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Impact of Perceptions of COVID-19 Related Risks on Partner "Social Undermining" of Healthcare Workers Through the Spillover Theory

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Abstract

The health emergency and pandemic at the global level was announced in the early months of 2020 due to the Covid-19 corona virus, and healthcare workers have had to perform their duties in risky circumstances. Consequently, the healthcare professionals are more vulnerable to being infected with the Covid-19 coronavirus. Hence, through the lens of the spillover

theory, this study investigates the effect of perceptions of Covid-19 related risks on partner (spouse) "social undermining" via emotional exhaustion. Data was collected in two periods with one-week time lag from 237 healthcare professionals and their partners.

Results revealed that perceptions of Covid-19 related risks increased partner undermining via employee emotional exhaustion. This study contributes to the literature of the current pandemic by investigating the impact of perceptions of Covid-19 related risks on healthcare workers' close relatives. Hospital administrators and policymakers need to develop timely interventions to mitigate or minimize this negative spillover effect. Therefore, practical implications are suggested accordingly.

Keywords: perceptions of COVID-19 related risks, Emotional exhaustion, partner undermining, healthcare workers, coronavirus pandemic

Introduction

Currently, the world is facing a major challenge in the outbreak of Covid-19 pandemic since the start of 2020 (Sohrabi, Alsafi, O'Neill, Khan, Kerwan, Al-Jabir, and Agha, 2020). Infectious diseases are considered a major threat to workers' physical and mental health (Huang, Han, Luo, Ren, & Zhou, 2020), especially for healthcare workers because they have more chances of catching the disease due to more interactions with infected patients (Liang & Acharya, 2020). Covid-19 has become a major health concern for the whole world due to its fast spread of infection through close contact, touching of infected surfaces, coughing, and airborne qualities among millions around the globe with high mortality rates (Gössling, Scott, & Hall, 2020). According to *The Washington Post* article,

> The novel coronavirus — once concentrated in specific cities or countries — has now crept into virtually every corner of the globe and is wreaking havoc in multiple major regions at once. But the impact is not being felt evenly. Poorer nations throughout Latin America, the Middle East, South Asia and Africa are bearing a growing share of the caseload, even as wealthier countries in Western Europe and East Asia enjoy a relative respite after having beaten back the worst effects through rigorously enforced lockdowns (Witte, Sheridan, Slater, and Sly, 2020, para. 3-4).

During the outbreak of SARS (severe acute respiratory syndrome), which was a very dangerous infection (Zhang and Yang, 2020), about one fifth of all the victims were healthcare workers (Chan-Yeung, 2004). Similarly, Covid-19, due to its contagious nature especially in closed spaces and airborne possibilities, is more dangerous for healthcare workers because they treat the patients of this coronavirus through collaborative face-to-face interactions (Wang, Zhou, & Liu, 2020). Furthermore, literature shows that the perceived risk of an event is linked with unfamiliarity and uncontrollability of hazards (Wu, Fang, Guan, Fan, Kong, Yao, Lu, 2009); and, increased unfamiliarity and uncontrollability of a disease tends to effect employees' mental health more (Wu *et al.*, 2009). Accordingly, a long traumatic exposure to Covid-19 may increase the risk of being infected with this coronavirus, which further increases the negative impact on workers' mental health. As such, it is the responsibility of all medical professionals and policy makers to make sure their essential

workers remain in good health (Mujtaba and Cavico, 2014) for them to effectively take care of patients who are impacted by the Covid-19 pandemic.

Pandemics may lead employees to chronic stress and mental health problems (Huang & Zhao, 2020); hence, Covid-19 is not only a risk to an individual's physical health but also to one's psychological and mental health. Although, researchers have considered its effective control in their studies (Yang, Peng, Wang, Guan, Jiang, Xu, Chang, 2020), the psychological and behavioral outcomes of Covid-19 for the long-term are yet to be considered (Ren, Gao, & Chen, 2020). Hence, there is a need to investigate the psychological effects of Covid-19 outbreak.

