

Role of Entrapment in Relation between Fear of Covid-19 and Compassion Fatigue among Nurses

Ann Sara Kottoor¹ (MSc), Noble Chacko¹ (PhD)

1. Department of Psychology, RCBSR Rajagiri College of Social Sciences (Autonomous), Kerala, India

Submitted: 2 December 2021

Accepted: 1 February 2022

Int J Behav Sci. 2022; 15(4): 250-255

Corresponding Author:

Ann Sara Kottoor
Department of Psychology,
RCBSR Rajagiri College of Social
Sciences (Autonomous),
Kerala,
India
E-mail: annkottoor97@gmail.com

Abstract

Introduction: Compassion fatigue is a state of exhaustion and dysfunction biologically, psychologically, and socially, resulting from the change in empathetic ability of the caregiver in reaction to the prolonged and overwhelming stress of caregiving. Hence, this can go deeper among people who work in caring and giving professions like nursing. The aim of the present study was to examine the association between fear of Coronavirus Diseases-2019 (Covid-19), entrapment and compassion fatigue among nurses.

Method: For this descriptive-correlational study, 107 nurses working in Hospitals (private/public) that provide service to Covid-19 patients were selected using convenience sampling method in 2020. Data were collected using the Fear of Covid-19 scale, Entrapment Scale and Compassion Fatigue Short Scale. Data were analyzed using the Spearman rank correlation coefficient and hierarchical regression analysis by IBM SPSS software.

Results: Findings revealed that a positive significant relationship exists between the variables fear of Covid-19, entrapment and compassion fatigue. In addition, fear of Covid-19 and entrapment significantly predicted compassion fatigue.

Conclusion: According to the results of this study, it can be concluded that nurses who have higher levels of fear of Covid-19 and higher sense of entrapment, experience a higher level of compassion fatigue.

Keywords: Fear of Covid-19, Entrapment, Compassion Fatigue

Introduction

Infectious disease outbreaks are by far the most traumatic types of catastrophe to deal with psychologically, because of the confusion and ambiguity they create [1]. The Covid-19 was recognized as a Public Health Emergency of International Concern by the World Health Organization (WHO) on the 30th of January, 2020. Pandemics such as coronavirus, like the other pandemics in the past, produce not only an epidemiological crisis but also a psychological crisis (i.e., anxiety, depression, insomnia, trauma, anger, psychosis, panic and boredom). Although infectious diseases cause a huge range of psychological responses, not everyone has the same emotional response [2].

Health workers at hospitals are always at the forefront of any epidemic, and put their lives at risk to execute their responsibilities [3]. In addition to providing therapeutic work for patients, nurses are also expected to give life care, basic care and psychosocial support [4]. Simultaneously, nurses are in a condition of physical and emotional stress and feel vulnerable and helpless amidst large number of patients, lack of protective materials and staff shortages, as well as shortages of beds and mechanical ventilators, precarious infrastructure, the need to make ethically complex choices around treatment rationing, high-intensity work triggered by these emergencies in public health and threats to their

own health [5]. They may be more likely to suffer moral injury concerning ethical dilemmas, suffering and death because of their closer interaction with patients [6]. Medical and nursing staff in Hong Kong have been found vulnerable to burnout, anxiety and mental exhaustion [7]. Personal and professional stress, and unfettered compassion in the forms of incessant self-giving and unhealthy countertransference may lead to the development of compassion fatigue [8]. Figley developed the most widely used definition of compassion fatigue and describes the concept as "a state of exhaustion and dysfunction biologically, psychologically, and socially as a result of prolonged exposure to compassion stress and all it invokes" [9]. Lynch and Lobo defined the attributes of compassion fatigue as an established relationship between the caregiver and the patient/client all associated with the caregiving role and the psychological and physical responses it arouses [10]. The adverse effects of caregiving are exacerbated by the magnitude of the trauma to which the caregiver is exposed, such as direct interaction with victims, especially when the exposure is of a graphic nature [11]. In essence, compassion fatigue results from the changing of the caregiver's empathic capacity in response to the prolonged and excessive caregiving tension, because the compassionate energy lavished by nurses has surpassed their revitalizing mechanisms, with the power of restoration being lost [8]. In order to account for the origins of compassion fatigue in healthcare professionals, two main theoretical perspectives were put forward [9]. The resource depletion perspective suggests that, physically and psychologically, helpers become worn out by exposure to traumatized victims. The emotional contagion perspective, on the other hand, refers to the affective process in which a helper, witnessing traumatized individuals, experiences emotional responses parallel to the real or anticipated emotions of that person [10].

