



When fear about health hurts performance: COVID-19 and its impact on employee's work

Ambreen Sarwar¹ · Muhammad Ibrahim Abdullah² ·
Muhammad Kashif Imran³ · Tehreem Fatima⁴

Received: 10 April 2021 / Accepted: 22 February 2022 / Published online: 8 March 2022

© The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature 2022

Abstract

This study utilized terror management and conservation of resources theory to fulfill its aim of investigating the effects of fear of contamination of COVID-19 on performance of employees in the banking sector of Pakistan. A survey was conducted to collect data in two waves from 206 bank employees in Punjab region. SPSS was used for data analysis. The results demonstrated that such fear leads to emotional exhaustion which in turn negatively affects employee's work performance. However, the perceptions of better precautionary measures taken by the organization against the spread of the disease moderated the said relationship and weakened the strength of fear on performance through emotional exhaustion. Amid the widespread fear, panic and detrimental effects of COVID-19 on organizations and economies of the worlds, this research has implications for policy makers by showing the importance of organizational measures taken and displayed to employees in decreasing the negative effects of extensive fear and uncertainty prevailing due to the pandemic.

Keywords COVID-19 · Work performance · Emotional exhaustion · Fear of contamination · Organizational response · Pakistan

✉ Ambreen Sarwar
ambreen_sarwar@hotmail.com; ambreen.sarwar@vu.edu.pk

Muhammad Ibrahim Abdullah
miabdullah@cuilahore.edu.pk

Muhammad Kashif Imran
kkaasshhii@gmail.com

Tehreem Fatima
tehreem.fatima@lbs.uol.edu.pk

¹ Department of Management Sciences, Virtual University of Pakistan, Lahore, Pakistan

² Department of Management Sciences, Comsats University Islamabad, Lahore, Pakistan

³ Department of Commerce, The Islamia University of Bahawalpur, Bahawalpur, Pakistan

⁴ Lahore Business School, The University of Lahore, Sargodha, Pakistan

Mathematics Subject Classification 91F99

1 Introduction

“If any human emotion is as old as our species, it must surely be fear, and the end of its hold on us is not in sight”. (Scruton 1986, p.7)

The fear of Coronavirus disease 2019 (COVID-19) has swiftly dispersed around the globe in a short time due to its clinical indications varying between minor respiratory symptoms to serious pneumonia and a fatality rate estimated around 1–12% (Mizumoto and Chowell 2020). The contagion is spreading quickly from one person to other (Abdi 2020) in the community as well as health-care and workplace settings. The World Health Organization (WHO) has lately pronounced the COVID-19 eruption as an international public health emergency where the risk being higher in countries with susceptible health systems (Sohrabi et al. 2020). One such country is Pakistan which is experiencing widespread ongoing transmission of COVID-19 (CDC 2020). As on July 27th, 2021, the confirmed numbers of cases in the country were more than 1.01 million, with 23,087 deaths and 928,722 recoveries (NIH 2021).

Due to the increasing number of cases, the provincial Punjab government recently announced and extended a lockdown in the province (ARY 2020). However, the State Bank of Pakistan (SBP 2020) has directed all banks to remain open despite the lockdown. Under this situation of the ongoing outbreak, several challenges arise in the workplace especially the banks as fear prevails regarding a possible risk of contamination. Because of the apparent possibility of harm to oneself or the family (Sinclair and LoCicero 2006; Pyszczynski et al. 2003), this fear might result in worry and exhaustion in employees even if they have not been infected with the disease. The realization of potential infection can influence a person's day to day life and deteriorate their quality of work and life (Ren et al. 2020).

Despite the undermining effects of the COVID-19 pandemic fear (Mizumoto and Chowell 2020; Ren et al. 2020) no research, to the best knowledge of author, has considered how the fear of contamination would affect an employee's organizational work in general and in Pakistani banking sector in particular. The eruption of COVID-19 offers a unique opportunity to comprehend its effects on work performance of employees during the outbreak of an epidemic.

For addressing the mentioned gap, this study draws from the terror management theory (TMT) (Pyszczynski et al. 1997; Greenberg et al. 1986) and the conservation of resources (COR) theory (Hobfoll 1989) to examine how the fear of getting infected from a contagious disease might deteriorate work performance by increasing employee's sense of emotional exhaustion, as well as how their perceptions of organizational response towards the safety of employees from infection lessen or mitigate this process.

Though the TMT is widely used in terrorism-related studies (e.g. Fischer-Preßler et al. 2019; Nugier et al. 2016), it is believed that it might also be applicable against the backdrop of an epidemic. The theory generally concentrates more on the influence of mortality salience and apparent fears of terrorism on worry (Greenberg et al. 1986; Burke et al. 2010), however, it focuses less on how fear may affect employees in organizational background (De Clercq et al. 2017). The main idea behind TMT is that individuals are terrified by the notion of their own death (Belmi and Pfeffer 2016). Their inherent mortality salience is fueled by the fear of death. It signals the mindful awareness that an unavoidable reality of life resides in death (Greenberg, Pyszczynski, and Solomon 1986). The idea of facing death sooner or later works as an important cause of fear that drives individuals to defend themselves from this danger (Kosloff et al. 2010; Burke et al. 2010). However, earlier studies have shown that individuals cope better with distressing situations when they perceive support from environment (Zhang et al. 2018; Zhou et al. 2018). Thus, an organization's efforts to display concern towards employee's safety at workplace might act as a mitigating agent against the fear of contamination of deadly infection.

Additionally, following the lead from Toker et al. (2015), who found a significant positive relation among burnout and fear, we utilize the underpinnings of COR theory to put forward that a vital mechanism as to why fear of contamination might deteriorate work performance is that such a fear would likely result in emotional exhaustion of employees. Job performance is described as a personnel's capacity to successfully finish the required job duties (Williams and Anderson 1991). In this study, job performance encompasses the cumulative worth generated by employees' behaviors that inclines them to achieve the organizational objectives and goals (Motowidlo 2003; Rich et al. 2010). Emotional exhaustion might forfeit the emotional, mental, and cognitive resources of personnel, making it tougher to perform adequately at job and ultimately resulting in deviating actions (Van Der Linden et al. 2005).

Better response towards the curtailment of contagion from organization shows support of organization to employees towards their well-being. Past researches have shown mixed results while studying the role of support from organizations in the stressor and strain relationship. Earlier, Kirmeyer and Dougherty (1988) have shown the moderating role of support in lessening the tension-anxiety among dispatchers due to stressors. Similar results have been discussed by Cohen and Wills (1985). When organizational support is more, stress is generally felt as lower; however, it may just exist like before (Venkatachalam 1995; Robblee 1998). Yet, some other researchers have presented some counterintuitive results with respect to support as moderator. They have shown a strong influence of organizational support on the stressor-strain response link in unexpected direction, depending on the source of support (Beehr et al. 2010; Kaufmann and Beehr 1986). For instance, Beehr et al. (2010) reported that every kind of support at workplace is not helpful for employees in all cases. Sometimes, support might prove to worsen rather than to improve mental and physical health. Likewise, Kaufmann and Beehr (1986) found that more is the level of support, the strongly it influences and strengthens the positive relationship between stressors and strains. However, in line with COR theory, we believe

that during the uncertain times of an epidemic outbreak, it becomes principally important for the organizations to realize how to limit the damaging influence of fear (of contamination) on personnel's work performance (Waldman et al. 2011; Toker et al. 2015).

Additionally, interestingly, many organizations initially opted for moving to work-from-home strategy during the pandemic. However, this as a strategy, did not work too well, since recent researchers (e.g. Vaziri et al. 2020) have shown rising cases of work–family conflict, increased stress and lesser job satisfaction (Hong et al. 2021) due to work-from-home strategy. Therefore, in accordance with both TMT and COR theory, it is proposed that organizational response towards safeguarding its employee's from potential infection from contact with and serving the bank customers with the work settings might play the role of a crucial job resource that cushions or guards against emotional exhaustion due to fear (Park et al. 1990) of contamination.

Accordingly, this research is likely to make contributions in numerous ways. First, it is believed that this is the first study investigating the fear about recent COVID-19 outbreak's contamination and its effect on employee's performance. Earlier studies have shown that the fear of contamination of a contagious disease has harmful influence on mental health of employees (Fiksenbaum et al. 2007; Kelloway et al. 2012), however, they have largely ignored to investigate the influence of fear of contamination on employee work-related behavior and performance. Some researchers have studied symptoms of Norwalk contamination, strain and hygiene practices (Kelloway et al. 2012); the coping strategies adopted by Hepatitis patients (Sohail et al. 2020) and patients related outcomes (Lundstrom et al. 2002). But studies related to organizational context in the aforementioned relation are scant. By focusing on fear of contamination and its link with performance, this study provides organizations—particularly the ones who have to operate and continue their operations despite the lockdown situation—valuable insights into why certain personnel might be more or less inclined in completing their job-related tasks satisfactorily.