We know that the Covid-19 epidemic has created excessive stress and much anxiety amongst some healthcare workers due to its rapid spread and high mortality rates, especially among the elderly and most experienced medical professionals (Roy *et al*., 2020). More cases are reported worldwide with each passing day, accounting for about 14 million Covid-19 cases as of July 2020. Consequently, emotional exhaustion is widely observed problem in healthcare workers (Dhaini *et al*., 2018). Furthermore, in China, the outbreak of Covid-19 created many psychological problems in workers, and mental health service has emerged as a serious challenge (Li *et al*., 2020), thus making it more important to study employee emotional exhaustion. Distress of any kind, especially if it is prolonged day after day, can hinder the success of any professional in the modern workplace (Mujtaba, Cavico and Senathip, 2020); as such, based on a solid understanding of the main stressors, managers and leaders can then properly plan, organize, lead, and control the circumstances to make sure all professionals have a good work experience every day which is balanced and supplemented by a healthy personal life (Mujtaba, 2014). According to Zhang and Yang (2020, p. 1)

> China's experience in combating the COVID-19 has shown that building a community prevention and control system is essential to control the spread of coronavirus. As the backbone of the epidemic prevention and control system, the community prevention and control system plays an important role in improving the pattern of disorderly medical treatment, screening suspected patients, preventing the input of pathogens, ensuring residents' medical needs, stabilizing public sentiment, reducing disease fear, and maintaining residents' national security. At the same time, it also exposed the problems of the community prevention and control epidemic system in terms of infrastructure, human resources, and internal systems.

As explained by Zhang and Yang (2020), we as researchers, academicians and practitioners all need to protect the livelihood of our society's human resources, especially the challenges associated with keeping healthcare professionals safe so they can take care of each person who becomes ill and a victim of this coronavirus. Before relevant policies can be inacted, we need research and fact-based preventive recommendations that can be consistently applied by all public and private sector leaders (Shaikh and Ali, 2020). As such, this study contributes in literature toward investigating the perceptions of COVID-19 related risks by modifying the existing scale to measure the perceptions of SARS related risks developed by Wu and

colleagues (2009). Let us begin by clarifying the basic terminologies and definitions.

Perception of Covid-19 risk is defined as an individual's insights and views of having the probability or chances of being infected with this coronavirus infection and dealing with its inherent related risks. Literature studies have discussed the increase in fears of Covid-19 in individuals (Salisbury, 2020); however, the literature is scarce about emotional exhaustion in healthcare workers due to the perceived risks of Covid-19.

Emotional exhaustion refers to "the organization's excessive emotional demands on the individual during interpersonal interactions, which the individual is unable to manage, thereby leading to exhaustion of emotional resources" (Chen, Chang, & Wang, 2019, p. 2). Although, researchers have considered the impacts and possible cures of Covid-19 in their studies (Wang, Wang, Ye, & Liu, 2020), literature is scarce about the spillover of psychological effect of risk of this coronavirus to workers' home domain, especially towards their partners (spouses). Recent research suggests that the effect of workplace stressors may spillover to one's family members (Sarwar, Bashir, & Karim Khan, 2019), and partners (spouses) are the most immediate relative or family members of workers (i.e., spouse).

Social undermining is defined as the negative opinions about each other, which may prevent the maintenance of positive interpersonal relationships (Hoobler & Brass, 2006; Taylor, 2015). *Partner social undermining* refers to "behaviors directed toward the partner that express negative affect or convey a negative evaluation or criticism" (Alfredo *et al.*, 2020, p. 3). While some researchers have considered the impact of stressors from one domain to other domain of employees (Rodríguez-Muñoz, Antino, León-Pérez, & Ruiz-Zorrilla, 2020; Sarwar, Bashir, & Karim Khan, 2019; Sarwar, Irshad, Zhong, Sarwar, & Pasha, 2020), the Covid-19 impact on home domain of workers specifically directed towards partners is still an ignored area. Hence, this study is an attempt to fill the gap in literature by investigating the relationship between perceptions of Covid-19 related risks among healthcare workers and partner undermining at home via emotional exhaustion.