Several factors have been recognized as leading to compassion fatigue in helping professionals. Individuals in younger age groups and those belonging to lower education brackets seem to be at significant risk [12]. Factors that can alleviate compassion fatigue and increase compassion satisfaction, on the other hand, include higher levels of work experience (more number of working years) and higher levels of training [13, 14]. Some research has shown that helping professionals with personal histories of trauma are more vulnerable to compassion fatigue [15]. Psychological processes like emotional contagion and countertransference can lead to compassion fatigue [16, 17]. On the contrary, professional experience and competency comprise the factors that tend to lessen the impact of compassion fatigue [18].

The nurse experiences inadequate performance and holistic health deterioration [19]. One may exhibit poor judgement, [8, 19] a surge in job errors [19, 20] and become prone to accidents [8, 20]. Absenteeism [8, 21], abuse of alcohol or drugs [21], and body weight fluctuations can ensue [21]. The person may have an emotional meltdown [8, 22] and may experience questioning of values in the spiritual sense [22]. A major consequence in the nursing discipline, is a pining to

leave the field [8, 20, 22], thereby leading to the shortage of nurses and high turnover rates for workers [22]. Additional defining characteristics of compassion fatigue include hopelessness/helplessness, confusion, depersonalization, distancing oneself from the patient, social isolation and risk of suicide [8].

Each time an epidemic hits, there is an aspect of confusion and fear. Nurses are at greater risk of developing psychological fears because they face a higher risk of exposure to Covid-19 patients, spend more time in wards, provide patients with direct treatment and collect virus sputum [23]. Since they are more likely to be in direct contact with Covid-19 patients, there is fear of autoinoculation and they are especially likely to transmit the virus among their colleagues and families [24]. Their fears can be further amplified due to their recurrent exposure to traumatic events like patients' pain and deaths [25]. Moreover, they are still bound to provide passionate care to patients despite their fears [26-28]. They are required to suppress emotional reactions that are unsuitable for the job role (such as frustration and fear), display those emotions (such as patience and empathy) that are more congruent, as well as alleviate the fear and distress of their patients. That is, they must express some emotions, fake other emotions, and suppress some emotions [29]. This emotional dissonance (i.e., conflict between experienced and expressed emotions) has been linked with compassion fatigue among nurses [30-32]. Fear can cause healthcare professionals to deliver less accurate or attentive treatment than they would under normal conditions [33, 34]. Findings show that the fear of Covid-19 predicts depression, anxiety, and stress [35] which are linked to compassion fatigue [36].

Nurses cannot remove themselves from their source of distress [22]. Entrapment has been defined as a desire to escape from an unbearable situation, tied with the perception that all escape routes are blocked [37]. In humans, a feeling of entrapment may be linked with traumatic life experiences or circumstances that are especially persistent or continuing [38]. Two forms of entrapment can be distinguished based on its triggers: (i) external entrapment, when the source of the escape motivation lies in the outside world (e.g. 'I am in a relationship that I can't get out of'); and (ii) internal entrapment, when the escape motivation is related to internal feelings and thoughts (e.g. 'I feel powerless to change myself') [37].

Entrapment, in particular, is associated with situations of chronic stress. Those nurses with heightened fear of Covid-19 may have further difficulties in resisting the feeling of entrapment [39]. Compassion fatigue is linked to psychological suffering and a sense of entrapment in an aversive setting [40], caused by a high workload. Research on entrapment has found that feeling trapped can lead to feeling subordinate, depressed and hopeless [37], which is associated with compassion fatigue [36].

Most of the previous research looking at compassion fatigue among nurses has examined the role of demographic variables, workload and role conflicts [41-

43]. However, since the epidemic has shown up relatively recently and progressed rapidly, the number of studies published on the topic is quite limited. This study aimed to examine the role of entrapment in relation to fear of Covid-19 and compassion fatigue among nurses.