Next, this study proposes that fear (of contamination from contagious diseases) results in employee's deteriorated performance, because such individuals are emotionally drained (Fiksenbaum et al. 2007). If environmental situations jeopardize personnel's physiological well-being in such a way that the resource reservoirs they possess become seriously hampered, their perceived strain and exhaustion (from external threats) might spill to their work and start deteriorating their work output (Hobfoll and Shirom 2000). This notion is congruent with the tenets of COR theory, which put forward that in case of exposure to stressful circumstances, individuals experience reduction in resources leading to deteriorated performance, since they distribute substantial energy for handling their fears rather than paying attention to the work duties that their respective organizations assumes (Hobfoll 1989; Witt and Carlson 2006; McCarthy et al. 2016). Emotional exhaustion, therefore, might serve as an important mechanism by which fear of contamination leads to personnel's underperformance at work.

Third, this study puts forward that organizational measures taken for contamination prevention would work as a job resource and a mitigating agent against emotional exhaustion that arises due to the fear of contamination with disease (Fiksenbaum et al. 2007), which in turn reduces the probability of personnel's under

performance. In line with the principles of the COR theory, such job resource might potentially counteract with the resource loss due to stressor (Sarfraz et al. 2019) in the form of fear. There forth, this study would extend earlier researches like Toker et al. (2015) and De Clercq et al. (2017) who have utilized similar underpinnings but against the backdrop of terrorism and also studies like Fiksenbaum et al. (2007) who overlooked to include employees performance in their study model. Additionally, the support extended by the organization by demonstrating care for employees, assists in the reduction of harmful influence of stressful events on their mental health (Sarfraz et al 2019; Fiksenbaum et al. 2007) though the author is unaware of any studies that focuses on how organizational response towards an epidemic may buffer the hazardous influence of fear of contamination on job performance through emotional exhaustion. Since organizational support aids personnel in coping with stressors (Sarfraz et al. 2019), the present research provides original insights that organizations may utilize with respect to immunizing the personnel against the fears arising due to an epidemic outbreak.

The Pakistani empirical settings are relevant for the current study as the number of COVID-19 victims are increasing day by day (CDC 2020) and a widespread fear is prevailing here among masses due to the chances of contamination with the disease. Additionally, the banking sector provides perfect avenues for studying such effects on employee's performance since the banking sector is working despite lockdown and the banking employees are at risk of such contamination since their daily interaction with customers is high (Sarwar et al. 2019). Hence, investigating the potential positive influence of organizational response and measures towards fighting with the negative effects of fear of contamination at workplace and its outcomes on work performance in context of the Pakistani banking sector is a pertinent and timely issue.

2 Research model

The research framework and the hypotheses proposed in this study are depicted in Fig. 1. It is hypothesized that fear of contamination increases emotional exhaustion which in turn reduces job performance of employees. Therefore, it is predicted that

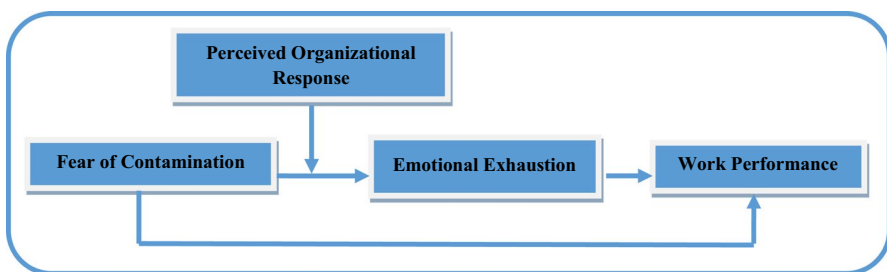


Fig. 1 Hypothesized research model

emotional exhaustion serves as an important mechanism by which fear might undermine performance. The study also proposes that a positive organizational response would work as a buffer, in a way that the translation of fear into emotional exhaustion, and hence deteriorated work performance, might be alleviated.

3 Hypotheses development

3.1 Fear of contamination and work performance

According to the COR theory, people try to increase, maintain and defend important physical and psychosocial resources that are most valuable to them (Hobfoll 1989). During the times of outbreak, survival of oneself and beloved ones being the most important personal and social resources (Toker et al. 2015), are endangered; a situation that is stressful (Hobfoll et al. 2006). The TMT proposes the importance of survival as individual's vital drive (Pyszczynski et al. 1997). It is suggested that epidemic episodes, being random and uncertain, brings forth the idea that such outbreaks might result in death or health hazards to oneself, and/or the loved ones. The danger to life has been demonstrated, in experimental setting, to result in negative affect and ensue harm to personal resources (Zeidner et al. 2011). When the fear is persistent, it might influence all spheres of life involving the work settings (Toker et al. 2015).

COR theory proposes that actual or potential loss of resource results in decrease of a person's intrinsic energy resources known as loss cycles (Toker et al. 2015) which might affect a person's work performance. Additionally, the same theory focuses on the downward spirals by which harm to resources in one sphere (e.g., detrimental influence of fear due to outbreak) might aggravate resource exhaustion in other spheres (job-related performance) (Hobfoll 1989). There is an evidence in earlier researches that resource loss in a person can result in fatigue, burnout and weariness (Melamed et al. 2006; Shirom 2003) which would negatively affect an employee's performance at workplace (Maslach et al. 2001). It is, therefore, hypothesized that:

Hypothesis 1 Fear of contamination is negatively related to work performance.

3.2 Fear of contamination and emotional exhaustion

Emotional exhaustion is described as the sense of being emotionally overstretched and fatigued due to the job duties (Wright and Cropanzano 1998). It reveals itself when personnel perceive themselves to be short of appropriate emotional reserves for coping with continual stressors (Lee and Ashforth 1996). The same scholars have demonstrated that emotional exhaustion is strongly correlated to stressors. The current study proposes that fear of contamination represents a stressor that impends mental, emotional, and cognitive resources. Personnel employ cognitive coping strategies for reducing the worry related to threatening individuals and circumstances

(Tepper et al. 2007). Such a coping behavior includes accepting the circumstances as they are and agreeing that such situation cannot be changed (Cronkite and Moos 1995). As the spread of contagious diseases is a relatively unstoppable phenomenon, therefore, its related fear is expected to result in emotional depletion.

Additionally, the sense of worry in life, like the personal, family or any other domain, has the potential to spill over and harmfully affect one's feelings and performance in the job settings (Ford et al. 2007; Lim and Tai 2014). The prevalence of an epidemic among the larger masses might be considered as a general threat to one's well-being. Such a threat of danger to one's health leads to undesirable job outcomes, since it potentially exhausts the resource pools that personnel rely upon in work settings, hence overloading their work competences (Witt and Carlson 2006; De Clercq et al. 2017). The loss of resources arising from worrying situations can potentially overflow and produce apprehension in personnel regarding their capability to successfully complete organizational obligations (Hobfoll and Shirom 2000). Previously, Fiksenbaum et al. (2007), have demonstrated the fear of infection leads to emotional exhaustion of employees.

In the same vein, the fear COVID-19 spreading in the public, a stressor that might be considered as of outside work origin may increase the personnel's emotional exhaustion. Parallel to the principals of TMT, the probability of contamination from a fatal disease might raise a person's mortality salience, which can generate noteworthy tension in their life (Greenberg et al. 1986). Additionally in line with the tenets of the conservation of resources theory, which has the capacity to elucidate how fear might stimulate the sense of weariness (Toker et al. 2015) and anxiety (De Clercq et al. 2017), it is proposed that fear of contamination with a contagious disease represents a genuine danger to health and it might be so distressing to personnel that it drains them off their emotional resources (Hobfoll and Shirom 2000). Based on this discussion, it is hypothesized that:

Hypothesis 2 Fear of contamination is positively related to emotional exhaustion.

3.3 Emotional exhaustion and work performance

It is also expected in this study that emotional exhaustion would result in deteriorated work performance. In line with the principals of the COR theory, an important mechanism that might relate emotional exhaustion with negative work performance is the inclination of individuals to preserve resources when faced with unfavorable circumstances (Hobfoll 2001). Emotionally exhausted personnel have decreased psychological, emotional and cognitive resources, that makes it hard for them to accomplish work demands (Jahanzeb and Fatima 2017). For example, they might deliberately or un-deliberately attempt to slow down services or put unsatisfactory work efforts on job. These kinds of employees utilize coping strategy of detaching themselves from work demands (Van der Linden et al. 2005). Earlier studies also show that the existence of emotional exhaustion

results in failure in the work settings (Jahanzeb and Fatima 2017; Van Jaarsveld et al. 2010). Therefore, it is proposed that:

Hypothesis 3 Emotional exhaustion is negatively associated to work performance.

