The total potential population is estimated to be fewer than 730 but cannot be determined precisely.

The Web-based survey was accessed 191 times; given the large sample, cases with missing data were deleted. Evaluation of the missing data showed no discernable pattern to warrant concern. Only completed surveys were subjected to statistical analysis.

Measures

Burnout

In this study, we used the 16-item Oldenburg Burnout Inventory⁴² (OLBI) to measure burnout (mean = 41.63; standard deviation [SD] = 9.15; $\alpha = 0.85$). The OLBI was chosen over other possible burnout measures because it is tied to the conceptual basis for this study, the job demands-resources model of burnout. The inventory uses a 5-option agreement scale, with choices being 1 (strongly disagree) to 5 (strongly agree). The OLBI contains both positively and negatively framed items (eg, "This is the only type of work I can imagine myself doing" vs "After my work, I usually feel worn out and weary") about one's level of either engagement or vigor. The present study focused on the construct of burnout, rather than on the subscales of engagement and vigor; therefore, we used the overall score. Because the OLBI contains 8 negatively framed questions and 8 positively framed questions (4 from each subscale), researchers reverse-scored half of the questions. Ultimately, a high total score reflects high levels of burnout for the participant.

Secondary Traumatic Stress Scale

The STS Scale is a 17-item instrument developed by Bride et al⁴³ and designed to measure intrusion (mean = 7.60, SD = 2.83, $\alpha = 0.80$), avoidance (mean = 12.97, SD = 4.42, $\alpha = 0.83$), and arousal (mean = 10.55, SD = 3.54, $\alpha = 0.78$) symptoms among practitioners experiencing trauma indirectly through their clients. Statements include “I had disturbing dreams about my work with patients” and “I was easily annoyed.” Practitioners report how many times within the past 7 days they have experienced each statement. Answers follow a 5-point Likert-type response format from 1 (never) to 5 (very often). Thus, a higher overall score indicates greater level of STS.²⁶

Hope

The Dispositional Hope Scale⁴⁴ is a 12-item survey that measures the extent to which the respondent feels motivated to obtain goals and whether the respondent sees viable ways to attain those goals. Examples of hope statements include “I can think of many ways to get out of a jam” and “I energetically pursue my goals.” Item responses are on a 4-point scale, ranging from 1 (definitely false) to 4 (definitely true). Two subscales compose the Dispositional Hope Scale: 1) agency, which captures motivation to obtain said goals, and 2) pathways, which captures one’s thinking regarding goal attainment. Together, the 2 subscales derive a total hope score with a potential range of 8 (low) to 32 (mean = 26.42, SD = 2.76, $\alpha = 0.80$).

Meaning in Work

Derived from the individual’s subjective experience, the Work as Meaning Inventory assigns a value interpreted as the degree to which a person thinks work has value in his/her life.⁴⁵ We used 5 items (mean = 31.34, SD = 4.26, $\alpha = 0.95$) of the Work as Meaning Inventory.⁴⁶ These items included “The work that I do is important,” “I have a meaningful job,” “The work that I do makes the world a better place,” “What I do at work makes a difference in the world,” and “The work that I do is meaningful.” Associated with each item was a 5-point agreement: 1 (very strongly disagree) to 5 (very strongly agree); thus, higher scores reflect higher meaning attributed to work.

Data Analysis

Data were analyzed using SPSS statistical software Version 18.⁴⁷ Participant demographics were summarized using descriptive statistics. Means, SD, and Cronbach α were computed for each measure. Pearson correlations were calculated to measure the associations between the 3 dimensions of STS: Burnout, meaning in work, and hope. A 2-step hierarchical regression analysis was conducted to assess the significant contributions of STS, meaning in work, and hope to burnout. In the first step, burnout was regressed on the 3 dimensions of STS. In the second step, burnout was regressed on meaning in work and hope.

RESULTS

A total of 151 individuals completed the survey in full, and their responses were subjected to statistical analysis. Most respondents (90.7%) were physicians. The remaining 9.3% of participants were nurse practitioners. The participant sample were chiefly women (80.9%) and white (86.6%). On average, participants reported

Table 1. Demographic characteristics of child abuse pediatric clinicians (CAPCs, N = 151)

Variable	Number (%)
Sex	
Men	29.0 (19.1)
Women	122.0 (80.9)
Race/ethnicity^a	
African American	4.0 (2.7)
Asian	7.0 (4.7)
White	129.0 (86.6)
Hispanic/Latino	4.0 (2.7)
Native American	1.0 (0.7)
Other	4.0 (2.7)
Position title	
Physician	137.0 (90.7)
Nurse practitioner	14.0 (9.3)
Years as CAPC	
< 1	7.0 (4.6)
1-5	41.0 (27.2)
6-10	35.0 (23.2)
11-15	25.0 (16.6)
16-20	6.0 (4.0)
≥ 20	37.0 (24.5)
Average hrs worked weekly	39.1

^a Two participants did not answer this question.

working with patients 39.1 hours per week. Table 1 shows participants’ demographics.