Method

In the present cross-sectional study, correlational research design was used to find out the relationship between fear of Covid-19, entrapment and compassion fatigue among nurses. The sample was selected using convenience sampling technique. The statistical population included all nurses in India in 2020. Among the nurses, 107 nurses that provided service to Covid-19 patients were selected through convenience sampling based on the inclusion and exclusion criteria. The sample included nurses working in India, in healthcare settings during the Covid-19 outbreak. Respondents were excluded if they reported a history of mental illness and / or could not complete the online survey independently.

A Google form was circulated via the internet beginning with an informed consent letter, followed by socio-demographic details, and measures of fear of Covid-19, entrapment and compassion fatigue.

The following questionnaires were used to collect data:

Fear of Covid-19 Scale: The Fear of COVID-19 Scale was developed by Ahsoru et al. in 2020 [44]. It is a self-report measure aimed at assessing fear of Covid-19. The scale consists of seven items pertaining to emotional fear reactions towards the pandemic. It is a five-item Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score ranges between seven and 35, with a higher sum score indicates a higher fear of Covid-19. Previous research reported excellent predictive validity and reliability ($\alpha = .86$) of the scale [44, 45].

Entrapment Scale: The entrapment scale was developed by Gilbert and Allan in 1998. It is a 16-item self-report instrument assessing perceptions of psychological entrapment. The scale includes two subscales, with six items tapping internal entrapment (perceptions of entrapment by one’s own thoughts and feelings) and 10 items related to external entrapment (perceptions of entrapment by external situations). Ratings are made on a five-point scale, ranging from 0 (not at all like me) to 4 (extremely like me) with higher scores indicating greater entrapment. It has good psychometric properties with Cronbach’s alphas respectively of .93 and .86 in Internal entrapment, and .88 and .89 in external entrapment [37].

Compassion Fatigue Short Scale: The Compassion Fatigue – Short Scale was developed by Adams et al. in

2006. It is a 13-item measure of compassion fatigue (e.g., “I have felt trapped by my work”). Participants respond to each item using a 10-point visual analogue scale (1 ¼ rarely/never to 10 ¼ very often). Previous research has found adequate internal consistency (a ¼ .90; Adams et al., 2006). In this study, we averaged all items to form an overall compassion fatigue score, in which a higher score indicates a higher level of compassion fatigue and found high internal consistency (Cronbach’s a ¼ .85) [46].

The data was the processed in Microsoft Excel and the statistical analysis was done using IBM SPSS. The normality of the data was found using the Shapiro-wilk test and depending on the nature of the data obtained, non-parametric test was used for further analysis of data.

Results

This study included 107 participants where 92 of them were female respondents and 15 of them were male respondents. The majority of the respondents were middle-aged adults, followed by young adults. The least number of responses was obtained from older adults. Among all participants, 51 were working in public hospitals and 56 in private hospitals. With respect to work experience, the majority of the respondents belonged to the 5-10 years group, followed by 11-20, less than five years and 21-30. Only one participant had work experience exceeding 30 years. Since the variables were not normally distributed, Spearman’s rank correlation was used to test the hypotheses and the significant correlations were taken in account. Table 1 shows the descriptive indices of the studied variables.

The correlation coefficients of the studied variables are presented in Table 2. Results of the Spearman correlation indicated that there were statistically significant correlations between all three variables. As illustrated in Table 2, there was a significant positive correlation between fear of Covid-19 and entrapment ($r=.40, p<.01$). This relationship demonstrated that as levels of fear of Covid-19 increased, levels of entrapment also increased. The positive relationship between entrapment and compassion fatigue had a stronger correlation ($r=.72, p<.01$). A significant relationship between fear of Covid-19 and compassion fatigue was also found ($r = .36, p < .01$).

A multiple linear regression was carried out to investigate whether fear of Covid-19 and entrapment could significantly predict nurses’ compassion fatigue. The results of the regression indicated that fear of Covid-19 ($\beta =.14$) and entrapment ($\beta =0.74$) explained 68.2% of the variance and that the model was a significant predictor of compassion fatigue, ($F (2,104)=111.39,p<.0001$).

