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The moderating role of posttraumatic growth in secondary traumatic stress–burnout relationship: a sample of child psychiatrists from Turkey

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Abstract

Background Secondary traumatization is a common occupational hazard for professionals working with distressed and traumatized people, especially children. If not properly managed, secondary traumatization can lead to symptoms similar to posttraumatic stress disorder. This condition is known as secondary traumatic stress (STS) and is linked to adverse mental health outcomes, such as burnout. Nevertheless, exposure to a traumatic event or its disturbing details can contribute to personal transformation, allowing an individual to move beyond pre-traumatic functioning and awareness. This process is called posttraumatic growth and is associated with positive mental health outcomes. The current study examined the relationship between STS and burnout and whether posttraumatic growth moderates this relationship in a sample of child psychiatrists.

Methods An online questionnaire was designed and distributed to participants. A total of 59 child psychiatrists working in Turkey completed measures including the Copenhagen Burnout Inventory-work burnout subscale, the Post-traumatic Growth Inventory, and the Secondary Traumatic Stress Scale.

Results While STS was positively related to burnout (r = 0.661, p < .001), posttraumatic growth moderated this relationship. In other words, the relationship between STS and burnout was weaker for child psychiatrists with higher posttraumatic growth.

Conclusions Promoting posttraumatic growth may be a good way to reduce burnout among child psychiatrists. Individual or group supervision can promote posttraumatic growth by providing a supportive environment for child psychiatrists. Balancing workloads and creating time for self-care can also contribute to their growth.

Keywords Burnout, Child psychiatrists, Posttraumatic growth, Secondary traumatic stress

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Background

Burnout is a syndrome caused by prolonged and unmanaged work-related stress [1]. It is characterized by three components: emotional depletion or exhaustion, depersonalization, and a lack of personal accomplishment [2]. Professionals who experience burnout typically lose interest and motivation in their work, which often results in them considering quitting or reducing their work hours [3, 4]. In addition, burnout can lead to physical and mental health issues, including cardiovascular diseases, metabolic syndrome, immune system dysfunction, anxiety, irritability, and depression [5, 6]. As a consequence, burnout comes with considerable costs to society [4, 5].

Healthcare professionals working with physically or psychologically traumatized children are at a high risk of experiencing burnout. Compassion has an incontrovertible role in the therapeutic relationship with traumatized children; hence, the emotions experienced by professionals may be intense [7]. These intense and overwhelming emotions may also make professionals vulnerable to burnout. Indeed, a longitudinal study in the USA showed that burnout rates among pediatricians range from 20 to 35% [8]. Additionally, McNicholas and colleagues [9] found that 75% of child and adolescent psychiatrists in Ireland experienced moderate levels of burnout.

Secondary traumatic stress (STS)

Experiencing a traumatic event can have detrimental effects on individuals' mental health. Nevertheless, it is not necessary to have direct exposure to a traumatic event to suffer from these consequences [10]. People who have indirect (secondary) exposure to disturbing details of traumatic events can experience symptoms similar to those of trauma survivors, including intrusive images, fear, hypervigilance, and sleep disturbance (e.g., nightmares) [11]. This condition is known as secondary traumatic stress (STS) [12].

STS is a frequent occupational hazard for professionals working with traumatized people, especially children. For instance, a study reported that 92% of child-protective service workers occasionally experienced one or more STS symptoms in the week preceding the survey, and 59% often experienced at least one STS symptom during the same period [13]. In another study, 15.2% of social workers met the full criteria for posttraumatic stress disorder due to indirect trauma exposure [14]. It is crucial to recognize STS because it can affect professionals' abilities to provide effective service and maintain positive professional relationships. Moreover, it is associated with low motivation, decreased productivity, and burnout [15].

Posttraumatic growth

Traumatic experiences are closely related to adverse mental health outcomes. However, traumatic events, in addition to having permanent and deep effects on the mental health of individuals, can also foster positive transformation and increased functionality [16]. People exposed to a traumatic event may begin to see themselves as better able to cope with future challenges, experience a greater sense of belonging and closeness toward others, and gain a greater sense of purpose and appreciation for life [16]. This phenomenon has been called posttraumatic growth [17].