Before computing the correlations and regression analyses, we tested the statistical assumptions and completed a search for outliers⁴⁸ using standardized residuals with absolute values greater than or equal to 3.0. No cases met the criteria for outliers. Additionally, the Cook distance statistic ranged from 0 to 0.05, which is in the acceptable range.⁴⁸ For linearity, we examined a scatter plot of predicted and actual scores for the dependent variable resulting in a positive linear distribution. The mean score for the standardized residual is 0, with an SD of 0.982. Furthermore, when we plotted predicted values against the residuals, we observed residual spherical patterns. These findings suggested normal distribution and noncorrelation of error. Finally, as shown in Table 2, the reliability scores for all variables of interest were moderate to strong, suggesting minimal measurement error. On the basis of these outcomes, we determined that the assumptions for correlation and regression were met.

Table 2 displays the mean, SD, Cronbach α , and zero-order correlation matrix for all variables. All variables showed moderate to strong correlations with burnout. The 3 dimensions of STS displayed strong positive correlations with burnout: Arousal ($r = 0.61$), intrusion ($r = 0.56$), and avoidance ($r = 0.66$). Study findings showed a negative correlation between hope and the 3 dimensions of STS: Arousal ($r = -0.41$), intrusion ($r = -0.27$), and avoidance ($r = -0.34$) as well as with burnout ($r = -0.43$). There was a negative correlation between meaning in work and the 3 dimensions of STS: Arousal ($r = -0.13$), intrusion

Table 2. Means, standard deviations, and correlations among predictor variables and outcome variable (burnout)^a

Variable	Mean	SD	1	2	3	4	5	6
1. Burnout	41.63	9.15	0.85					
2. Arousal	10.55	3.54	0.61 ^b	0.78				
3. Intrusion	7.60	2.83	0.56 ^b	0.71 ^b	0.80			
4. Avoidance	12.97	4.42	0.66 ^b	0.77 ^b	0.73 ^b	0.83		
5. Meaning in work	31.49	4.19	-0.31 ^b	-0.13	-0.04	-0.10	0.95	
6. Hope	26.47	2.76	-0.43 ^b	-0.41 ^b	-0.27 ^b	-0.34 ^b	0.39 ^b	0.80

^a Values on diagonal reflect Cronbach α .

^b $p \leq 0.01$.

SD = standard deviation.

($r = -0.04$), and avoidance ($r = -0.10$) as well as with burnout ($r = -0.31$). Although the correlations among the independent variables and burnout were high, the intercorrelations among the independent variables were also high, resulting in challenges in interpreting the findings. We computed collinearity statistics to estimate redundancy. The tolerance and variance inflation factor levels for the variables were intrusion (0.413, 2.419), avoidance (0.348, 2.872), arousal (0.348, 2.871), meaning in work (0.824, 1.214), and hope (0.700, 1.428). Both variance inflation factor and tolerance levels fell within the acceptable range, suggesting minimal multicollinearity.⁴⁹ In summary, individuals reporting higher levels of arousal, intrusion, and avoidance reported high levels of burnout, while individuals endorsing the constructs of hope and meaning in work reported low burnout.

To investigate the hypotheses that hope and meaning would account for significant variance in burnout over and above secondary stress, we computed a 2-step hierarchical regression. In the first step, burnout was regressed on arousal, intrusion, and avoidance. Results suggested that the independent variables account for approximately 47% of explained variance of burnout ($R^2 = 0.47$; $F^{3,140} = 40.64$; $p \leq 0.001$) in this model. In step 2, we entered the meaning in work and hope variables, resulting in burnout being regressed on the full set of variables. The subsequent change suggests that the addition of the 2 independent variables accounts for an additional 7.3% of explained variance of burnout ($\Delta R^2 = 0.07$, $p \leq 0.001$). The avoidance variables account for 47% of the variance in burnout. Adding hope and meaning adds an additional 7% (change in R square). The final set of independent variables (avoidance, hope, meaning) account for 54% of the variance in burnout. Table 3 provides the standardized β coefficients.

