

Research Article

Relationship between Secondary Trauma Self-Efficacy, Secondary Trauma and Job Burnout among Doctors Dealing with COVID-19 Patients

Wajiha Kiran,¹ Nuzhat-ul-Ain²

^{1,2}Center for Clinical Psychology, University of the Punjab, Lahore

Abstract

Background: The global pandemic of coronavirus became a profound threat to the physical and mental health of people worldwide. Healthcare workers especially doctors on the frontline experience critical and traumatic situations on regular basis. Doctors dealing with COVID-19 patients become more vulnerable to secondary traumatic stress and burnout due to persistent exposure to stressful situations.

Objective: To examine the relationship between secondary trauma self-efficacy, job burnout and secondary trauma in doctors who are involved in treating people infected with COVID-19.

Methods: The study was conducted by using cross-sectional research design. The sample consisted of 78 doctors who were working as frontline workers in dealing with COVID-19 patients. Online google form was devised to collect data from the participants by employing convenient sampling technique. The google form comprised of demographic questionnaire and two scales i.e., Secondary Trauma Self-Efficacy scale and Compassion Fatigue scale. Two primary hypotheses were formulated i.e., there would likely be a negative relationship between secondary trauma self-efficacy and compassion fatigue in doctors dealing with coronavirus patients and secondary trauma self-efficacy would likely predict secondary trauma and job burnout in doctors dealing with coronavirus patients. The hypotheses were tested through SPSS software by conducting Pearson Product Moment Correlation and Hierarchical Multiple Regression analysis.

Results: The results showed that there was significant negative relationship between Secondary Trauma Self-Efficacy and Compassion Fatigue ($r = -0.54, p < 0.01$). Furthermore, results of hierarchical multiple regression indicated that Secondary Trauma Self-Efficacy explained 19 % statistically significant variability in secondary traumatic stress. While it was found to contribute 17 % statistical variability in job burnout in physicians working with coronavirus patients.

Conclusion: Dealing with coronavirus patients can lead to compassion fatigue in frontline doctors. However, a doctor's self-efficacy in dealing with traumatic situations can serve as a crucial factor for protecting against compassion fatigue.

Corresponding Author | Wajiha Kiran, Center for Clinical Psychology, University of the Punjab, Lahore

Email: wajihakiran352@gmail.com

Keywords | Compassion Fatigue, COVID-19, Frontline workers in dealing with Covid 19 patients, Secondary Trauma, Job Burnout, Doctors, Secondary Trauma Self-efficacy

Introduction:

COVID-19 pandemic, which emerged at the end of 2019 in China and affected over 77,000,000 people worldwide, has become a major health crisis.

As of July 2022, more than 1,500,000 cases have been reported in Pakistan and almost 30,000 people have died of it.¹ While this pandemic had affected people in all walks of life, doctors being the frontline workers

are most vulnerable to contacting the disease themselves or exposing their closed ones to risk of getting infected with the virus. The enormous exposure to the sufferings of coronavirus patients along with personal concerns can have detrimental effects for healthcare staff especially doctors.² This can result in emotional distress and reduced ability to be compassionate towards patients and ultimately lead to development of compassion fatigue in doctors.³ Compassion fatigue is manifested in various forms through physical (exhaustion, headaches, fatigue, changes in appetite), emotional (irritability, pessimistic thinking, mood swings) and cognitive (difficulty concentrating, apathy, obsessions) symptoms which interfere in their personal as well as professional life.⁴ The compassion fatigue is manifested in form of job burnout and secondary trauma. Doctors suffering from job burnout experience feelings of emotional exhaustion related to job and loss of personal accomplishments or feelings of inadequacy regarding job which ultimately affects the quality of services they provide.⁵ While secondary trauma is related to experience of symptoms of traumatic stress reactions a result of exposure to sufferings of patients.⁶ These symptoms could be physical (headache, digestion or appetite problems) or psychological (restlessness, flashbacks or dreams, depression etc).^{6,7}