Table 1. Mean, Standard Deviation of Research Variables

Variables	Mean	SD
Fear of Covid-19	11.54	6.06
Entrapment	11.87	13.05
Compassion Fatigue	33.63	22.59

Table 2. Spearman rank Correlation of Fear of COVID, Entrapment and Compassion Fatigue

Variables	1	2	3
Fear of Covid-19	1		
Entrapment	.40**	1	
Compassion Fatigue	.36**	.72**	1

Table 3. Fear of Covid-19 and Entrapment as Predictors of Compassion Fatigue

Predictor Variables	Unstandardized Coefficients		Standardized Coefficients	t	P
	B	SE	β		
Fear of Covid-19	1.28	.11	.74	11.69	.0001
Entrapment	.55	.23	.14	2.34	.021
R ²	.68				
F	111.39				

Discussion

This study investigated the role of fear of Covid-19 and entrapment in the prediction of compassion fatigue in nurses. The correlation results showed that fear of Covid-19 had a significant, positive relationship with compassion fatigue. The results of regression showed that fear of Covid-19 is a significant positive predictor of compassion fatigue. This finding coincides with previous research in other sectors on Italian supermarket workers, indicating that fear of Covid-19 moderated the relationship between job demands and compassion fatigue [47]. The fear of infection among Taiwanese nurses was a major factor in their willingness to care for patients infected with the avian flu [48]. In Jordanian hospitals, fear of Covid-19 infection is a factor in healthcare personnel' burnout, which is a component of compassion fatigue [49]. In fact, negative affect can promote compassion fatigue [43, 50]. One explanation of these results can be that, as a psychological response to a threatening event or stimuli [51], fear associated with coronavirus may interfere with job performance in nurses, contributing to higher levels of compassion fatigue.

The results showed a positive significant correlation between entrapment and compassion fatigue among nurses. The regression results showed that entrapment is a significant positive predictor of compassion fatigue. This relationship is in accordance with previous studies which show that a sense of entrapment in an aversive environment, ensuing from heavy workload, is linked to compassion fatigue [40]. Feelings of helplessness, despair, and entrapment are common indicators of compassion fatigue [52]. In a study involving three clinical focus groups and one of psychiatric nurses, participants felt that arrested escape (entrapments) was one among the core aspects of the experience of depression, which is an outcome of compassion fatigue [53]. Compassion fatigue has also been referred to as caregiver burnout [54]. In a study amongst formal caregivers, entrapment was associated with caregiver burden (compassion fatigue) and depression [55]. Burnout is a factor that contributes to compassion fatigue, and has a significant emotional impact on helping professionals, which can include feelings of helplessness, and entrapment [56-58].

There is a positive significant correlation between entrapment and fear of Covid-19 among nurses. This may be due to the unpredictability, uncertainty, seriousness, fear of contamination, knowledge gaps, and social isolation associated with the epidemic [59]. Entrapment was linked to fear in a focus group exploration of South Asian women [39]. Fear was significantly related to entrapment and depression in the caregiver of people with dementia [60].

The present study is not without limitations. The sample size could have been larger. The larger the sample size, the greater the credibility and generalizability to the target population. Secondly, only age, gender, marital status, type of hospital and work experience were considered as a part of the socio-demographic sheet so the influence of other factors (such as religion, socio-economic status, etc.) on the variables of the study cannot be explained. Thirdly, social desirability could play a major role in affecting the results as the study uses self-report questionnaires. Finally, since there was no follow-up data on frontline nurses' mental health, it was not possible to monitor their mental health statuses over time.

Conclusion

In conclusion, the present study highlighted the association between variables including fear of Covid-19, entrapment and compassion fatigue by which compassion fatigue was explained. The findings imply that nurses with higher levels of fear of Covid-19 and sense of entrapment could experience a higher level of compassion fatigue.