3.4 Mediating role of emotional exhaustion

By merging the earlier discussion, it is proposed that emotional exhaustion acts as a mediator since personnel's resource reduction, related to fear of contamination deteriorates their work-related performance because their emotional resource reservoir has diminished. Personnel who sense that the epidemic poses a serious danger to them and their loved one's well-being would be more prone to underperform since they greatly fear such danger while at job and have greater drive to preserve their resources and decrease their diligent efforts to finish their work duties (Hobfoll 2001; Bader and Berg 2014). Therefore, this study proposes that emotional drainage is key mechanism by which life-threatening stressor of getting infected by a contagion at work diminishes work performance, because it distracts the employees from successful completion of work duties. Hence:

Hypothesis 4 Emotional exhaustion acts as a mediator between the association of fear of contamination and work performance.

3.5 Moderating role of organizational response

The terror management theory states that individuals feel stressed if they perceive a potential threat to their life due to the absolute distinction of their heightened death recognition against their self-preservation disposition (Burke et al. 2010; Becker 1973). The COR theory proposes that if personnel are able to pull from the job-related resources of perceived support from organization, the probability that fear of contamination of disease (fear of death/ threat to well-being) spill over to their job-related behavior in the shape of emotional exhaustion might be restrained (Hobfoll 2001). Support from the organization is perceived as a job resource by employees (Sarraz et al. 2019) which can be utilized for compensating the hazardous influence of initial resource loss resulting from stressful situations (Hobfoll et al. 2003; Hobfoll 2002). The support extended by the organization (i.e. the timely response against spread of infection in its employees) might improve their capacity to confront adverse situations by offering helpful resources and, therefore, potentially halt the loss cycles (Hobfoll and Stokes 1988). Such a resource improving influence improves the advantageous direct influence of support on people and organizational results (e.g., Uchino 2006; Baruch-Feldman et al. 2002).

Additionally, earlier researches have demonstrated that support can have a mitigating effect on the relation between stressors and stress reactions (Cohen, and Wills 1985; Scott et al. 2014). Richardson et al. (2008) showed that support is significantly associated to all the stressor and strains in such a way that the relation is stronger

for cognitive/emotional strains. This study puts forward that organization's timely response against spread of infection in its employees and perception of employee's about effectiveness of such measures would be helpful in decreasing the harmful influence of fear of contamination on emotional exhaustion of employees. Support has been found to have a positive influence of personnel's physiological well-being, involving longevity (e.g., Shirom et al. 2011), and other body responses and reactions (e.g., Uchino et al. 2012). Particularly, support has an attenuating effect on the reactivity of the neuroendocrine system towards feelings of strain, in such a way that it releases less cortisol (Eisenberger et al. 2007). This advocates that in the personnel sensing fear of contamination, positive perceptions of organizational response might decrease the possibility of emotional exhaustion. The proposition is backed by Fiksenbaum et al. (2007) who demonstrated that higher levels of organizational support predicts lower emotional exhaustion in event of an outbreak.

Therefore, when employees are able to draw from organizational support due to its perceived positive response towards infection prevention in employees, the related resource gains balance for the resource exhaustion that typically results from the fear of getting ill (Hobfoll 2001), thereby reducing the chances of such fear translating into emotional exhaustion. Hence, it is proposed that:

Hypothesis 5 The positive association between employees' fear of contamination and their emotional exhaustion is moderated by organizational response, in such a way that the association is weaker due to better response.

By merging the arguments from previous hypotheses, this study also proposes a conditional indirect effect (Preacher et al. 2007), in such a way that job resource of organizational positive response acts as an important factor in the indirect relation of fear of contamination on work performance, via emotional exhaustion. This moderated mediation relation suggests that better the response of organization towards preventing the exposure of organizational employees to potential contamination, the influence of emotional exhaustion, as a guiding mechanism to inform the association between fear of contamination and job performance, should be alleviated. Particularly, the existence of positive organizational measures, diminishes the chances of resource reduction stemming from fear that results in deteriorated work performance by the activation of emotional exhaustion (Fiksenbaum et al. 2007; Sarfraz et al. 2019; Jahanzeb and Fatima 2017). Hence, it is proposed that:

Hypothesis 6 The indirect association between employees' fear of contamination and work performance via emotional exhaustion is moderated by organizational positive response, in such a way that this indirect association is weaker when organizational response is better.

4 Methodology

4.1 Data collection

The data for this study were collected from full time personnel working in the banking industry of Pakistan in Punjab province. Convenience sampling method was utilized as the list of studied population was not available. Time-lagged data were collected in two waves and from multiple sources (supervisor and self-report) as it was considered suitable for reducing social desirability issue and common method bias (Podsakoff et al. 2012). Banks were chosen as it was believed that they offer suitable opportunity to study the variables under the widespread epidemic situation. Banks employees in Pakistan were forced to keep on working even in lockdown situation. Because of the nature of work, i.e. offering services to customers in face to face dealings, employees are exposed more and chances of getting infected are also more. Recently, 24 suspected cases of COVID-19 emerged from a single bank branch operating in Lahore city (Ali 2020). Because English is the official and business language in Pakistani educational institutes and organizations (De Clercq et al. 2017; Jahanzeb and Fatima 2017), therefore, the questionnaire was designed in English language.

Initially (T1), 500 questionnaires regarding fear of contamination and organizational response were distributed, out of which only 324 were received back. After a gap of 4 weeks (T2), 324 questionnaires regarding the emotional exhaustion and demographic profile were floated again to the respective respondents, out of which 233 were received back. Amongst these, 21 were incomplete, while others had errors. In the end, 206 responses were left in analyzable form. Additionally, responses from supervisors regarding employee's performance were also collected at T2. The time lag of 4 weeks was considered suitable since it was believed to be sufficient to curtail recall bias and adequately short to limit the possibility that noteworthy external events may happen between the assessments of their fear, emotional exhaustion, perceived organizational response and job performance (De Clercq et al. 2017). The responses at T1 and T2 were matched with a code produced by every participant in accordance with the guidance written in the survey forms. Respondents were requested to write their birth months and initials for matching the time lagged responses. For supervisor responses, they were inquired about the full name of their immediate supervisor to whom they were answerable. The researchers collecting the data on the site (bank) matched and attached the responses from the employees and their respective supervisor on the spot. This is how the time lagged data and supervisor responses were synchronized.

The response rate of 41% though is comparatively low, however, the utilization of multi-sourced and time lagged collection techniques and panic situation due to the ever-increasing spread of the epidemic justifies such rate. Moreover, a cover letter was utilized for explaining the aim, importance and purpose of this study. Participants were also assured regarding the confidentiality of data usage. The respondents of the study consisted of 73% males with average age and work experience of 34 and

6 years, respectively. Majority of the respondents (82%) represented the private sector banks as compared to the public sector.

4.2 Measures

This study has utilized adapted measures to collect data for the constructs under study, with response options ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), unless otherwise mentioned.

Fear of contamination Fear of contamination was measured by a five-items scale adapted from Rogers and Kelloway (1997). Some of the examples of items are: “I am worried that I will become sick with Corona Virus” and “I worry about how safe the bank is from this infectious disease (COVID-19)”. The higher scores on this scale indicated more fear. The Cronbach’s alpha value of this scale was 0.82.

Emotional exhaustion For measuring emotional exhaustion, Emotional Exhaustion Scale (Maslach and Jackson 1981) was utilized. The scale consists of seven items. Sample questions include: “I feel emotionally drained from my work” and “I feel burned out from my work”. The Cronbach’s alpha value of this scale was 0.87.

Job performance For measuring the supervisor-rated work performance, we utilized the scale created by Williams and Anderson (1991) which consists of seven items. Some sample questions are: “This employee fulfills responsibilities specified in his or her job” and “This employee adequately completes assigned duties”. The Cronbach’s alpha value of this scale was 0.84.

Organizational response Perception of the bank’s response (POR) was measured by an adapted scale, created and validated by Kelloway et al. (2012) which consists of nine items. Some sample items include: “The bank took appropriate steps to protect its employees from COVID-19” and “The bank took this outbreak seriously”. The higher scores represented a more favorable evaluation of the bank’s response. The Cronbach’s alpha value of this measure was 0.84.

Control variables Earlier study has advocated that females may be more prone to emotional exhaustion as compared to males (Lackritz 2004) and that work experience (tenure) might also affect the emotional exhaustion of employees (Karatepe and Karatepe 2009). Therefore, this study has controlled for gender and work experience in the models.