This study will help to increase our understanding about the psychological impact of being exposed to the fast spreading, fatal infectious disease Covid-19 outbreak to better respond to such possible future pandemics. Figure 1 shows a proposed research model where perceptions of Covid-19 related risks can affect partner social undermining through "Emotional Exhaustion."
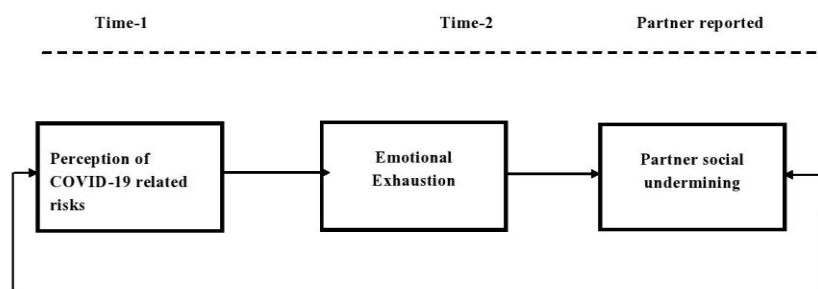

Figure 1. Research Model

Literature Review

This study adopted the spillover theory (Staines, 1980) to explain the hypothesized relationships connecting the work and home domains with a focus on the spillover of perceptions and experiences at the workplace to home or from home to work (Judge & Ilies, 2004; Sonnentag & Binnewies, 2013). Furthermore, it has been stated that the negative spillover prevails more than the positive ones (Barling & Macewen, 1992; Sonnentag & Binnewies, 2013). In addition, according to Sarwar *et al.* (2019), bullying experienced by employees at the workplace may spillover to one's family in the form of exhibiting family incivility which can easily lead to destructive and even destroyed relationships among spouses. Hence, researchers have discussed about spillover from one domain to another. Accordingly, this study considers the spillover of psychological impacts of risk of Covid-19 on partner undermining via fear about the emotional exhaustion of employees.

Perception of Covid-19 related risk and partner undermining

Researchers' interest has increased in examining the impact of work stressors on workers' home life since an employee's personal life is likely to have a great impact on his/her professional life and vice versa. As aligned with the spillover theory, literature suggests that experiences at the workplace may "spill over" to family of workers, thereby effecting individuals and personal relationships at home (Alfredo *et al.,* 2020). When there are many tasks that need to be completed at work during any short amount of time, especially when one is being supervised by a task-oriented leader (Mujtaba, Senathip and Sungkhawan, 2021), some of the stressful and negative behaviors at work can be easily displaced or transferred from the workplace to home. Hence, relevant resources should be employed at the workplace to effectively handle all challenges without exhausting the person with undue stress, while leaving some mental resources (energy) for home. Meier and Cho (2019) found that stressors at workplace increases partner social undermining at home. Furthermore, abusive supervision in the organization has been found to have a positive relationship to more arguing with one's partner or spouse at home (Hoobler & Brass, 2006).

Work family interface model suggests that stressors at the workplace may "spill over" to workers' family, hindering their personal activities and disrupting their well-being (Carlson, Ferguson, Hunter, & Whitten, 2012; Greenhaus & Beutell, 1985). Employees experiencing strain-based demands at the workplace have drainage of resources and are often unable to perform family roles appropriately (Sarwar *et al.*, 2019; Trépanier, Fernet, & Austin, 2013). Accordingly, Liu, Kwan, Lee, and Hui (2013) argued that employees transfer their negative perceptions and emotions from work to family which ultimately may affect their relations with family members.

H1: Perception of Covid-19 *related risk has a positive relationship with partner social undermining.*

Mediator

Roles performed by individuals in different domains may interfere with demands of their roles in other domains due to the spillover effects (Greenhaus & Beutell, 1985). Employees

experiencing stressors at workplace may feel irritation which can lead them to not show sufficient interest or engagement in family activities (Carlson, Kacmar, & Williams, 2000). Demanding and challenging workplace stressors may create negative emotions like grief, anxiety, sorrow, and distress spanning employees' work as well as home life (Sarwar *et al.*, 2019; Williams & Alliger, 1994). This study contributes to literature by considering employees' emotional exhaustion as mediator between perception of Covid-19 related risk and partner undermining. Emotional exhaustion plays the role of mediator between perception of Covid-19 related risk and partner undermining. Emotional exhaustion, which arises from the risk of getting the coronavirus infection, is difficult for workers to leave at the workplace. Therefore, one sphere of life may create hazards for other life spheres. The risk of getting Covid-19 infection may have devastating effects beyond the worker's workplace.