In general, the findings of this study could be beneficial in decreasing the compassion fatigue of nurses by addressing their fear of Covid-19 and sense of entrapment. The results may help administrators to identify nurses' vulnerability to compassion fatigue and develop comprehensive strategies to enhance their professional quality of life. Accordingly, it is suggested that therapeutic programs be held to mitigate nurses' fear of Covid-19 and sense of entrapment. To improve the generalizability of our findings and examine other potential variables, more research should be done in diverse specializations and geographies. Future research should investigate the impact of a therapeutic program in mitigating the effect of fear of Covid-19 on nurses.

Conflict of Interest

The authors declare no conflicts of interest.

Ethical Approval

All ethical considerations have been applied in this study and has been approved by the Department of Psychology, Rajagiri College of Social Sciences (Autonomous) review committee.

Acknowledgement

The authors extend their gratitude to all the nurses who voluntarily participated in the study and greatly appreciate their patience and willingness to contribute to this study.

References

- Moukaddam N. Fear, outbreaks, and pandemics: lessons learned. *Psychiatry Times*. 2019;36(11).
- Rodríguez-Rey R, Garrido-Hernansaiz H, Collado S. Psychological impact and associated factors during the initial stage of the coronavirus (COVID-19) pandemic among the general population in Spain. *Frontiers in psychology*. 2020;11:1540. doi: [10.3389/fpsyg.2020.01540](https://doi.org/10.3389/fpsyg.2020.01540).
- Fawaz M, Samaha A. <? covid19?> The psychosocial effects of being quarantined following exposure to COVID-19: A qualitative study of Lebanese health care workers. *International Journal of Social Psychiatry*. 2020;66(6):560-565. doi: [10.1177/0020764020932202](https://doi.org/10.1177/0020764020932202)
- Jiang L, Broome ME, Ning C. The performance and professionalism of nurses in the fight against the new outbreak of COVID-19 epidemic is laudable. *International Journal of Nursing Studies*. 2020;107:103578. doi: [10.1016/j.ijnurstu.2020.103578](https://doi.org/10.1016/j.ijnurstu.2020.103578).
- Sun N, Wei L, Shi S, Jiao D, Song R, Ma L, et al. A qualitative study on the psychological experience of caregivers of COVID-19 patients. *American journal of infection control*. 2020;48(6):592-598. doi: [10.1016/j.ajic.2020.03.018](https://doi.org/10.1016/j.ajic.2020.03.018).
- Papazoglou K, Chopko B. The role of moral suffering (moral distress and moral injury) in police compassion fatigue and PTSD: An unexplored topic. *Frontiers in psychology*. 2017;8:1999. doi: [10.3389/fpsyg.2017.01999](https://doi.org/10.3389/fpsyg.2017.01999).
- Cheung T, Fong TK, Bressington D. COVID-19 under the SARS cloud: Mental health nursing during the pandemic in Hong Kong. *Journal of psychiatric and mental health nursing*. 2021;28(2):115-117. doi: [10.1111/jpm.12639](https://doi.org/10.1111/jpm.12639).
- Coetzee SK, Klopper HC. Compassion fatigue within nursing practice: A concept analysis. *Nursing & health sciences*. 2010;12(2):235-243. doi: [10.1111/j.1442-2018.2010.00526.x](https://doi.org/10.1111/j.1442-2018.2010.00526.x).
- Figley CR, editor. Epilogue: the transmission of trauma. In: *Compassion fatigue: coping with secondary traumatic stress disorder in those who treat the traumatized*. Oxfordshire: Routledge Taylor & Francis Group; 1995. p. 249-254.