Table 1 Correlation analysis

Constructs	Mean	SD	G	WE	FoC	EE	OR	WP
Gender (G)	0.45	1.11	1					
Work experience (WE)	2.85	1.27	0.63*	1				
Fear of contamination (FoC)	2.48	0.80	0.01	0.15*	1			
Emotional exhaustion (EE)	2.05	0.79	-0.13	-0.1	0.37**	1		
Organizational response (OR)	3.77	0.70	0.20**	0.15*	-0.28*	-0.3**	1	
Work performance (WP)	3.9	0.78	0.09	0.07	0.52**	-0.6**	0.49**	1

N=206, gender and work experience are control variables, * $p < 0.05$, ** $p < 0.01$

Table 2 Mediating effect of EE between FoC and WP using process macro

Predictor	Model 1 (path c)			Model 2 (path a)			Model 3 (path b and c')		
	WP			EE			WP		
	β	t	CI	β	t	CI	β	t	CI
Gender	-0.01	-0.03	-0.1; 0.1	-0.4	-0.67	-0.1; 0.07	-0.02	-0.44	-0.11; 0.1
WE	0.09*	2.02	0.003; 0.1	0.07	-1.5	-0.1; 0.25	-0.06	1.5	-0.02; 0.1
FoC	-0.52**	-9.06	-0.6; -0.41	-0.39**	6.05	-0.26; 0.51	-0.35**	-6.3	-0.4; -0.2
EE							-0.47**	-8.6	-0.5; -0.3
R ²	0.29**			0.16**			0.48**		
F	28.17			13.6			47.53		

** $\rho < 0.001$, * $\rho < 0.05$

Table 3 Moderating effect of POR using process macro

Predictor	Outcome variable			
	EE			
	β	t	CI	R ²
Gender	-0.02	-0.46	-0.13; 0.08	
WE	-0.06	-1.2	-0.15; 0.03	
FoC	1.8**	4.01	0.92; 2.6	
POR	-0.7*	2.5	0.15; 1.3	
FoC*POR	-0.3**	-3.3	-0.5; -0.15	0.24** (F = 13.24)

** $\rho < 0.001$, * $\rho < 0.01$

5 Data analysis

5.1 Results

Table 1 shows the correlations and descriptive statistics, whereas the regression results are displayed in Tables 2 and 3. Before moving on to regression analysis, the variance inflation factor values were checked for each model of regression coefficients. All the values were found to be below 10, showing that the data was free from the problem of multicollinearity (Aiken et al. 1991). Moreover, the numbers in Table 1 show a moderate correlation among the studied variables which are in line with the standards (Cohen et al. 2014).

To test hypotheses 1, 2 and 3, hierarchical regression test was applied. The results showed support for the first hypothesis which predicted a negative relationship between FoC and WP. The figures ($\beta = -0.52$, $t = -9.06$, $p < 0.001$) in Table 2, Model 1 indicates that as the fear of contamination increases, the performance of

employees at work would deteriorate. Hypothesis 2 had put forward that the employees who are more afraid of being infected with a contagious disease will be more emotionally exhausted. In support of this prediction, Model 2 in Table 2 demonstrates a positive association between FoC and EE ($\beta=0.39$, $t=6.05$, $p<0.001$). Because employees sense a threat to their health and well-being due to pandemic, they feel that an important personal resource is at stake, therefore, they feel emotional drainage. Moreover, Hypothesis 3 predicted that the more are the employees emotionally exhausted, the more are the chances that their work performance would be negatively affected, as revealed by the negative association between EE and WP in Model 3 of Table 2 ($\beta=-0.47$, $t=-8.6$ $p<0.001$).

Hypothesis 4 of this study proposed that emotional exhaustion mediates the association between FoC and WP. To test this mediated relationship, Preacher and Hayes's (2004) technique was executed at 5000 bootstrapping, by utilizing the Process macro (Hayes 2017). This test generates confidence intervals (CI) for indirect effects. Therefore, this technique minimizes the potential statistical power problems that might arise from asymmetric and other non-normal sampling distributions (MacKinnon et al. 2004). The CI for the indirect effect of FoC on WP through EE did not include 0 (CI = -0.28; -0.10) in support of the presence of mediation.

Regression results presented in Table 2 contain three models to explain the statistics extracted for mediation analysis. Model 1 shows that FoC significantly negatively predicted WP and 29% variation found in WP was due to CSS ($R^2=0.29$, $F=28.17$, $p<0.001$). Next, Model 2 demonstrates a positive relation between FoC and EE with R^2 value of 0.16 ($F=13.6$, $p<0.001$). In model 3, after controlling for FoC, EE negatively impacted WP with R^2 value of 0.48. Finally, biased corrected percentile bootstrap method using model 4 of PROCESS macro by Hayes (2017) indicated that indirect path of FoC on WP via EE was satisfied ($b=-0.18$, $SE=0.045$, 95% (-0.28, -0.10). Therefore, hypothesis 4 was accepted, supporting the mediation effect of EE between FoC and WP.

Hypothesis 5 was confirmed by testing the FoC \times POR interaction term for EE. Table 3 shows that the interaction term was found to be significant ($\beta=-0.37$, $t=-3.3$, $p<0.001$) with a $\Delta R^2=0.04$, ($F=11.12$, $p<0.005$), demonstrating that the positive effect of fear of contamination on emotional exhaustion was mitigated by higher levels of organizational response. A simple slope test (Aiken et al. 1991) showed that at different values of POR, the effect of FoC on EE of employees varies significantly; for example at low levels of POR, the relation between FoC and EE was found to be significant ($b=0.65$, $t=5.53$, $p<0.001$, CI=0.42; 0.89); however, at high levels of POR, the relation became insignificant ($b=0.13$, $t=1.55$, CI=-0.03; 0.30). The significance of the interaction is further proven by plotting the values in a graph with moderating variable at +1 SD and -1 SD. Figure 2 shows the effect of FoC on EE at high, medium and low levels of POR. The harmful effect of fear in the form of emotional exhaustion is buffered in the presence of positive organizational response. Therefore, the effect by which fear increases the chances of EE is lessened by POR, in further support of Hypothesis 5.

The last hypothesis of the study was to investigate the moderating role of POR in the indirect relation between FoC and WP via EE. To examine this moderated mediation relationship in Hypothesis 6, we applied Preacher et al.'s (2007) procedure and

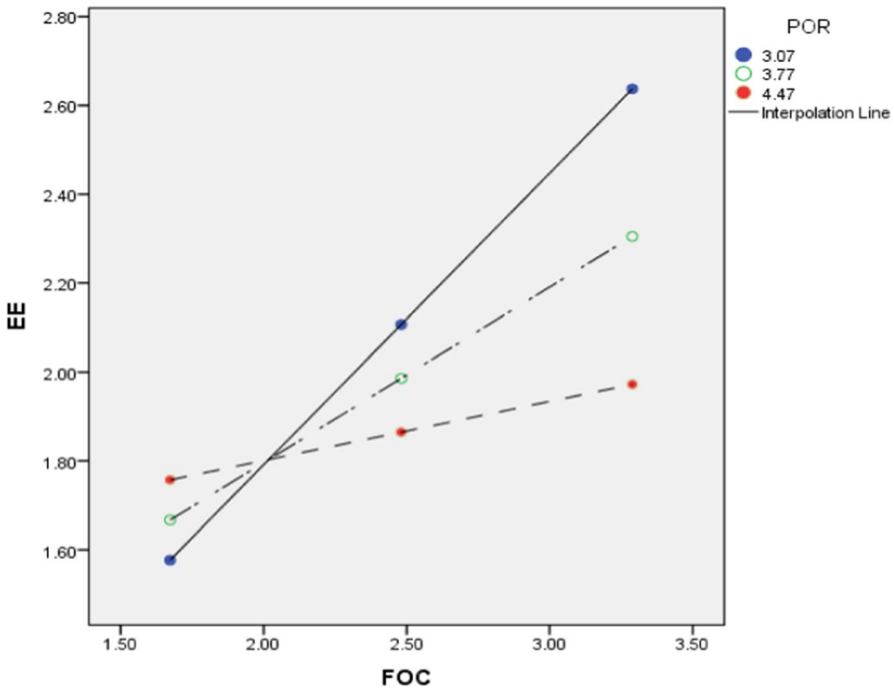


Fig. 2 Moderating effect of POR in the relation between FoC and EE

Hayes's (2017) Process macro, i.e. Model 14. This procedure produces CI for the conditional indirect effects (MacKinnon et al. 2004). The results from the analysis with 10,000 random samples and replacement from the full sample, showed that the 95% bootstrap confidence intervals for the conditional indirect effect of FoC on WP at the low level (-1 SD) of the moderator POR did not contain zero ($b = -0.31$, $CI = -0.49; -0.16$), but contained zero when the value of POR was low ($b = -0.06$, $CI = -0.16; 0.03$). Moreover, the index (Hayes 2015) of moderated mediation ($i = 0.17$) and its corresponding confidence interval did not include zero ($CI = 0.05; 0.33$), showing that POR acts as a buffer against the detrimental indirect effect of FoC on job performance, through emotional exhaustion, in support of Hypothesis 6 and this study's overall framework.