In the literature, posttraumatic growth has been conceptualized as a process that enables individuals to cope with adversity [15, 18]. Thus, it contributes to positive mental health consequences. Moreover, posttraumatic growth may buffer the unpleasant impacts of traumatic events and stressors [19]. Specifically, posttraumatic growth may enable therapists to reinterpret the challenging aspects of their work and can reduce the adverse effects of their work on their mental health [19]. Additionally, therapists who experience posttraumatic growth are more capable of understanding and empathizing with their clients. Their personal growth can enhance the therapeutic relationship, making them more effective in the healing process of clients.

In sum, working with traumatized and suffering children can provoke burnout through secondary (vicarious) traumatization. In this context, child psychiatrists may be at high risk for burnout. However, studies addressing burnout in child psychiatrists are scarce worldwide, and no such study has been conducted in Turkey. The current study evaluated the STS-burnout relationship in child psychiatrists. It also tested the moderating role of posttraumatic growth in this relationship. We hypothesized the following:

- H₁: There is a positive relationship between STS and burnout.
- H₂: Posttraumatic growth moderates the relationship between STS and burnout.

Materials and methods

Participants and procedure

The participants in this study were 59 child psychiatrists working in Turkey. Of the 59 participants, 48 (81.4%) were female, and 33 (55.9%) had at least 6 years of professional experience. The mean age was 33.36 (6.50) years. Social media groups created by child psychiatrists for professional assistance were used to reach the participants and send them the online survey. The first question asked participants whether they wanted to proceed with the survey; those who stated that they wanted to proceed were allowed to do so.

Measures

The Copenhagen Burnout Inventory is a 19-item and 5-point Likert-type tool. It comprises three subscales: personal burnout (six items), work-related burnout (seven items), and patient-related burnout (six items). Higher scores for each subscale indicate higher degrees of burnout [20]. The work-related burnout subscale was used. This subscale evaluates the levels of physical and mental exhaustion related to work (e.g., "Is your work emotionally exhausting?" and "Are you exhausted in the morning at the thought of another day at work?"). The psychometric properties of the tool were tested by Deliorman Bakoğlu and colleagues [21] on a Turkish sample.

The Secondary Traumatic Stress Scale is a 17-item selfreport tool designed to assess the frequency of symptoms related to secondary exposure to a traumatic event (e.g., intrusive thoughts about patients and the avoidance of people, places, and things) in professionals [22]. The tool has three subscales: intrusion (five items), avoidance (seven items), and arousal (five items). Items are scored on a 5-point Likert scale, with responses ranging from 1 (never) to 5 (very often). The total scores range from 17 to 85, and higher scores indicate more severe symptoms of secondary traumatic stress. The psychometric properties of the Turkish version were performed by Yildirim and colleagues [23].

The Posttraumatic Growth Inventory is a 25-item tool developed by Tedeschi and colleagues [24] to assess personal growth after a traumatic event. The tool comprises

five domains: personal strength, relating to others, appreciation of life, new possibilities, and spiritual/existential change. Participants identify the degree to which they have experienced posttraumatic growth on a 6-point Likert scale. Total scores range from 0 to 125, with higher scores indicating more remarkable growth.

Statistical analysis

Firstly, a power analysis was performed to determine the required sample size. The sample size was calculated based on the large ($f^2 = 0.35$) and medium ($f^2 = 0.15$) effect size, an alpha of 0.05, and a target power of 0.80. The power analysis recommended a minimum sampling of 52 and 109 participants for large and medium effect sizes, respectively.

Next, all analyses were performed using SPSS 28.0. Firstly, missing data were evaluated, and no such data were identified. Then, the normality assumption was assessed using skewness/kurtosis values and an inspection of histograms. Thereafter, Pearson's correlation analysis was conducted to evaluate the correlations between the variables. Finally, a hierarchical multiple regression analysis was performed to examine whether posttraumatic growth moderated the relationship between STS and burnout. STS and posttraumatic growth were mean centered before the interaction term was created to avoid multicollinearity.