Researches have reported that higher levels of self-efficacy results in reduced risk of secondary traumatic stress in healthcare and emergency workers.⁸ Since, self-efficacy should be preferably studied according to specificity of its context, it highlights the significance of exploring the secondary trauma self-efficacy in relation to secondary traumatic stress and burnout. Secondary trauma self-efficacy is a person's belief in his ability to deal with secondary traumatic stress and related symptoms.⁹ But no studies have been conducted to analyze the relationship between secondary trauma self-efficacy and compassion fatigue in doctors.

The current study was aimed to analyze the relationship between secondary trauma self-efficacy and compassion fatigue, and its sub-factors i.e., secondary trauma and job burnout, in doctors dealing with coronavirus patients. It was hypothesized that secondary trauma self-efficacy would likely be negatively related to compassion fatigue in doctors. Moreover, secondary trauma self-efficacy would predict both factors of compassion fatigue i.e.,

secondary trauma and job burnout among doctors working with coronavirus patients.

Methods:

The present study was done by employing cross sectional research design and non-probability convenient sampling technique was used to recruit a sample participants. The results of g power analysis suggested a sample size of 89⁹ but due to COVID related lockdown and increased restrictions; it was hard to approach doctors for data collection. Moreover, many doctors did not respond possibly due to increased burden related to pandemic, therefore, only 78 doctors participated in the research. Only those physicians who were frontline workers in treating COVID 19 patients in Lahore were included in the study. Since the study was conducted during lockdown period due to COVID 19, so the data were collected through online Google form. For this purpose, doctors were contacted in following ways a) directly requesting hospital administrations to share google form link with doctors dealing with coronavirus patients b) personally contacting with doctors who we knew were working with COVID 19 patients. The data were collected between mid of June 2020 till the end of July 2020, during first COVID wave in Pakistan.

The measures of the study included demographic questionnaire, secondary trauma self-efficacy scale and compassion fatigue scale (short form). Demographic questionnaire was prepared to gather personal information about the participants. This form included questions related to gender (male/female), age, and satisfaction regarding income and working hours, years of experience. Moreover, self-reported questions were also added in demographic questionnaire to probe doctor's subjective experience of stress, anxiousness and sadness during past few weeks while working with coronavirus patients. Secondary Trauma Self-efficacy Scale¹⁰ evaluates a person's self-efficacy skills to deal with exposure to secondary trauma. This scale constitutes seven items and measures the ability to tackle work related barriers (e.g. providing services to trauma survivors) and dealing with emotional and cognitive reactions associated with it. Items are marked on seven-point Likert scale. The Cronbach's alpha reliability value of Secondary Trauma Self-efficacy scale in the present study was 90.

Compassion Fatigue Short Form¹¹ includes 13-items.

This scale consists of two subscales; one is a burnout subscale comprising of 8 items which includes items related to job burnout and the second is a 5-item secondary trauma subscale which involves items related to secondary trauma stress symptoms. Participants reported on 10-point Likert scale ranging from never/rarely to very often.¹¹ The Cronbach's alpha reliability values of Compassion Fatigue, Secondary Trauma and Job Burnout in present study were found to be .93, .86 and .90 respectively which suggest high reliability values.

The research was conducted after getting approvals of the respective department, Doctoral Program Committee and permissions for using questionnaires were taken from respective authors of the scale. Information sheet and consent form were provided along with the demographic form and questionnaires. Participants were explained about the nature and purpose of research through information sheet attached before questionnaires. Participants were asked to fill the consent form first and after this they were asked to fill the demographic information sheet and questionnaires.

Statistical Package for Social Sciences²² was used to analyze the data. Pearson Product Moment Correlation was conducted to examine the relationship between demographic variables, Secondary Trauma Self-efficacy and Compassion Fatigue in doctors working with corona-virus patients. Hierarchical Multiple Regression analysis was used to find the predicting effect of Secondary Trauma Self-efficacy and demographic variables on Compassion Fatigue.