H2: *Emotional exhaustion mediates the relationship between perception of Covid-19 related risk and partner undermining.*

Methodology

Hypotheses were tested by collecting data via questionnaires in two-time lags with a gap of one week. Data was collected in different time lags to avoid common method bias (Podsakoff, MacKenzie & Podsakoff, 2012). Data was collected from 30th of April to 30th of May 2020. On February 26 of 2020, more new virus cases were identified outside of the Chinese territories than inside China. The Covid-19 pandemic was first identified in Pakistan on the 26th of February 2020 based on two cases in Karachi and Islamabad (Ali, 2020). Just 15 days later, cases reached to 20 in Pakistan (14 in Sindh, 5 in Gilgit Baltistan, and 1 in Baluchistan) (Ali, 2020).   On a global scale during the time of the data collection, according to Ali (2020), by March 31 the virus had spread to 113 countries and 118,162 cases were registered with 4290 deaths.

The pandemic quickly spread to the entire country of Pakistan when we started the data collection process and when the government announced the official lockdown of all non-essential businesses in the country. So far, more than 202,311 Covid-19 cases have been reported in Pakistan and it is continuing to rise fast (Government of Pakistan, 2020). At global level, as of August 2020 there are over 14 million cases with at least 650,000 deaths from the Covid-19 coronavirus. According to some researchers, Pakistani healthcare workers have been impacted more by this pandemic than any other groups of professionals in the general populations (Junaidi, 2020). Sadly, the rate of new cases shows a sharp rise in Pakistan as well as in other nations around the world during data collection, analysis and writing of this paper.

Due to social distancing rules, data were collected online and through emails. First, data about perceptions of COVID-19 related risks were collected at time one (T1). Secondly, data for emotional exhaustion was collected at time two (T2) after a gap of one week from T1. Data for partner undermining (dependent variable) was also collected at T2. Respondents were assured of confidentiality of their responses. Surveys were accompanied with a cover letter stating the purpose of this study. Unit of analysis for this study was healthcare workers. Healthcare workers were included in sample because they are considered essential as they

must go to work even during the outbreak of this Covid-19 pandemic. Convenience sampling was employed to collect data for this study.

For this study, a total of 420 questionnaires were distributed at T1, and 310 were received back. Healthcare workers were asked to mention the email identification (ID) of their partners at T1. Thus, 310 respondents were contacted after a gap of one week to collect data about emotional exhaustion and the scale of partner social undermining was sent to partners email IDs at T2. Finally, 237 usable surveys were returned after T2 with a response rate of 56.4%.

Measures

This study employed previously published scales to collect data. English language is used because it is the official language for communication in Pakistan. Similarly, previous studies used scales in English and reported no language related issues (Sarwar & Muhammad, 2020; Sarwar, Naseer, & Zhong, 2020). Therefore, consistent with previous literature, this study used surveys in the English language.

Perceptions of Covid-19 related risk

Perceptions of Covid-19 risk was measured with 10 items scale developed by Wu *et al.* (2009) to measure perceptions of SARS related risk. For this current study, 4 items were slightly changed by changing the term "SARS" with "Covid-19", and 6 items were used exactly as before. For example, the original item was "I thought about resigning because of SARS," and it was replaced with "I thought about resigning because of Covid-19".

Emotional exhaustion at work

Emotional exhaustion at work was assessed via three items scale of the Maslach Burnout Inventory–General Survey (Schaufeli, 1996). It was used recently by Rodríguez-Muñoz *et al.* (2020) to study bullying, emotional exhaustion, and partner undermining. Respondents were asked to report how often they have experienced such specific events or situations at their workplace during the last week. Sample items include, "This week at work, I felt emotionally drained".

Partner social undermining

Partner social undermining was measured by 3 items scale of previous researchers (Abbey, Abramis, & Caplan, 1985). Rodríguez-Muñoz *et al.* (2020) used this scale to measure partner social undermining. Partners of healthcare workers filled this survey. Sample item includes, "During this week, at home, my partner acted in an unpleasant or angry manner toward me".