6 Discussion

This research tried to comprehend the detrimental effects of fear of contamination of the deadly COVID-19 pandemic that has caused widespread panic all around the world (Mizumoto and Chowell 2020) on an important organizational outcome, i.e. employee's work performance. The study utilized TMT (Greenberg et al. 1986) and the COR theory (Hobfoll 1989) and investigated emotional exhaustion as a vital mediating mechanism in explaining the association between fear of

contamination and performance; and studied the moderating role of positive organizational response in the said relationship. Earlier studies have shown that the fear of contamination of a contagious disease has harmful influence on mental health of employees (Fiksenbaum et al. 2007; Kelloway et al. 2012), however, previous researchers have largely ignored to investigate the influence of fear of contamination on employee work-related behavior and performance.

The result of this study demonstrated that such fear affects employee's mortality salience and increases their perception of increased threat towards their own and loved one's well-being. According to the terror management theory, survival instincts are of utmost importance in an individual's life (Pyszczynski et al. 1997). The theory puts forward that threatful (epidemic) events, being uncertain and random, instigates the idea that they (outbreaks) might result in death. Our study results demonstrated that such fear negatively affects employee's performance at work and are in line with the results of studies that show that threat to one's life leads to negative affect and loss of personal resources (Zeidner et al. 2011) and deteriorated performance (Toker et al. 2015; De Clercq et al. 2017).

Additionally, the results of this study also confirmed that such fear leads to reduced job performance through the emotional route, i.e. fear results in emotional exhaustion of employees which consequently leads to reduced job performance. Employees view fear of contamination as a cause of tension that results in high level of emotional exhaustion (Fiksenbaum et al. 2007). Additionally, when the employees lose emotional resources, it becomes hard for them to concentrate on work and, therefore, the reduced level of resources leads to their deteriorated work performance (De Clercq et al. 2017). This result is backed by several earlier studies that have shown emotional exhaustion to be related with negative work-related behavior and performance (e.g. Van Jaarsveld et al. 2010; Swider and Zimmerman 2010). Emotionally exhausted personnel are also observed to experience and exhibit negative behavior including lower levels of commitment, turnover intentions, reduced engagement in organizational citizenship behaviors, depression, counterproductive work behaviors and family difficulties (Alarcon 2011; Cropanzano et al. 2003; Jahanzeb and Fatima 2017). This study confirms the mediating link of emotional exhaustion between fear of contamination and work performance.

Moreover, with the support of COR theory, our proposed hypotheses regarding the moderating role of organizational response were also accepted, demonstrating that perceived positive reaction of organization regarding the spread of infection from contagious diseases serves an important job resource amidst the situation of widespread panic. Such a resource helps employees in fighting against the fear of contamination and, therefore, reduces the chances of them getting emotionally exhausted. Earlier, Fiksenbaum et al. (2007) showed that higher levels of organizational support predicted lower perceived threat of contagious diseases and lower emotional exhaustion among employees.

Showing a satisfactory level of performance at work requires substantial resources of energy (Quinn et al. 2012; McCarthy et al. 2016), and personnel who are facing worrying events might not own the resources desired to perform their work responsibilities (Boscarino et al. 2006). Particularly, the resource exhaustion that reinforces the development of emotional drainage (due to fear of contamination)

increases employee's motivations to preserve resources (Hobfoll 2001), that makes it more difficult for the employees to go out of their way to meet work standards. Additionally, if employees perceive a threat in their environment that has the capacity to put their lives in danger, they might think that utilizing substantial energy resources to the effective completion of their work duties is less profound or beneficial (Kastenmüller et al. 2011), and therefore, they start focusing their energies to tasks that they might consider to be useful in reducing the threat to their well-being, for example like indulging in religious activities (De Clercq et al. 2017) or hygiene practices (Kelloway et al. 2012).

Support from the organization is perceived as an important job resource by employees (Sarfraz et al. 2019) which is utilized by them for countering the harmful effect of initial resource loss resulting from stressful situations (Hobfoll et al. 2003; Hobfoll 2002). The timely response of organizations against spread of infection in its employees improves employee's capacity to confront adverse situations and, therefore, potentially halt the loss cycles (Hobfoll and Stokes 1988). Such a resource influence improves the advantageous direct influence of support on people and organizational results (Uchino 2006; Baruch-Feldman et al. 2002). It might be argued that perceived organizational response may be utilized as a mediator, rather than a moderator between the relationship of fear of contagion and work performance due to its significant correlation with fear of contamination. However, this study used organizational response as a moderator due to its theoretical underpinnings in COR, which posits that stress (EE) would occur as employees perceive threat (FoC) to their valuable resources. Moreover, if employees are able to extract job-related resources, the probability of threat to personal resource (fear of death/threat to well-being) translating to their negative job-related behavior might be restrained (Hobfoll 2001).

Finally, the last hypothesis regarding moderated mediation relation was also endorsed by our data and tenets of COR theory. The moderating role of organizational response in the relationship between fear of contamination and job performance via emotional exhaustion (Preacher et al. 2007) provide insightful perspective in that the strength of this indirect association is contingent on the level of effectiveness of organizational response. Therefore, emotional exhaustion in employees links fear and diminished work performance less strongly in the presence of a strong perception of effective measures adopted by the organization. This is because the resource exhaustion related with serious fear of contamination with a fatal virus is restrained due to the presence of positive job resources and reduces its effects of job performance of employees.

Largely, this research authenticates a better comprehension of the effects of employee's fear of contamination during an epidemic outbreak on their performance at their jobs due to resource loss. The study contributes to the literature by (1) postulating the part a previously under explored stressor (fear of contamination) plays towards work performance, (2) enlightening how emotional drainage work as an important mechanism that links a stressor to deteriorated work performance, and (3) demonstrating how effective organizational response perceptions reduces the chances of translation of stressors into reduced work performance via emotional exhaustion.

7 Implications

7.1 Theoretical contribution

Drawing on the TMT and the COR theory, this research is the first that author knows of to investigate the resource loss cycles that arise in personnel because of the fear arising from the risks of potential infection of a contagious disease while at work. The results of the study revealed that a resource depletion occurs in such a way that stressor in the form of fear of terror results in a loss of emotional resources (emotional exhaustion), which consequently leads to lowered job performance. This effect, however, can be mitigated in the presence of valuable job resource in the form of positive organizational response towards the epidemic situation. The findings were endorsed by the TMT theory's (Pyszczynski et al. 1997) general principles that death-related stimuli (denoted in this research by fear of contamination) are associated with undesirable mental (Toker et al. 2015) and job-related outcomes (De Clercq et al. 2017).

It is increasingly important in the contemporary world that organizations be equipped to deal with the effects of epidemic outbreaks (O'Reilly 2006) and that researchers be prepared to provide data that would enlighten these efforts (Kelloway et al. 2012). Therefore, during the dreadful times of the increasing spread of COVID-19, this study has investigated how emotional exhaustion offer crucial channel, by which fear of contamination at workplace results in deteriorated performance, and how positive organizational response might mitigate such detrimental effect. Recognition of death due to a threat (from a deadly virus) potentially drains personnel's resource pools and disrupts their organizational working (Bader and Berg 2014), which results in lowered job performance. The results from the study provides evidence that emotional drainage is a vital cause because of which fear of contamination weaken personnel's capacity to successfully complete the tasks assigned to them by the organization. The positive relationship between fear and emotional exhaustion shows that fear of health risks has implications on employee's work. When a threat is perceived by the employees, their mortality salience is triggered (Greenberg et al. 1986). Therefore, when employees fear the threat to their well-being as salient, they can manage only limited emotional resources to complete the performance targets that their supervisors expect from them.