Results:

Demographic characteristics of participants revealed that out of 78 participants 48 were male doctors and 30 participants were female doctors who were directly involved in treating corona-virus patients as frontline workers with average age of 28 years ($M= 28.6$, $SD= 6.5$). Moreover, 52(66.7%) participants were satisfied with working hours while 26 participants (33.3%) reported that they were unsatisfied with working hours. Moreover, 39 (50%) participants reported that they were not satisfied with their salaries. Participants were also asked about their subjective experiences of stress, anxiousness/restless and sadness during past few weeks because of working with corona-virus patients. Out of 78 participants, 24(30%) reported experiencing sadness some of the time and 18 (23%) participants had experienced sadness most of the time. While 23 (29%) had experienced anxiousness some of the time while 16(20%) had experienced anxiousness most of the time. Moreover 25(32%) participants reported feeling stressed some of the time while 15(18%) participants reported experiencing stress most of the time because of dealing with coronavirus patients. Furthermore, 61 participants had less than 5 years of experience, while 11 participants had 5-15 years of experience and only 6 participants were having more than 15 years of experience.(Table 1)

Pearson Product moment correlation was done to analyze the relationship between demographic variables and study variables. Satisfaction with salary was positively correlated with working hours. While it was negatively correlated with experience of Secondary Trauma. Satisfaction with working hours was negatively correlated

Table 1: Pearson Product Moment Correlation between Study Variables and Demographics

		1	2	3	4	5	6	7	8	9	M	SD
1	SS	-	.38**	-.21	-.10	-.14	-.05	-.18	-.24*	-.13	.50	.50
2	SH	-	-	-.32**	-.17	-.31**	.06	-.23*	-.15	-.26*	.67	.47
3	ESd	-	-	-	.68**	.72**	-.06	.47**	.40**	.49**	2.54	1.08
4	EA	-	-	-	-	.86**	-.13	.46**	.41**	.46**	2.56	.97
5	Est	-	-	-	-	-	-.17	.57**	.48**	.59**	2.55	1.01
6	STSE	-	-	-	-	-	-	-.54**	-.53**	-.52**	35.71	8.02
7	CF	-	-	-	-	-	-	-	.93**	.97**	57.47	28.67
8	ST	-	-	-	-	-	-	-	-	.83**	22.24	11.59
9	JB	-	-	-	-	-	-	-	-	-	36.23	18.35

Note. * $p<.05$, ** $p<.01$ YE=years of experience, SS= satisfied with salary, SH=satisfied with working hours, EA=experience of anxious symptoms, Est=experience of stress, ESd=experience of sadness,STSE=secondary trauma self-efficacy, CF=compassion fatigue, JB=job burnout, ST=secondary trauma. (one tailed)

with subjective experience of sadness, stress and job burnout. While Secondary Trauma Self-efficacy was negatively related to compassion fatigue ($r = -0.54$, $p < 0.01$), secondary trauma ($r = -0.53$, $p < 0.01$), and job burnout ($r = -0.52$, $p < 0.01$). (Table 1)

Multiple hierarchical regression analysis was conducted to analyze the predictive effect of secondary trauma self-efficacy on secondary trauma in doctors (Table 2). In first step control variables i.e. gender, satisfaction with salary and working hours, relationship with head of department, colleagues and family, subjective experience of stress, restlessness and sadness were added. Subjective experience of stress was found to be significant predictor of secondary trauma. The overall model was significant i.e. $F(9,68) = 3.58$, $p = 0.001$ and explained 31% variance in secondary trauma ($\Delta R^2 = 0.31$). In the second step, secondary trauma self efficacy was added and it explained 19% variance in secondary trauma and overall model was significant $F(10,67) = 7.71$, $p < 0.001$.