- Lynch SH, Lobo ML. Compassion fatigue in family caregivers: a Wilsonian concept analysis. *Journal of advanced nursing*. 2012;68(9):2125-2134. doi: [10.1111/j.1365-2648.2012.05985.x](https://doi.org/10.1111/j.1365-2648.2012.05985.x).
- Cocker F, Joss N. Compassion fatigue among healthcare, emergency and community service workers: A systematic review. *International journal of environmental research and public health*. 2016;13(6):618. doi: [10.3390/ijerph13060618](https://doi.org/10.3390/ijerph13060618).
- Craig CD, Sprang G. Compassion satisfaction, compassion fatigue, and burnout in a national sample of trauma treatment therapists. *Anxiety, Stress, & Coping*. 2010;23(3):319-339. doi: [10.1080/10615800903085818](https://doi.org/10.1080/10615800903085818).
- Arvay MJ. Secondary traumatic stress among trauma counsellors: What does the research say? *International Journal for the Advancement of Counselling*. 2001;23(4):283-293. doi: [10.1023/a:1014496419410](https://doi.org/10.1023/a:1014496419410).
- Sprang G, Clark JJ, Whitt-Woosley A. Compassion fatigue, compassion satisfaction, and burnout: Factors impacting a professional's quality of life. *Journal of loss and Trauma*. 2007;12(3):259-280. doi: [10.1080/15325020701238093](https://doi.org/10.1080/15325020701238093).
- Kanter J. Compassion fatigue and secondary traumatization: A second look. *Clinical Social Work Journal*. 2007;35(4):289-293. doi: [10.1007/s10615-007-0125-1](https://doi.org/10.1007/s10615-007-0125-1).
- Sabin-Farrell R, Turpin G. Vicarious traumatization: implications for the mental health of health workers? *Clinical psychology review*. 2003;23(3):449-480. doi: [10.1016/s0272-7358\(03\)00030-8](https://doi.org/10.1016/s0272-7358(03)00030-8).
- Radey M, Figley CR. The social psychology of compassion. *Clinical Social Work Journal*. 2007;35(3):207-214. doi: [10.1007/s10615-007-0087-3](https://doi.org/10.1007/s10615-007-0087-3).
- Wells-English D, Giese J, Price J. Compassion fatigue and satisfaction: Influence on turnover among oncology nurses at an urban cancer center. *Clinical journal of oncology nursing*. 2019;23(5):487-493. doi: [10.1188/19.CJON.487-493](https://doi.org/10.1188/19.CJON.487-493).
- Harris C, Griffin MTQ. Nursing on empty: compassion fatigue signs, symptoms, and system interventions. *Journal of Christian Nursing*. 2015;32(2):80-87. doi: [10.1097/CNJ.0000000000000155](https://doi.org/10.1097/CNJ.0000000000000155).
- Sheppard K. Compassion fatigue: Are you at risk. *American Nurse Today*. 2016;11(1):53-55.
- Jenkins B, Warren NA. Concept analysis: Compassion fatigue and effects upon critical care nurses. *Critical care nursing quarterly*. 2012;35(4):388-395. doi: [10.1097/CNQ.0b013e318268fe09](https://doi.org/10.1097/CNQ.0b013e318268fe09).
- Boyle DA. Compassion fatigue: The cost of caring. *Nursing2020*. 2015;45(7):48-51. doi: [10.1097/01.NURSE.0000461857.48809.a1](https://doi.org/10.1097/01.NURSE.0000461857.48809.a1).
- Liu Z, Han B, Jiang R, Huang Y, Ma C, Wen J, et al. Mental health status of doctors and nurses during COVID-19 epidemic in China. Available at SSRN 3551329. 2020. doi: [10.2139/ssrn.3551329](https://doi.org/10.2139/ssrn.3551329).
- Xiang Y-T, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The lancet psychiatry*. 2020;7(3):228-229. doi: [10.1016/S2215-0366\(20\)30046-8](https://doi.org/10.1016/S2215-0366(20)30046-8).