Furthermore, the study results acknowledged that the effectiveness of a strong job resource, i.e., organizational measures in the mind of the employees, plays an important role in reducing fear's translation into emotional exhaustion of employees. In line with the principles of TMT, individuals are able to cope better with the tension arising from their understanding of human's mortality by espousal of standard values (Burke et al. 2010) that might be set by their organization for containing the spread of disease. In the same vein, COR theory posits that reduction in resources and its harmful effects might be restrained to the degree that individual can pull from pertinent resources (Hobfoll 2001). Organizational measures taken for the well-being of employees gives them a sense of being cherished and being taken care of by the organization (Sarfraz et al. 2019). These perceptions have the capacity

to reduce the chances that fear would be translated into emotional exhaustion. One cause of the mitigating influence of organizational response might be that it makes the personnel feel they can rely on the organization to aid them (Rhoades and Eisenberger 2002) in the event of challenging and life-threatening situations. In line with the COR theory (Hobfoll 2001), the resource advantages related to such assurance should assist in lightening the exhaustion generated due to fear of contamination and prevent the chances that personnel start sensing the feeling of being emotionally drained.

7.2 Practical implications

With ever-increasing incidents of various disease outbreaks all around the world (Kelloway et al. 2012), organizations face more chances of having to deal with epidemics. With that in mind, this study offers some vital implications for organizations working in this era. To uphold satisfactory work performance of employees during and after an epidemic, organization must diagnose that an important cause of emotional exhaustion is the fear of contamination lurking in the minds of employees. Importantly, some employees might hesitate to acknowledge their fear to avoid stigmatization. It is, therefore, necessary to recognize employees' worries regarding harm to well-being due to diseases, by fitting formal mechanisms for what to do during such circumstances and applying feedback procedures (De Clercq et al. 2017) that permit personnel to express their anguish during the times of epidemic outbreak.

As this study has shown that fear of contamination with diseases affects employees work performance indirectly by draining them emotionally, managers and leadership should extend work-based interventions intended to reduce emotional exhaustion by increasing the levels of emotional support (Le Blanc et al. 2007). This might be done by improving group cohesion levels and helping employees in collaborating with members of the team (Wong and Lin 2007). Organizations must try to be supportive and protective in situations that pose threat to employee's well-being by providing a strong collegial climate so that personnel feel attached to departmental members (Toker et al. 2015). This is possible by a vigilant selection and assignment of individuals in teams, along with a suitable incentive plan that encourages cooperation. Additionally, emotional mentoring should be provided for sustenance and development of adaptive management skills (Kinman and Grant 2010). The levels of emotional support by means of implementing personnel assistance plans should be improved so that emotional management counseling and training be extended to employees (Jahanzeb and Fatima 2017).

Moreover, though organizations and researchers alike are busy in developing response plans for biological threats (e.g. Mitroff and Alpaslan 2003; Augustine 1995), such responses must be swift enough to create a positive and lasting impression in the minds of employees so that their performance levels might not be hampered. Organizations can stress on the importance of turning to work peers for assistance during worrying times and reassure personnel to create facilitating relations at workplace (Toker et al. 2015). Despite such actions, because epidemic events

cannot be ruled out, thus the negative effects of fear on performance cannot be fully evaded. An important insight presented by the current study in this situation is that it becomes necessary for the organization to show concern and effective response towards contagion preventive strategy so that employees might perceive a sense of care and support from the organization and the translation of the related resource drainage be prevented into becoming poor performance. Particularly, organizations can implement procedures like maintaining distance, sanitizing and hygiene practices. Alongside, special sessions extending support and information regarding infection prevention strategies would also be useful. Additional incentives, compensation and healthcare benefit might also play a part in motivating the discouraged employees for showing good performance despite the prevailing fear.

It is important to note that in a situation where an employee has been exposed to a contagious disease in the past, it is possible that the fear of contamination in these personnel be relatively serious. The long-term effects of such fear might still manifest in employees even after years of contamination. In such a situation, management should evaluate the extent of employee's exposure directly or vicariously and offer access to expert assistance even when the outbreak has subsided. Furthermore, policy makers and governments usually estimate the "cost" of epidemic outbreaks in terms of the casualties and effects on overall economy. It is hopeful that recognizing the concealed costs of fear (i.e., the effects on employee's mental health and consequently on their job performance) would motivate the leadership to concentrate their energies on this sector. Moreover, it is suggested that energies utilized in extending a supportive environment along with valuable health resources may assist organizations not only in the event of outbreaks but also on other instances where personnel sense a fear of resource loss, like reduced job security during economic downturn.

Finally, leaders must realize that when faced with a threat to valuable resources (like well-being, health, and life), employees can easily become worried and might adopt a "fight or flight" response (Toker et al. 2015). Fight responses might be revealed in violence, offensive actions, or rudeness at workplace, while flight responses might involve laziness, absenteeism, and excessive breaks from work (Johnson and Swogger 1990). Comprehending the potential boundary conditions that can mitigate the adverse effects of fear are necessary. This study has presented organizational response as one such contingent factor, future researchers are welcome to highlight more boundary conditions.

7.3 Limitations and recommendations

Though this study significantly contributes to the existing literature, however, it is not without limitations, which offers future research avenues for scholars. First, this study used a time lag of 4 weeks between first and second wave of data collection, which was considered suitable for reducing several biases, however, it is also believed that a longer time lag might be more beneficial since the fear of contamination may manifest only after a more extended period and more fatality rate. Additionally, emotional exhaustion may not lead to reduced work performance immediately. Longitudinal designs are also recommended for confirming the causal effects

of the variables under study, i.e. some employees might get emotionally exhausted because they cannot meet their performance requirements.

Second, the response rate of this study also represents a limitation as some earlier researches have been able to achieve a higher response rate (e.g. Jahanzeb and Fatima 2017; Donia et al. 2016; Bouckenooghe et al. 2015). Though this limitation is acknowledged, however, it can be justified on the basis of time lagged, multi-sources nature of data collection. Additionally, the context of the study, i.e. data collection during the days of pandemic outbreak made response collection difficult.

Third, the generalizability of the results might be limited due to the fact that data were collected from a single country and only from banking sector. However, cultural factors (on the basis of country as well as industry) can potentially affect the results. For instance, Pakistan has a high uncertainty avoidance culture (De Clercq et al. 2017) and here personnel might, therefore, be predominantly sensitive to situations that generate uncertainty and stress in their day to day life (Hofstede 2001). The comparative strength of relationship found among the studied variables might come out to be weaker in more risk prone regions of the world. Therefore, cross-national researchers might offer more insightful results. Moreover, similar study might be replicated in other industries to confirm the generalizability of the results.

Additionally, this study only investigated one variable as moderator, i.e. organizational response; and one variable as mediator, i.e. emotional exhaustion in the relation between fear of contamination and work performance. Future researchers are welcome to consider more mediating mechanisms like strain, and anxiety; and boundary conditions like religiousness and emotional intelligence that might be involved in the relation between fear and performance. We also welcome scholars to test organizational support as a mediator rather than a moderator between stress and strain relationships, by underpinning the relationship in a theory other than the COR.

8 Conclusion

This study has contributed to existing literature by showing the negative effect of fear of contamination of a contagious disease during an epidemic outbreak on employees' work performance, along with the mediating role of emotional exhaustion and moderating role of positive organizational response. A vital explanation as to why such fears of contamination deteriorates personnel's job performance is the significant drainage of their emotional resources because of a threat to their own and their loved one's well-being. This relation of fear and performance via emotional exhaustion, in turn, depends on the perception of employees about the extent of measures taken by their respective organization for safeguarding the employee's health. Positive perceptions of organizational response facilitates the personnel to cope with the fear that comes with the outbreak of a deadly epidemic like COVID-19, acting as buffer against its negative effects at workplace and, therefore, against the probability that resources are drained that might be allocated to positive actions that furthers better job performance. It is expected that this particular investigation

acts as a steppingstone for more studies on how organizations might ensure satisfactory performance of their employees during the times of fear since organizations are faced by an increased realistic probability of being hit by similar epidemics in future.

Funding This research did not receive any sort of funding.

Availability of data Data will be available on request from the corresponding author.

Declarations

Conflict of interest There is no conflict of interest to disclose.