Results

Preliminary analysis

Table 1 summarizes the mean scores, standard deviations, and internal consistency coefficients. There was a

 Table 1
 Pearson's correlations, means, and standard deviations between study variables

	1	2	3	4	5	6	7	8	9	10	11
1. Secondary traumatic stress	-										
2. Intrusion	0.684***	-									
3. Avoidance	0.899***	0.362**	-								
4. Arousal	0.937***	0.542***	0.804***	-							
5. Posttraumatic growth	-0.140	0.137	-0.332*	058	-						
6. Appreciation of life	001	0.141	-0.157	.078	0.844***	-					
7. New possibilities	045	0.253	-0.245	010	0.913***	0.744***	-				
8. Personal strength	-0.120	0.145	-0.317*	033	0.922***	0.827***	0.834***	-			
9. Spiritual/existential change	-0.185	.011	-0.326	088	0.931***	0.703***	0.801***	0.802***	-		
10. Relating to others	-0.201	0.136	-0.396**	-0.137	0.924***	0.684***	0.803***	0.788***	0.842***	-	
11. Burnout	0.661***	0.352**	0.633***	0.649***	-0.276*	071	-0.282*	-0.229	-0.317*	-0.284*	-
Mean	38.83	10.25	16.61	11.97	53.29	7.96	9.88	10.56	11.40	13.46	59.32
SD	9.31	2.78	4.42	3.67	26.32	4.27	4.93	4.83	7.60	7.23	17.76
α	0.87				0.96						0.90

SD Standard deviation, a Cronbach's alpha

* *p* < 0.05, ***p* < 0.01

positive correlation between burnout and STS (r = 0.661, p < .001). Conversely, the relationship between burnout and posttraumatic growth was significant and negative (r = 0.276, p = 0.034). However, there was no correlation between STS and posttraumatic growth (r = -0.140, p = 0.291) (Table 1).

Child psychiatrists with children had significantly lower burnout scores than others (p = 0.014). Similarly, child psychiatrists with a preexisting psychiatric disease had significantly higher burnout scores than others (p =0.012). Differences in scores according to the characteristics of the participants are presented in Table 2.

Moderation analysis

Previous research has revealed significant associations between burnout and gender, work experience, preexisting psychiatric disease, and parenting status. Therefore, these variables were entered during Step 1 of the hierarchical regression analysis. Additionally, we asked the participants, "How willing were you to become a child psychiatrist?" Participants answered this question using a 7-point Likert-type scale, with higher scores indicating a greater willingness to become a child psychiatrist. STS and posttraumatic growth were entered into the regression equations during Step 2. The mean-centered interaction term between STS and posttraumatic growth was entered during Step 3.

The results of the hierarchical multiple regression analysis are summarized in Table 3. Male gender ($\beta =$ -12.43, p = 0.014) and willingness to become a psychiatrist ($\beta = -3.10$, p = 0.047) were negatively related to burnout. STS positively predicted burnout ($\beta = 0.98$, p <.001). Notwithstanding, the interaction term for STS by posttraumatic growth negatively predicted burnout ($\beta = -0.02$, p = 0.034).

The moderating role of posttraumatic growth in the STS-burnout relationship is depicted in Fig. 1. This relationship was weaker for child psychiatrists with high posttraumatic growth (+1 SD) compared to those with low posttraumatic growth (-1 SD).

Discussion

The current study reveals a positive connection between STS and burnout, as observed in previous research [25, 26]. There are several ways to explain this relationship. Firstly, being exposed to traumatic stories can cause emotional exhaustion - the core aspect of burnout. Secondly, professionals may adopt depersonalization or cynicism as a coping mechanism to protect themselves from the emotional distress that comes with empathizing with these stories. Lastly, STS can damage one's sense of personal achievement, leading to feelings of reduced efficacy and contributing to the personal accomplishment component of burnout. Nevertheless, it is important to note that the relationship between STS and burnout is bidirectional [3]. The conservation of resources (COR) theory explains that when individuals expend too much energy to deal with stressors (e.g., workplace stressors), their personal and environmental resources are depleted [27, 28]. Burnout is related to this depletion process and can make individuals susceptible to STS [29].

A noteworthy finding of this study is that posttraumatic growth moderated the relationship between STS and burnout. In other words, STS was weakly associated with burnout in child psychiatrists with higher posttraumatic growth. This result is plausible and

 Table 2
 Differences in scale scores according to the characteristics of participants

	Burnout			Posttraum	natic growth (F	PTGI-X)	Secondary traumatic stress (STSS)		
	Mean	SD	p	Mean	SD	p	Mean	SD	р
Gender									
Female	60.79	15.65	0.336	55.63	24.30	0.156	38.88	8.87	0.940
Male	52.92	24.94		43.10	33.21		38.64	11.53	
Work experien	ce								
≤ 5 years	57.42	18.54	0.469	50.69	26.11	0.506	38.00	9.75	0.548
≥ 6 years	60.82	17.26		55.33	26.71		39.48	9.05	
Preexisting psy	chiatric diseas	e							
Yes	75.00	13.98	0.012*	49.43	23.74	0.683	44.43	10.55	0.090
No	57.21	17.24		53.81	26.82		38.08	8.98	
Parenting statu	JS								
Yes	53.02	19.71	0.014*	59.69	28.34	0.097	37.42	9.23	0.307
No	64.29	14.51		48.24	23.84		39.94	9.37	