Results

Demographic characteristics are shown in Table 1. In this study, 33.3% were females and 66.7% were males. Also, 51.1% were in the age group of 26-30, while 47.3% were in the 36-45 range, and 1.7% were 46 years of age and above. In terms of experience, 81% were having tenure of 1-5 years, while 19% had a tenure of 5-10 years. Moreover, PLS-SEM was employed to assess the measurement as well as structural model (Hair, Risher, Sarstedt, & Ringle, 2019). This study employed PLS-SEM for data analysis because it is the most powerful tool to investigate the constructs prediction-orientation. Shmueli *et al*. (2019) introduced the out-sample prediction technique in PLS-SEM.

Table 1. Demographics

Demographic Characteristics	Frequency	Percent	Cumulative Percent
Gender			
Females	79	33.3	33.3
Males	158	66.7	100.0
Age			
26 -35	121	51.1	51.1
36 -45	112	47.3	98.3
46 & above	4	1.7	100.0
Tenure			
1-5	192	81	81
5-10	45	19	100.0

2.1 Measurement Model

Constructs reliability and validity is assessed through the measurement model (Hair *et al.*, 2019). Reliability was evaluated through the assessment of composite reliability. Three items (PR2, PR4, PR8) of perceptions of Covid-19 (originally SARS) related risks had low loadings, while the threshold value of loadings is 0.70 (Gefen *et al.,* 2000). Hence, we reassessed the measurement model after deleting these three items. Minimum value for the composite reliability was 0.84, which was larger than 0.70 (Gefen, Straub, & Boudreau, 2000). Convergent validity was evaluated through average variance extracted (AVE) (Gefen *et al.,* 2000). Values of AVE were larger than the standard value of 0.50. Table 2 shows the item loadings.

Table 2. Reliability and Validity

Measures		OL	CR	AVE
Perception of Covid-19 related risks			0.86	0.71
PR1	"I believed that my job was putting me at great risk"	0.68		
PR3	"I was afraid of falling ill with Covid-19".	0.63		
PR5	"I thought I would be unlikely to survive if I were to get Covid-19".	0.72		
PR6	"I thought about resigning because of Covid-19".	0.76		
PR7	"I was afraid I would pass Covid-19on to others".	0.70		
PR9	"People avoided my family because of my work."	0.69		
PR10	"Because I wanted to help the Covid-19 patients, I was willing to accept the risks involved"	0.73		
Emotional Exhaustion			0.85	0.51
EE1	"This week, I felt burned out at my work'.	0.84		

EE2	'"This week, I felt emotionally drained at my work	0.87
EE3	"This week, I felt downhearted	0.81

Partner social undermining		0.84	0.65
PSU1	"During this week, at home, my partner acted in an unpleasant or angry manner toward me".	0.84	
PSU2	"During this week, at home, my partner misunderstood the way i thought and felt about things"	0.83	
PSU3	"During this week, at home, my partner done things that conflicted with my own sense of what should be done"	0.75	

OL= Outer Loadings, CR= Composite Reliability, AVE= Average Variance Extracted

Discriminant validity was assessed through heterotrait-monotrait ratio (HTMT) criteria (Henseler, Ringle, & Sarstedt, 2015). Values are shown in Table 3. HTMT values are acceptable when they are smaller than 0.90.

Table 3. Discriminant Validity of Measurement Model (Heterotrait-monotrait Ratio (HTMT) of Correlations)

Constructs	EE	PR	PU
EE			
PR		0.74	
PU		0.81	0.84

2.1 Structural Model

Structural model assesses the effect sizes f2, predictive relevance Q2, T-values, coefficient of determination (R2) and out sample prediction   (Hair et al., 2019). T values were assessed through 5000 bootstrapping procedure (Hair et al., 2019). As presented in Table 4 the impact of perception of Covid-19 related risk on partner undermining (H1) was accepted (β = -0.44, p= 0.000).

Table 4. Analysis of Structural Model (Hypotheses testing)

Hypothesis	Relationships	β	SE	t-values	P values	f^2	R^2	Q^2	Decision
H1	PR→PU	0.44	0.06	6.59	0.000	0.25	0.51	0.31	Accepted

Furthermore, mediation was checked by investigating confidence intervals and employing Preacher and Hayes' (2008) approach with 5000 bootstrapping. Results are shown in Table 5 which reveals that H2 was accepted as per the p-value of 0.000 in confidence intervals (Preacher & Hayes, 2008).