References

- Abdi M (2020) Coronavirus disease 2019 (COVID-19) outbreak in Iran: actions and problems. *Infect Control Hosp Epidemiol* 41(6):754–755
- Aiken LS, West SG, Reno RR (1991) *Multiple regression: testing and interpreting interactions*. Sage, New York
- Alarcon GM (2011) A meta-analysis of burnout with job demands, resources, and attitudes. *J Vocat Behav* 79(2):549–562
- Ali N (2020) 24 Suspected cases of COVID-19 traced in Bank Alfalah. MARCH 26, 2020. <https://dailytimes.com.pk/583337/24-suspected-cases-of-covid-19-traced-in-bank-alfalah/>. Accessed 23 Mar 2020
- ARY (2020) CM Punjab Usman Buzdar announces lockdown in Punjab. ARY News. 23 March 2020. Accessed 23 Mar 2020
- Augustine NR (1995) Managing the crisis you tried to prevent. *Harv Bus Rev* 73(6):147
- Bader B, Berg N (2014) The influence of terrorism on expatriate performance: a conceptual approach. *Int J Hum Resour Manag* 25(4):539–557
- Baruch-Feldman C, Brondolo E, Ben-Dayan D, Schwartz J (2002) Sources of social support and burnout, job satisfaction, and productivity. *J Occup Health Psychol* 7(1):84
- Becker E (1973) *The denial of death*. The Free Press, New York
- Beehr TA, Bowling NA, Bennett MM (2010) Occupational stress and failures of social support: when helping hurts. *J Occup Health Psychol* 15(1):45–59
- Belmi P, Pfeffer J (2016) Power and death: Mortality salience increases power seeking while feeling powerful reduces death anxiety. *J Appl Psychol* 101(5):702
- Boscarino JA, Adams RE, Figley CR (2006) Worker productivity and outpatient service use after the September 11th attacks: results from the New York City terrorism outcome study. *Am J Ind Med* 49(8):670–682
- Bouckennooghe D, Zafar A, Raja U (2015) How ethical leadership shapes employees' job performance: the mediating roles of goal congruence and psychological capital. *J Bus Ethics* 129(2):251–264
- Burke BL, Martens A, Faucher EH (2010) Two decades of terror management theory: a meta-analysis of mortality salience research. *Pers Soc Psychol Rev* 14(2):155–195
- CDC (2020) <https://wwwnc.cdc.gov/travel/notices/warning/coronavirus-pakistan>. Accessed 23 Mar 2020
- Cohen S, Wills TA (1985) Stress, social support, and the buffering hypothesis. *Psychol Bull* 98(2):310
- Cohen P, West SG, Aiken LS (2014) *Applied multiple regression/correlation analysis for the behavioral sciences*. Psychology Press
- Cronkite RC, Moos RH (1995) Life context, coping processes, and depression. In: Beckham EE, Leber WR (eds) *Handbook of depression*. Guilford Press, New York, pp 569–587
- Cropanzano R, Rupp DE, Byrne ZS (2003) The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *J Appl Psychol* 88(1):160

- De Clercq D, Haq IU, Azeem MU (2017) Perceived threats of terrorism and job performance: the roles of job-related anxiety and religiousness. *J Bus Res* 78:23–32
- Donia MB, Raja U, Panaccio A, Wang Z (2016) Servant leadership and employee outcomes: The moderating role of subordinates' motives. *Eur J Work Organ Psy* 25(5):722–734
- Eisenberger NI, Taylor SE, Gable SL, Hilmert CJ, Lieberman MD (2007) Neural pathways link social support to attenuated neuroendocrine stress responses. *Neuroimage* 35(4):1601–1612
- Fiksenbaum L, Marjanovic Z, Greenglass ER, Coffey S (2007) Emotional exhaustion and state anger in nurses who worked during the SARS outbreak: the role of perceived threat and organizational support. *Can J Commun Ment Health* 25(2):89–103
- Fischer-Preßler D, Schwemmer C, Fischbach K (2019) Collective sense-making in times of crisis: Connecting terror management theory with Twitter user reactions to the Berlin terrorist attack. *Comput Hum Behav* 100:138–151
- Ford MT, Heinen BA, Langkamer KL (2007) Work and family satisfaction and conflict: a meta-analysis of cross-domain relations. *J Appl Psychol* 92(1):57
- Greenberg J, Pyszczynski T, Solomon S (1986) The causes and consequences of a need for self-esteem: a terror management theory. In: Baumeister RF (eds) *Public self and private self*. Springer Series in Social Psychology. Springer, New York. https://doi.org/10.1007/978-1-4613-9564-5_10
- Hayes AF (2015) An index and test of linear moderated mediation. *Multivar Behav Res* 50(1):1–22
- Hayes AF (2017) *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach*. Guilford Publications, New York
- Hobfoll SE (1989) Conservation of resources: a new attempt at conceptualizing stress. *Am Psychol* 44(3):513
- Hobfoll SE (2001) The influence of culture, community, and the nested self in the stress process: advancing conservation of resources theory. *Appl Psychol* 50(3):337–421
- Hobfoll SE (2002) Social and psychological resources and adaptation. *Rev Gen Psychol* 6(4):307–324
- Hobfoll SE, Shirom A (2000) Conservation of resources theory. In: Golembiewski RT (ed) *Handbook of organizational behavior*. Marcel Dekker, New York, pp 57–80
- Hobfoll SE, Stokes JP (1988) The process and mechanics of social support. In: Duck S, Hay DF, Hobfoll SE, Ickes W, Montgomery BM (eds) *Handbook of personal relationships: theory, research and interventions*. Wiley, Hoboken, pp 497–517
- Hobfoll SE, Johnson RJ, Ennis N, Jackson AP (2003) Resource loss, resource gain, and emotional outcomes among inner city women. *J Pers Soc Psychol* 84(3):632
- Hobfoll SE, Canetti-Nisim D, Johnson RJ (2006) Exposure to terrorism, stress-related mental health symptoms, and defensive coping among Jews and Arabs in Israel. *J Consult Clin Psychol* 74(2):207
- Hofstede G (2001) *Culture's consequences: comparing values, behaviors, institutions and organizations across nations*. Sage, New York
- Hong X, Liu Q, Zhang M (2021) Dual stressors and female pre-school teachers' job satisfaction during the COVID-19: the mediation of work-family conflict. *Front Psychol* 12:2175
- Jahanzeb S, Fatima T (2017) How workplace ostracism influences interpersonal deviance: The mediating role of defensive silence and emotional exhaustion. *J Bus Psychol* 33(6):779–791
- Johnson JW, Swogger G (1990) Psychological responses to stress: work and academic inhibition and withdrawal. In: Noshpitz JD (ed) *Stressors and the adjustment disorders*. Wiley, Oxford, pp 547–558
- Karatepe OM, Karatepe T (2009) Role stress, emotional exhaustion, and turnover intentions: does organizational tenure in hotels matter? *J Hum Resour Hosp Tour* 9(1):1–16
- Kastenmüller A, Greitemeyer T, Aydin N, Tattersall AJ, Peus C, Bussmann P et al (2011) Terrorism threat and networking: evidence that terrorism salience decreases occupational networking. *J Organ Behav* 32(7):961–977
- Kaufmann GM, Beehr TA (1986) Interactions between job stressors and social support: some counterintuitive results. *J Appl Psychol* 71(3):522–526
- Kelloway EK, Mullen J, Francis L (2012) The stress (of an) epidemic. *Stress Health* 28(2):91–97
- Kinman G, Grant L (2010) Exploring stress resilience in trainee social workers: the role of emotional and social competencies. *Br J Soc Work* 41(2):261–275
- Kirmeyer SL, Dougherty TW (1988) Work load, tension, and coping: moderating effects of supervisor support. *Pers Psychol* 41(1):125–139
- Kosloff S, Greenberg J, Sullivan D, Weise D (2010) Of trophies and pillars: exploring the terror management functions of short-term and long-term relationship partners. *Pers Soc Psychol Bull* 36(8):1037–1051