SD Standard deviation

^{*} p < 0.05

		Burnout		
Predictors	β	SE	R ²	ΔR^2
Step 1			0.285	0.285**
Gender	-12.43*	4.88		
Work experience	5.89	3.25		
Preexisting psychiatric disease	9.31	4.94		
Parenting status	-6.33	3.60		
Willingness to become a child psychiatrist	-3.10*	1.52		
Step 2			0.587	0.302***
Secondary traumatic stress	0.98***	0.18		
Posttraumatic growth	-0.12	0.06		
Step 3			0.623	.036*
Secondary traumatic stress \times posttraumatic growth	-0.02*	0.01		

Table 3 The results of hierarchical multiple regression analysis

Gender (0 = female; 1 = male), work experience (0 = \leq 5 years; 1 = \geq 6 years), parenting status (0 = no; 1 = yes), and preexisting psychiatric disease (0 = no; 1 = yes) were dummy code

 β Unstandardized regression coefficients, SE Standard error

* *p* < .05, ***p* < .01, ****p* < .001



Secondary traumatic stress

Fig. 1 Posttraumatic growth moderates the relationship between secondary traumatic stress and burnout. Depicted are slopes for one standard deviation above (+1 SD, high) and one standard deviation below (-1 SD, low) the mean for posttraumatic growth

compatible with the literature [30, 31]. Posttraumatic growth is a transformation process in which an individual can achieve greater awareness and functionality than before experiencing the traumatic event [32]. After a traumatic event, individuals incorporate new experiences into their existing ones, leading to more adaptable, comprehensive life perspectives. Consequently, posttraumatic growth is linked to improvements in coping with adversity, multidimensional thinking, and problem-solving abilities [32]. The current study revealed that willingness to become a child psychiatrist was negatively associated with burnout. This result may be due to a prosocial motivation to help children. Prosocial motivation may affect people's work lives and work-related experiences. Engaging in prosocial behaviors can increase meaningfulness at work [33]. Additionally, being prosocial can positively impact one's mental health [34]. However, taking on too much responsibility, which may result from a desire to help others, can negatively affect one's mental health [35, 36].

The present study expands the current knowledge on the role of posttraumatic growth on mental health. In addition, this study is the first to address posttraumatic growth in child psychiatrists. However, it is important to emphasize some limitations. Firstly, this study is cross-sectional; hence, we could not examine the relationships between STS, posttraumatic growth, and burnout longitudinally. Secondly, the primary experiences of child psychiatrists were not addressed. Primary traumatic experiences may impact secondary stress and growth experienced by child psychiatrists, depending on their work. Thirdly, the sample size was small. However, our sample size was acceptable according to similar previous studies [19]. Moreover, the current sample size was adequate for detecting a large effect ($f^2 = 0.35$, power = 0.86).

Conclusion

Working with children who have experienced traumatic events may create emotional overload, which results in secondary traumatic stress and burnout. The present study sheds light on how to mitigate adverse mental health consequences. Specifically, promoting posttraumatic growth seems to be a good way to mitigate such consequences. Individual or group supervision can promote posttraumatic growth by providing a supportive environment for child psychiatrists. Balancing caseloads and creating time for self-care can also contribute to child psychiatrists' growth. Thus, the quality of mental health services improves, and traumatized children may benefit more from these services.

Abbreviations

CBI	Copenhagen Burnout Inventory
PTG	Posttraumatic growth
PTGI-X	Posttraumatic Growth Inventory-X
STS	Secondary traumatic stress

STSS Secondary Traumatic Stress Scale

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Authors' contributions

BA and SBC contributed to the study conception and design. Material preparation, data collection, and analysis were performed by FU, Fİ, and BA. The first draft of the manuscript was written by BA and SN, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

The data supporting this study's findings are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate

Permission was obtained from the Adana Training and Research Hospital Clinical Research Ethics Committee (approval no: 2021/1677), and Helsinki Declaration rules were followed to conduct this study.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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