In the second step, the standardized β coefficients showed that 3 variables make unique, significant contributions to burnout. Avoidance ($\beta = 0.38$) had the highest unique relationship with burnout. Meaning in work ($\beta = -0.17$) and hope ($\beta = -0.17$) presented negative unique relationships with burnout. The multiple R^2 indicated that approximately 54% of the variance in burnout can be associated with the variables in the model.

DISCUSSION

These study results suggest that all our hypotheses were supported. The correlational analyses showed strong positive associations between the dimensions of secondary trauma and burnout

(H1). Hope and meaning in work demonstrated negatively moderate associations with STS and burnout (H2-H5). The results of the hierarchical regression analysis show that the 3 dimensions of STS accounted for significant variance in burnout (H6), and the addition of hope and meaningful work accounted for significant variance in burnout over and above secondary trauma (H7). Because we tested and established the statistical assumptions, we have strong confidence in our findings.

These results are compelling for the practice of child abuse pediatrics given the established negative consequences of burnout in other medical clinicians. Although it is unclear exactly what relationship STS and burnout have,^{50,51} according to the job demands-resources model, burnout is the result of too many demands and too few resources.⁹ In this context, hope and meaning in work can be viewed as resources, whereas STS can be seen as a demand. Increasing hope and meaning in work may ameliorate the disordered accumulation of secondary trauma and burnout.

If, as our results suggest, meaning in work and hope can mitigate these negative effects, it is important to provide greater support to CAPs. This can be achieved both in the short-term with targeted interventions and in the long-term with institutional supports. Several interventions have already been successfully piloted in other professions at high risk of STS and burnout (eg, meaning-centered intervention in bone marrow transplantation nurses⁵² and interventions targeting STS and self-efficacy in well-baby clinic nurses in war-torn areas of Israel⁵³). These interventions could easily be adapted for the purposes of child

Table 3. Hierarchical regression of child abuse pediatric clinicians' burnout on arousal, intrusion, avoidance, meaning in work, and hope (n = 144)^a

Predictor	ΔR^2	β
Step 1	0.47 ^b	
Arousal		0.23 ^b
Intrusion		0.1
Avoidance		0.41 ^b
Step 2	0.07 ^b	
Meaning in work		-0.17 ^b
Hope		-0.17 ^b
Total R^2	0.54 ^b	

^a Arousal, intrusion, and avoidance are components of secondary traumatic stress.

^b $p < 0.05$.

abuse pediatrics. Our findings also suggest that prevention and intervention strategies be guided by the Hope Theory (goals, pathways, agency). To this end, the goal of mitigating burnout would follow supporting healthy coping pathways (mentoring, coaching, reflective practice, etc). At the very least, professional organizations could also target sessions or session tracks targeting the self-care of its members. In this regard, the organization becomes a pathway of hope for CAPs. For the long term, CAPs could be assessed at regular intervals, starting during fellowship training,⁴¹ and a system of established protocols could be created for maintenance of a high level of hope and meaning in work coupled with efforts at minimization of STS.

Without such supports, CAPs cannot do the vital work of helping and protecting maltreated children to the best of their abilities. Working in a field with high rates of STS and burnout can decrease work productivity and increase turnover.¹⁰ When the mental and physical toll is too high, practitioners may leave the field in large numbers. Creating a system (including access to community resources, reduced pressure to rush patient encounters) to minimize STS and burnout will keep clinicians in the discipline longer, while also aiding in recruitment of new physicians to the field. The tasks of CAPs—identification, diagnosis, and research of the physical and mental marks of child abuse and neglect, parental and societal education, advocacy for prevention, and expert testimony—make them valuable components in stopping current child maltreatment and preventing future cases. In this way, CAPs make an impact in not only the lives of maltreated children but on society as a whole. Therefore, it is important to tend adequately to their mental health.

Our study is not without potential limitations. Although we used the professional listservs for SIGCA and Helfer, we are unclear if the participating sample generalizes to the target population of CAPs. Next, the cross-sectional design resulted in a concurrent collection of all measures; thus, the common method variance may have influenced the results. The relationship between STS and burnout was not tested directly; given other researchers' results, we may not have described their relationship accurately. Additionally, we used a specific set of measures for the constructs of interest. However, these measures provided acceptable reliability estimates in the national sample of CAPs, and these measures have an established recognition in the literature with both validity and reliability supported. Nevertheless, alternative measures may present variant results. Finally, we tested a specific regression model. Model specificity suggests that the inclusion of additional variables will result in alternative findings.

CONCLUSION

A national sample of child abuse pediatric clinicians shows that STS is associated with burnout. Meaning in work and hope can mitigate these effects. Professional organizations should institute education and other support to encourage or provide its members with healthy coping pathways and to minimize STS and burnout. ❖

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

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