In the second analysis predictive effect of secondary trauma self-efficacy on job burnout was examined (Table 3). The overall model was found to be significant i.e. $F(10,67) = 8.83$, $p < 0.001$. Secondary trauma self-efficacy explained 17% variance in job burnout i.e. ($\Delta R^2 = 0.17$).

Table 2: Multiple Hierarchical Regression Analysis taking Secondary Trauma Self Efficacy as Predictor and Secondary Trauma as The Outcome Variable

Predictors	ΔR^2	B
Model 1	.32***	
Control variables		
Model 2	.19***	
Secondary Trauma Self efficacy		-.33**
Total R ²	.52***	

Note. control variables include gender, years of experience, satisfaction with salary and working hours
* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3: Multiple Hierarchical Regression Analysis taking Secondary Trauma Self Efficacy as Predictor and Job Burnout as The Outcome Variable

Predictors	ΔR^2	B
Model 1	.39***	
Control variables		
Model 2	.17***	
Secondary Trauma Self efficacy		-.47**
Total R ²	.57***	

Note. control variables include gender, years of experience, satisfaction with salary and working hours * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion:

The present study was aimed to analyze the relationship between secondary trauma self-efficacy and compassion along with its sub factors i.e., secondary trauma and job burnout. The results of the study showed that secondary trauma self-efficacy was negatively related to compassion fatigue in doctors. Moreover, it was found that secondary trauma self-efficacy was a significant predictor of job burnout and secondary trauma in frontline doctors who were treating COVID-19 patients.

Compassion fatigue in doctors has already been a concern but due to unprecedented circumstances during COVID 19 pandemic, its incidences have increased to an alarming rate.¹¹ In the present study, the relationship between secondary trauma self-efficacy and compassion fatigue i.e. job burnout and secondary trauma was explored which was supported by results of the study. It indicates that doctor's high level of belief in personal ability to cope with secondary trauma is related to lower levels of compassion fatigue, secondary trauma and job burnout.

Secondly the results of multiple hierarchical regression indicated that secondary trauma self-efficacy explained a significant variance in secondary traumatic stress among doctors working with coronavirus patients. It means that doctors' belief in their abilities, skills and capacities to meet challenges encountered while working with coronavirus patients significantly predicted lower levels of secondary trauma. Thus, those doctors who have high levels of secondary trauma self-efficacy are less vulnerable to experience secondary traumatic stress reactions i.e. restlessness, flashbacks and other psychological disturbances. These results are in accordance with previous literature which supported role of self-efficacy in predicting secondary trauma.^{13,14}

Thirdly, secondary trauma self-efficacy significantly predicted job burnout and explained 17% variance in it. It implies that those doctors who effectively believe in their abilities to handle critical situations while dealing with coronavirus patients are less likely to experience job burnout symptoms i.e., emotional exhaustion or reduced capacity to perform their job effectively. Also, less job burnout increases quality of services provided by doctors thus enhanced care for coronavirus patients.¹⁵

Furthermore, the results of correlational analysis indicated that compassion fatigue and its subscales i.e.

secondary trauma and job burnout were significantly positively related with subjective experience of stress, anxiousness and sadness. This means that doctors having higher levels of compassion fatigue, job burnout and secondary trauma tend to experience higher levels of stress, anxiousness and sadness when they are unable to cope with symptoms of compassion fatigue.^{16,17} Due to COVID 19 pandemic and lockdown, the research was conducted online therefore it involved limited access to sample population. Therefore, manual research is suggested for detailed exploration of factors related to compassion fatigue among doctors working with coronavirus patients. Further studies are needed to explore the gender differences in compassion fatigue to investigate the causal factors of these variables. The present study highlighted the issue of compassion fatigue in doctors and role of the secondary trauma self efficacy in predicting compassion fatigue in doctors who are involved in working with coronavirus patients. If proper solution focused investigation are not carried out to combat compassion fatigue, these issues become progressively worse.