- Pappa S, Ntella V, Giannakas T, Giannakoulis VG, Papoutsis E, Katsaounou P. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, behavior, and immunity*. 2020;88:901-7. doi: [10.1016/j.bbi.2020.05.026](https://doi.org/10.1016/j.bbi.2020.05.026).
- Cai H, Tu B, Ma J, Chen L, Fu L, Jiang Y, et al. Psychological impact and coping strategies of frontline medical staff in Hunan between January and March 2020 during the outbreak of coronavirus disease 2019 (COVID-19) in Hubei, China. *Medical science monitor: international medical journal of experimental and clinical research*. 2020;26:e924171-1. doi: [10.12659/MSM.924171](https://doi.org/10.12659/MSM.924171).
- Khalid I, Khalid TJ, Qabajah MR, Barnard AG, Qushmaq IA. Healthcare workers emotions, perceived stressors and coping strategies during a MERS-CoV outbreak. *Clinical medicine & research*. 2016;14(1):7-14. doi: [10.3121/cmr.2016.1303](https://doi.org/10.3121/cmr.2016.1303).
- Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *bmj*. 2020;368. doi: [10.1136/bmj.m1211](https://doi.org/10.1136/bmj.m1211).
- Glomb TM, Tews MJ. Emotional labor: A conceptualization and scale development. *Journal of Vocational Behavior*. 2004;64(1):1-23. doi: [10.1016/s0001-8791\(03\)00038-1](https://doi.org/10.1016/s0001-8791(03)00038-1).
- Huynh T, Alderson M, Thompson M. Emotional labour underlying caring: an evolutionary concept analysis. *Journal of advanced nursing*. 2008;64(2):195-208. doi: [10.1111/j.1365-2648.2008.04780.x](https://doi.org/10.1111/j.1365-2648.2008.04780.x).
- Stayt LC. Death, empathy and self preservation: the emotional labour of caring for families of the critically ill in adult intensive care. *Journal of clinical nursing*. 2009;18(9):1267-1275. doi: [10.1111/j.1365-2702.2008.02712.x](https://doi.org/10.1111/j.1365-2702.2008.02712.x).
- Yoon SL, Kim JH. Job-related stress, emotional labor, and depressive symptoms among Korean nurses. *Journal of Nursing Scholarship*. 2013;45(2):169-176. doi: [10.1111/jnu.12018](https://doi.org/10.1111/jnu.12018).
- Labrague LJ, de Los Santos JA. Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*. 2021;29(3):395-403. doi: [10.21203/rs.3.rs-35366/v1](https://doi.org/10.21203/rs.3.rs-35366/v1).
- Weiss DS, Marmar CR, Metzler TJ, Ronfeldt HM. Predicting symptomatic distress in emergency services personnel. *Journal of consulting and clinical psychology*. 1995;63(3):361. doi: [10.1037//0022-006x.63.3.361](https://doi.org/10.1037//0022-006x.63.3.361).
- Bakioğlu F, Korkmaz O, Ercan H. Fear of COVID-19 and positivity: Mediating role of intolerance of uncertainty, depression, anxiety, and stress. *International journal of mental health and addiction*. 2021;19(6):2369-238. doi: [10.1007/s11469-020-00331-y](https://doi.org/10.1007/s11469-020-00331-y).
- Cerney MS. Treating the "heroic treaters." *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. 1995;23:131-149.
- Gilbert P, Allan S. The role of defeat and entrapment (arrested flight) in depression: an exploration of an evolutionary view. *Psychological medicine*. 1998;28(3):585-598. doi: [10.1017/s0033291798006710](https://doi.org/10.1017/s0033291798006710).
- Brown GW, Harris TO, Hepworth C. Loss, humiliation and entrapment among women developing depression: a patient and non-patient comparison. *Psychological medicine*. 1995;25(1):7-21. doi: [10.1017/s003329170002804x](https://doi.org/10.1017/s003329170002804x).