Table 5. Analysis of Mediation

Hypothesis	Relationships	B	SE	t-values	P values	CI.95 2.50%	97.50%	Decision
H2	PR→EE→PU	0.22	0.04	5.28	0.000	0.143	0.305	Accepted

Finally, Q^2 and R^2 were also assessed through PLS-SEM. Q^2 and R^2 show predictive relevance. Moreover, f^2 had a value of 0.25 which is acceptable because Cohen (1988) described that 0.02, 0.15 and 0.35 of f^2 small, moderate and large. Similarly, out sample prediction technique is suggested for conducting prediction analysis. PLS-Predict was evaluated via PLS-Predict (Shmueli *et al.,* 2019). Results are shown in Table 6.

Table 6. Out Sample Prediction

	PLS-MAE	LM-MAE
EE1	0.73	0.74
EE2	0.65	0.67
EE3	0.64	0.62
PU1	0.61	0.64
PU2	0.67	0.68
PU3	0.69	0.71

Discussion

The aim of this study was to investigate and explain how perceptions of Covid-19 related risks may result in workers' behaviors of social undermining toward their partners through emotional exhaustion. The World Health Organization (WHO) officials recommended that all countries must work on early detection of Covid-19 cases, clinical management, and proper quarantine procedures to reduce the spread of the virus (Ali, 2020). Hence, due to the worst effects of Covid-19, most people around the world have been following quarantine rules where nonessential employees stay home or work from home, but healthcare workers perform their tasks, duties and responsibilities in severe and dangerous circumstances in hospitals as they work directly with their patients through close and personal contact. The findings suggest that perceived Covid-19 related risks of healthcare professionals trigger workers to show behaviors of social undermining towards their partners. The findings are consistent with previously published literature as Rodríguez-Muñoz *et al.* (2020) found that stressors like workplace bullying lead employees to show behaviors of social undermining towards their partners and family members at home. Similarly, Sarwar *et al.* (2019) found that workplace stressors lead employees to exhibit family incivility towards their family members. The results are consistent with spillover theory, as Staines (1980) argued that employees' emotions at the workplace change as well as influence their emotions along with their behaviors at home.

Healthcare workers regularly experience Covid-19 related risks as they perform their normal duties. Therefore, healthcare workers are facing mental health issues and energy drainage due to Covid-19 related risks. This study covered this gap in literature and considered healthcare workers' Covid-19 related risks. This study proposed and tested emotional exhaustion as mediator between perception of Covid-19 related risks and partner social undermining.

The findings of this study suggests that the perception of Covid-19 related risks lead workers to experience emotional exhaustion which further leads to behaviors of social undermining towards their partners or spouses at home. Consistent with previous studies, literature also

has documented that emotional exhaustion is increased during pandemics (Sun, Wu, Qu, Lu, & Wang, 2014). Excessive emotional exhaustion at work may cause drainage of energy in workers, while partner social undermining may also be due to less social support from their partners. The resource drainage processes may leave few or little energy resources for employees to effectively deal with both work and home demands. The study by Sarwar *et al.* (2019) found that negative emotion is the mechanism through which the consequence of stressors at the workplace is transferred to family incivility in one's personal life. These findings suggest that chronic stressors at the workplace tend to drain an employee's physical and psychological resources, thereby negatively effecting workers' emotions, while leading them to exhibit inappropriate behaviors in their personal lives with family members. These findings are consistent with the perspective of self-regulation which highlights that having appropriate resources are important to regulate emotions as they effect employees' behaviors later in their personal lives (Baumeister & Vohs, 2003). Hence, changes in employees' emotions due to stressors at the workplace may lead them to show negative behaviors with their spouses and other family members.