- Lackritz JR (2004) Exploring burnout among university faculty: incidence, performance, and demographic issues. *Teach Teach Educ* 20(7):713–729
- Linden DVD, Keijsers GP, Eling P, Schaijk RV (2005) Work stress and attentional difficulties: an initial study on burnout and cognitive failures. *Work Stress* 19(1):23–36
- Le Blanc PM, Hox JJ, Schaufeli WB, Taris TW, Peeters MC (2007) Take care! The evaluation of a team-based burnout intervention program for oncology care providers. *J Appl Psychol* 92(1):213
- Lee RT, Ashforth BE (1996) A meta-analytic examination of the correlates of the three dimensions of job burnout. *J Appl Psychol* 81(2):123
- Lim S, Tai K (2014) Family incivility and job performance: a moderated mediation model of psychological distress and core self-evaluation. *J Appl Psychol* 99(2):351
- Lundstrom T, Pugliese G, Bartley J, Cox J, Guither C (2002) Organizational and environmental factors that affect worker health and safety and patient outcomes. *Am J Infect Control* 30(2):93–106
- MacKinnon DP, Lockwood CM, Williams J (2004) Confidence limits for the indirect effect: distribution of the product and resampling methods. *Multivar Behav Res* 39(1):99–128
- Maslach C, Jackson SE (1981) The measurement of experienced burnout. *J Organ Behav* 2(2):99–113
- Maslach C, Schaufeli WB, Leiter MP (2001) Job burnout. *Annu Rev Psychol* 52(1):397–422
- McCarthy JM, Trougakos JP, Cheng BH (2016) Are anxious workers less productive workers? It depends on the quality of social exchange. *J Appl Psychol* 101(2):279
- Melamed S, Shirom A, Toker S, Berliner S, Shapira I (2006) Burnout and risk of cardiovascular disease: evidence, possible causal paths, and promising research directions. *Psychol Bull* 132(3):327
- Mitroff II, Alpaslan MC (2003) Preparing for evil. Harvard Business School Pub, Boston
- Mizumoto K, Chowell G (2020) Estimating risk for death from coronavirus disease, China, January–February 2020. *Emerg Infect Dis* 26(6):1251
- Motowidlo SJ (2003) Job performance. In: Borman WC, Ilgen DR, Klimoski RJ, Weiner IB (eds) *Handbook of psychology: industrial and organizational psychology*, vol 12. Wiley, USA, pp 39–53
- NIH (2021) COVID-19 updates. www.nih.gov.pk/. <http://covid.gov.pk/stats/pakistan>. Accessed 27 Jul 2021
- Nugier A, Roebroek E, Anier N, Kleinlogel EP, Chatard A, Guimond S (2016) The psychological effects of terrorism are moderated by cultural worldviews. *Int Rev Soc Psychol* 29(1):77–84
- O'Reilly S (2006) Planning for the flu pandemic. *Occup Health Wellbeing* 58(2):8
- Park C, Cohen LH, Herb L (1990) Intrinsic religiousness and religious coping as life stress moderators for Catholics versus Protestants. *J Pers Soc Psychol* 59(3):562
- Podsakoff PM, MacKenzie SB, Podsakoff NP (2012) Sources of method bias in social science research and recommendations on how to control it. *Annu Rev Psychol* 63:539–569
- Preacher KJ, Hayes AF (2004) SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behav Res Methods Instrum Comput* 36(4):717–731
- Preacher KJ, Rucker DD, Hayes AF (2007) Addressing moderated mediation hypotheses: theory, methods, and prescriptions. *Multivar Behav Res* 42(1):185–227
- Pyszczynski T, Greenberg J, Solomon S (1997) Why do we need what we need? A terror management perspective on the roots of human social motivation. *Psychol Inq* 8(1):1–20
- Pyszczynski T, Solomon S, Greenberg J (2003) In the wake of 9/11: the psychology of terror. American Psychological Association, Washington, DC
- Quinn RW, Spreitzer GM, Lam CF (2012) Building a sustainable model of human energy in organizations: exploring the critical role of resources. *Acad Manag Ann* 6(1):337–396
- Ren SY, Gao RD, Chen YL (2020) Fear can be more harmful than the severe acute respiratory syndrome coronavirus 2 in controlling the corona virus disease 2019 epidemic. *World J Clin Cases* 8(4):652
- Rhoades L, Eisenberger R (2002) Perceived organizational support: a review of the literature. *J Appl Psychol* 87(4):698
- Rich BL, Lepine JA, Crawford ER (2010) Job engagement: Antecedents and effects on job performance. *Acad Manag J* 53(3):617–635
- Richardson HA, Yang J, Vandenberg RJ, DeJoy DM, Wilson MG (2008) Perceived organizational support's role in stressor-strain relationships. *J Manag Psychol* 23(7):789–810
- Robblee MA (1998) Confronting the threat of organizational downsizing: coping and health (doctoral dissertation, ProQuest information & learning). *Dr Diss Abstr Int Sect Sci Eng* 59(6-B):3072
- Rogers KA, Kelloway EK (1997) Violence at work: personal and organizational outcomes. *J Occup Health Psychol* 2(1):63

- Sarfraz M, Qun W, Sarwar A, Abdullah MI, Imran MK, Shafique I (2019) Mitigating effect of perceived organizational support on stress in the presence of workplace ostracism in the Pakistani nursing sector. *Psychol Res Behav Manag* 12:839
- Sarwar A, Abdullah MI, Sarfraz M, Imran MK (2019) Collaborative effect of workplace ostracism and self-efficacy versus job stress. *J Entrep Manag Innov* 15(4):107–138
- SBP (2020) <https://92newshd.tv/sbp-directs-all-banks-to-remain-open-across-country-during-lockdown/#.XnnZpKgzblU>. Accessed 23 Mar 2020
- Scott KL, Zagenczyk TJ, Schippers M, Purvis RL, Cruz KS (2014) Co-worker exclusion and employee outcomes: an investigation of the moderating roles of perceived organizational and social support. *J Manage Stud* 51(8):1235–1256
- Scruton DL (1986) Introduction. In: Scruton DL (ed) *Sociophobics: the anthropology of fear*. Westview Press, Boulder
- Shirom A (2003) Job-related burnout. In: Quick JC, Tetrick LE (eds) *Handbook of occupational health psychology*. American Psychological Association, Washington, DC, pp 245–265
- Shirom A, Toker S, Alkaly Y, Jacobson O, Balicer R (2011) Work-based predictors of mortality: a 20-year follow-up of healthy employees. *Health Psychol* 30(3):268
- Sinclair SJ, LoCicero A (2006) Development and psychometric testing of the perceptions of terrorism questionnaire short-form (PTQ-SF). *New Sch Psychol Bull* 4(1)
- Sohail MM, Ahmad S, Maqsood F (2020) The Role of Socio-demographics in Adoption of Religious-Spiritual and Other Coping Strategies Among Muslim Chronic Patients with Hepatitis C in Pakistan. *J Relig Health* 59(1):234–256
- Sohrabi C, Alsafi Z, O’neil N, Khan M, Kerwan A, Al-Jabir A et al (2020) World Health Organization declares global emergency: a review of the 2019 novel coronavirus (COVID-19). *Int J Surg* 76:71–76
- Swider BW, Zimmerman RD (2010) Born to burnout: a meta-analytic path model of personality, job burnout, and work outcomes. *J Vocat Behav* 76(3):487–506
- Tepper BJ, Moss SE, Lockhart DE, Carr JC (2007) Abusive supervision, upward maintenance communication, and subordinates’ psychological distress. *Acad Manag J* 50(5):1169–1180
- Toker S, Laurence GA, Fried Y (2015) Fear of terror and increased job burnout over time: examining the mediating role of insomnia and the moderating role of work support. *J Organ Behav* 36(2):272–291
- Uchino BN (2006) Social support and health: a review of physiological processes potentially underlying links to disease outcomes. *J Behav Med* 29(4):377–387
- Uchino BN, Bowen K, Carlisle M, Birmingham W (2012) Psychological pathways linking social support to health outcomes: a visit with the “ghosts” of research past, present, and future. *Soc Sci Med* 74(7):949–957
- Van Jaarsveld DD, Walker DD, Skarlicki DP (2010) The role of job demands and emotional exhaustion in the relationship between customer and employee incivility. *J Manag* 36(6):1486–1504
- Vaziri H, Casper WJ, Wayne JH, Matthews RA (2020) Changes to the work–family interface during the COVID-19 pandemic: examining predictors and implications using latent transition analysis. *J Appl Psychol* 105(10):1073
- Venkatachalam M (1995) Personal hardiness and perceived organizational support as links in the role stress-outcome relationship: a person-environment fit model. *Dr Diss Abstr Int Sect A Human Soc Sci* 56(6-A):2328
- Waldman DA, Carmeli A, Halevi MY (2011) Beyond the red tape: how victims of terrorism perceive and react to organizational responses to their suffering. *J Organ Behav* 32(7):938–954
- Williams LJ, Anderson SE (1991) Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *J Manag* 17(3):601–617
- Witt LA, Carlson DS (2006) The work-family interface and job performance: moderating effects of conscientiousness and perceived organizational support. *J Occup Health Psychol* 11(4):343
- Wong JY, Lin JH (2007) The role of job control and job support in adjusting service employee’s work-to-leisure conflict. *Tour Manage* 28(3):726–735
- Wright TA, Cropanzano R (1998) Emotional exhaustion as a predictor of job performance and voluntary turnover. *J Appl Psychol* 83(3):486
- Zeidner M, Ben-Zur H, Reshef-Weil S (2011) Vicarious life threat: an experimental test of conservation of resources (COR) theory. *Personal Individ Differ* 50(5):641–645
- Zhang H, Xiao L, Ren G (2018) Experiences of social support among Chinese women with breast cancer: a qualitative analysis using a framework approach. *Med Sci Monit Int Med J Exp Clin Res* 24:574

Zhou X, Wu X, Li X, Zhen R (2018) The role of posttraumatic fear and social support in the relationship between trauma severity and posttraumatic growth among adolescent survivors of the Yaan earthquake. *Int J Psychol* 53(2):150–156

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.