39. Gilbert P, Gilbert J, Sanghera J. A focus group exploration of the impact of izzat, shame, subordination and entrapment on mental health and service use in South Asian women living in Derby. *Mental health, religion & culture*. 2004;7(2):109-130. doi:10.1080/13674670310001602418.
40. Soewardi H, Kusuma SR. Workload Analysis and Improvement of the Nurses Duty in the Hospital. In IOP Conference Series: Materials Science and Engineering 2019 (Vol.530, No.1, p. 012036). IOP Publishing. doi:10.1088/1757-899X/530/1/012036.
41. Hunsaker S, Chen HC, Maughan D, Heaston S. Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of nursing scholarship*. 2015;47(2):186-194. doi: 10.1111/jnu.12122.
42. Kelly L, Runge J, Spencer C. Predictors of compassion fatigue and compassion satisfaction in acute care nurses. *Journal of Nursing scholarship*. 2015;47(6):522-528. doi: 10.1111/jnu.12162.
43. Zhang Y-y, Zhang C, Han X-R, Li W, Wang Y-l. Determinants of compassion satisfaction, compassion fatigue and burn out in nursing: A correlative meta-analysis. *Medicine*. 2018;97(26). doi: 10.1097/MD.00000000000011086.
44. Ahorsu DK, Lin C-Y, Imani V, Saffari M, Griffiths MD, Pakpour AH. The fear of COVID-19 scale: development and initial validation. *International journal of mental health and addiction*. 2020;1-9. doi: 10.1007/s11469-020-00270-8.
45. Gritsenko V, Skugarevsky O, Konstantinov V, Khamenka N, Marinova T, Reznik A, et al. COVID 19 fear, stress, anxiety, and substance use among Russian and Belarusian university students. *International Journal of Mental Health and Addiction*. 2021;19(6):2362-2368. doi: 10.1007/s11469-020-00330-z.
46. Adams RE, Boscarino JA, Figley CR. Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of Orthopsychiatry*. 2006;76(1):103-108. doi: 10.1037/0002-9432.76.1.103.
47. Ramaci T, Pagliaro S, Teresi M, Barattucci M. Job demands and negative outcomes after the lockdown: the moderating role of stigma towards Italian supermarket workers. *Sustainability*. 2021;13(13):7507. doi:10.3390/su13137507.
48. Tzeng H-M, Yin C-Y. Nurses' fears and professional obligations concerning possible human-to-human avian flu. *Nursing Ethics*. 2006;13(5):455-470. doi: 10.1191/0969733006nej8930a.
49. Algunmeeyn A, El-Dahiyat F, Altakhineh MM, Azab M, Babar Z-U-D. Understanding the factors influencing healthcare providers' burnout during the outbreak of COVID-19 in Jordanian hospitals. *Journal of pharmaceutical policy and practice*. 2020;13(1):1-8. doi: 10.1186/s40545-020-00262-y.
50. Alharbi J, Jackson D, Usher K. Compassion fatigue in critical care nurses: An integrative review of the literature. *Saudi medical journal*. 2019;40(11):1087. doi: 10.15537/smj.2019.11.24569.
51. Gross CT, Canteras NS. The many paths to fear. *Nature Reviews Neuroscience*. 2012;13(9):651-658. doi: 10.1038/nrn3301.
52. Bride BE, Walls E. Secondary traumatic stress in substance abuse treatment. *Journal of Teaching in the Addictions*. 2006;5(2):5-20. doi:10.1300/j188v05n02_02.
53. Gilbert P, Gilbert J. Entrapment and arrested fight and flight in depression: An exploration using focus groups. *Psychology and Psychotherapy: Theory, Research and Practice*. 2003;76(2):173-188. doi: 10.1348/147608303765951203.
54. Sacco TL, Ciurzynski SM, Harvey ME, Ingersoll GL. Compassion satisfaction and compassion fatigue among critical care nurses. *Critical care nurse*. 2015;35(4):32-42. doi: 10.4037/ccn2015392.
55. Griffiths AW, Wood AM, Tai S. The prospective role of defeat and entrapment in caregiver burden and depression amongst formal caregivers. *Personality and Individual Differences*. 2018;120:24-31. doi: https://doi.org/10.1016/j.paid.2017.08.026.
56. Lee SM, Cho SH, Kissinger D, Ogle NT. A typology of burnout in professional counselors. *Journal of counseling & development*. 2010;88(2):131-138. doi:10.1002/j.1556-6678.2010.tb00001.x.
57. Lambie GW. The contribution of ego development level to burnout in school counselors: Implications for professional school counseling. *Journal of Counseling & Development*. 2007;85(1):82-88. doi:10.1002/j.1556-678.2007.tb00447.x.
58. Steinhardt MA, Smith Jaggars SE, Faulk KE, Gloria CT. Chronic work stress and depressive symptoms: Assessing the mediating role of teacher burnout. *Stress and health*. 2011;27(5):420-429. doi:10.1002/smi.1394.
59. Badrfam R, Zandifar A. Stigma over COVID-19: new conception beyond individual sense. *Archives of Medical Research*. 2020;51(6):593. doi:10.1016/j.arcmed.2020.05.006.
60. Martin Y, Gilbert P, McEwan K, Irons C. The relation of entrapment, shame and guilt to depression, in carers of people with dementia. *Aging and Mental Health*. 2006;10(2):101-106. doi: 10.1080/13607860500311953.