Theoretical implications

This study offers many theoretical implications. Firstly, this study extends literature on spillover effect domain by examining whether healthcare workers' partner undermining could be expected by perceptions of Covid-19 related risk. By employing a time lag study design, this research revealed that stressors experienced by workers in one domain may be transferred to other domains of life via emotional exhaustion of employees (Sarwar, Irshad, *et al.*, 2020). This finding is in support of the spillover theory (Staines, 1980), which describes the impact of stressors transfer from one context (such as professional work life) to another (i.e. personal life at home). This study is unique in focusing on healthcare workers in Pakistan during the Covid-19 pandemic. We chose healthcare workers because it is a stressful profession, especially now during this Covid-19 pandemic (Sarwar, Irshad, *et al.,* 2020; Sarwar, Naseer, *et al.*, 2020), and we all know that physically and mentally successful healthcare professionals are essential in order for life to get back to normal for all members of society around the globe.

Of course, there are many barriers to the effective management of Covid-19 coronavirus and taking care of healthcare professionals is just one important area to reduce the spread of this infection. There are many other barriers and strategies which should be researched academically and implemented practically to effectively reduce the spread and negative impact of Covid-19 infection. According to recent research,

> The rapid spread of the epidemic has impeded the control and prevention efforts. Ground-level management has faced tremendous challenges in a myriad of aspects, including: (a) weak infrastructures: the communities lack solid basis and have suffered from insufficient resources and shortages of necessary personal protective equipment (PPE) and materials; (b) shortage in the work force: there has been a huge gap in the community staffing, which makes it very difficult to meet the heavy workloads of infectious disease

control; (c) management system flaws: the authorities and responsibilities of the community workers were not defined, and the divisions of tasks were unclear; (d) poor compliance of the residents: some residents were not cooperative and the necessary guidance to manage these people were missing (Zhang and Yang, 2020, p. 3).

Practical implications

This study extends knowledge in spillover domain and suggests many practical implications for hospitals. Our findings suggest that perceptions about Covid-19 related risks have positive effect on partners' social undermining among healthcare workers. Hence, hospital management should minimize these risks for workers to reduce or mitigate any negative impact or the chances of spillover effect. This can be done by providing all employees, especially healthcare professionals, a safe working environment with sufficient and relevant personal protection equipment (PPEs) and regularly counseling them to minimize such Covid-19 related risks. Our findings also suggest that emotional exhaustion is the mechanism through which employees' perceptions of risk trigger them to exhibit partner social undermining. Hence hospital management needs to enhance positive experiences of their workers. Furthermore, practices of family support should be promoted. Accordingly, Hammer, Kossek, Anger, Bodner, and Zimmerman (2011) recommend that hospitals should invest time and resources to develop supervisors who may provide support to the family of healthcare workers. To make sure that healthcare workers are successfully equipped to effectively handle workplace stressors, management of hospitals should be supportive to provide a safe work environment (Mujtaba, Cavico and Senathip, 2020). As many medical professionals, researchers and authors have clearly stated, we are still dealing with the Covid-19 coronavirus, and it remains an arduous and determined enemy for humanity all over the globe:

> Nearly all the countries struggling with a surge share something in common: After weeks or months of trying to suppress the virus, they reopened their economies, only to find that the virus came roaring back. Now they are using a more limited arsenal to contain the spread, with little success…"Let me be blunt: too many countries are headed in the wrong direction," World Health Organization chief Tedros Adhanom Ghebreyesus declared in Geneva this week. "The virus remains public enemy number one, but the actions of many governments and people do not reflect this" (Witte, Sheridan, Slater, and Sly, 2020, para. 7-8).

Limitations and future recommendations

This study investigated the spillover of perception of Covid-19 risk to partner social undermining. We want to acknowledge some of the inherent limitations. For instance, this study did not investigate the demographics variables with outcomes as considering them may lead to different results. Future researchers should investigate the perceptions of Covid-19 related risk with other outcomes like family communication, family incivility and family functioning. This study of spillover further paves the way for more investigations of

perceived Covid-19 risk in other social roles of healthcare professionals like coworkers and parents. Moreover, future studies may also consider other potential mediators to increase our understanding of employees' perceptions and outcomes. Future researchers should focus on the all the aspects of his/her partner not on just mental health; for example, authors can review the sexual health of partners during and after Covid-19 pandemic period as this can be a very important element when one talks about his/her partner.

Conflict of Interest

There is no conflict of interest. This research was self-funded by the authors.

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