Conclusion:

Doctors who are frontline workers in dealing with coronavirus patients are prone to experience secondary trauma and burnout issues. These problems can further lead to anxiousness, low mood and stress. However, secondary trauma self efficacy can serve as a protective factor against these problems.

Ethical Approval: Given

Conflict of Interest: The authors declare no conflict of interest.

Funding Source: None

References

1. Covid 19 Situation in Pakistan. Government of Pakistan. 2021 July 7 [updated 2021 July 7, cited 2021 July 7] Available from: <https://covid.gov.pk/>
2. Alharbi J, Jackson D, Usher K. The potential for COVID-19 to contribute to compassion fatigue in critical care nurses. *Journal of Clinical Nursing*. 2020 May 18;29: 15-16.
3. Kogan LR, Wallace JE, Schoenfeld-Tacher R, Hellyer PW, Richards M. Veterinary technicians and occupational burnout. *Frontiers in Veterinary Science*. 2020; 12(7):328.
4. Henson, J. S. When compassion is lost. *Medsurg Nursing*. 2017 Mar;26(2):139-42.
5. Tawfik DS, Scheid A, Profit J, Shanafelt T, Trockel M, Adair KC, et al. Evidence relating health care provider burnout and quality of care: a systematic review and meta-analysis. *Ann Intern Med*. 2019 Oct 15; 171(8): 555-567
6. Kelly L. Burnout, Compassion fatigue, and secondary trauma in nurses: Recognizing the occupational phenomenon and personal consequences of caregiving. *Critical Care Nursing Quarterly*. 2020 Jan 1;43(1):73-80.
7. Dirik D, Sak R, Şahin-Sak İT. Compassion fatigue among obstetricians and gynecologists. *Current Psychology*. 2021 Jun 26;1:1-8.
8. Vagni M, Maiorano T, Giostra V, Pajardi D. Coping with COVID-19: emergency stress, secondary trauma and self-efficacy in healthcare and emergency workers in Italy. *Frontiers in psychology*. 2020 Sep 3;11:2294.
9. Faul F, Erdfelder E, Lang AG, Buchner A. G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods*. 2007 May;39(2):175-91.
10. Cieslak R, Shoji K, Luszczynska A, Taylor S, Rogala A, Benight CC. Secondary trauma self-efficacy: concept and its measurement. *Psychological Assessment*. 2013 Sep;25(3):917.
11. Adams RE, Boscarino JA, Figley CR. Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of orthopsychiatry*. 2006 Jan;76(1):103-8.
12. Ferry AV, Wereski R, Strachan FE, Mills NL. Predictors of UK healthcare worker burnout during the COVID-19 pandemic. *QJM: An International Journal of Medicine*. 2021 Jun;114(6):374-80.
13. Yıldırım N, Coşkun H, Polat Ş. The Relationship Between Psychological Capital and the Occupational Psychologic Risks of Nurses: The Mediation Role of Compassion Satisfaction. *Journal of Nursing Scholarship*. 2021 Jan;53(1):115-25.
14. Burgess N. Burnout and compassion fatigue in emergency care nurses: Factors that influence development. *Dublin Business School*. 2018;14(5): 1-37.
15. Kim JS, Choi JS. Factors influencing emergency nurses' burnout during an outbreak of Middle East Respiratory Syndrome Coronavirus in Korea. *Asian nursing research*. 2016 Dec 1;10(4):295-9.
16. Kim MA, Yi J, Molloy J, Choi K. The impact of compassion fatigue on the well-being of oncology social workers in Korea. *Journal of Social Service Research*. 2021 Sep 3;47(5):634-48.
17. Barnett MD, Ruiz IA. Psychological distress and compassion fatigue among hospice nurses: the mediating role of self-esteem and negative affect. *Journal of palliative medicine*. 2018 Oct 1;21(10):1504-6.