

## Psychological Capital and Stress: The Mediating Role of Fear of COVID-19 in Medical Professionals of Pakistan.

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### Abstract

*Around the globe, millions of people have been diagnosed with COVID-19 causing extreme pressure on health care professionals. The current study explored the mediating role of Fear of COVID-19 in between the relationship of psychological capital and stress in medical professionals working in different hospitals of Lahore, Pakistan. The sample was comprised of 216 doctors (n=88) and nurses (n=128), age ranged from 20 to 56 (M = 29.65, SD = 8.53) using a structured survey which consists of 3 different scales (i) psychological capital (ii) fear of COVID-19 and (iii) perceived stress along with other relevant demographic information. Results indicated a significant negative association between psychological capital and stress. The results also indicated that fear of COVID-19 partially mediates the relationship of psychological capital and stress which revealed that doctors who are high in psychological resources may experience stress due to the fear of COVID-19. The results were discussed in the light of relevant literature and some recommendations were given for future studies*

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### Introduction

The current study explored the mediating role of Fear of COVID-19 in between the relationship of psychological capital and stress in medical professionals working in different hospitals of Lahore, Pakistan as COVID-19 is comparatively a new phenomenon and around the globe, millions of people have been diagnosed with the coronavirus and thousands of them couldn't recover (Nyashanu et al., 2020). The death ratio due to the pandemic has increased from 6.3% to 9.3% within a year (JHU, 2020). Moreover, the COVID-19 pandemic has caused epidemiological and psychological crises (American Psychological Association, 2020; Balaratnasingam & Janca, 2020; Brooks et al., 2020; Özdin & Bayrak Özdin, 2020; WHO, 2020). In this context, the physical and psychological well-being of medical professionals is at great risk (Nyashanu et al., 2020; Li et al., 2021). Health care professionals, throughout the globe, are facing extreme pressures (Sim, 2020), and the fear of COVID-19 has developed mental health problems. (Javadi & Sajadian, 2020).

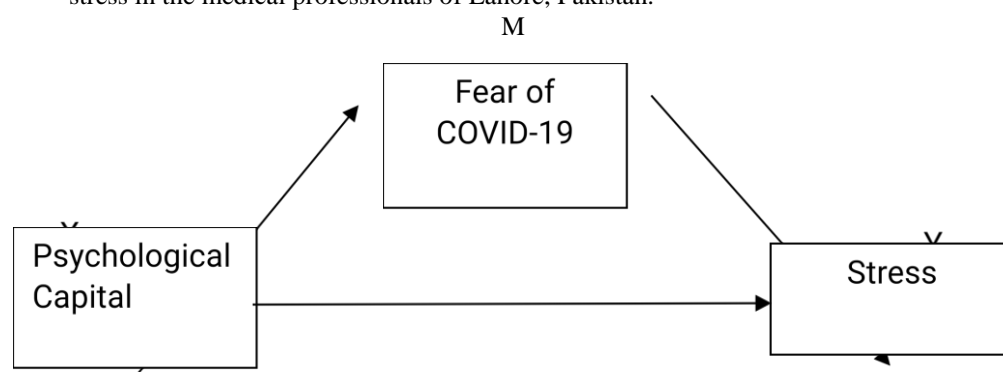
Medical professionals have been reported to undergo psychological disorders during a pandemic (Pedrosa, 2020; Luo et al., 2020). In general, these disorders include alcohol abuse (Nadkarni et al., 2020), insomnia, phobia known as "corona-phobia" (Dubey et al., 2020), anxiety (Huang & Zhao, 2020; Li et al., 2020; Qiu et al., 2020), and post-traumatic stress disorder (Brooks et al., 2020; Dutheil et al., 2020; Gunnell et al., 2020) and it has been observed that due to a pandemic situation, levels of depression, anxiety, and stress have increased drastically, worldwide (Khademian et al. 2021; Collins et al., 2021; Frenkel et al., 2021). However, psychological capital plays an important role while dealing with stressors (Luthans et al., 2007; Kwok et al., 2014). As Psychological capital is comprised of the positive personality resources of an individual (Çavuş and Gökçen, 2015). These resources include self-efficacy, resilience, optimism, and hope (Kwok et al., 2014). Self-efficacy is defined as an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1977). Resilience is defined in many ways, Aguirre (2006) described resilience as physical, biological, personality, social, and cultural systems' capability to effectively absorb, respond, and recover from an internally or externally induced set of extraordinary demands whereas Wisner et al., (2005) states resilience includes the ability to "bounce back" and continue to function. Optimism is a mental attitude characterized by hope and confidence in success and a positive future (Scott, 2002) and lastly, hope is the expectation that one will have positive experiences or that a potentially threatening or negative situation will not materialize or will ultimately result in a favorable situation (Snyder et al., 1991). These resources decrease the levels of stress and anxiety (Demir, 2018) especially during the COVID-19 time period (Pedro et al., 2021; Turlic & Candell, 2021; Maykrantz et al., 2021; Mao et al., 2020; Pathak & Joshi, 2020).

Despite the evidence from literature, there is also theoretical evidence of how fear can cause primary mental health issues. The Four Horsemen model is proposed by John Gottman (2014) states that fear is a basic emotion that is activated in response to the perceived threat. This theory is composed of four main parts, fear for the body, fear of losing a significant other, fear of not knowing or knowing too much, and lastly fear of taking a wrong action or not being able to take action. All these four domains of fear are observed in COVID-19 (Schimmenti et al., 2020) and the fear of COVID-19 has caused stress and many other mental health issues worldwide.

Despite all the shreds of evidence, very little light has been shed on the mediating role of COVID-19 in the relationship between psychological capital and stress in medical professionals of Pakistan. The current study aims to find out how fear of COVID-19 affects on the stress of medical professionals during COVID-19. The relationship of psychological capital with fear of COVID-19 and stress is also explored in the present study.

The dependent variable of the research is psychological stress, and the independent variable is psychological capital whereas fear of COVID-19 is the mediator. The following hypothesis and hypothetical model were developed:

- a. There will be a negative relationship between psychological capital and stress in the medical professionals of Lahore, Pakistan.
- b. Fear of COVID-19 will play a significant mediating role in between psychological capital and stress in the medical professionals of Lahore, Pakistan.



## Methodology

The sample of the study is comprised of 216 medical professionals, specifically from doctors (n=88) and nurses (n=128). The age range of the sample was from 20 to 56 ( $M = 29.65$ ,  $SD = 8.53$ ). The purposive sampling technique was used for data collection from different hospitals in Lahore, Pakistan via self-administration. The survey protocol is comprised of two parts, Demographic Performa, which included information such as if they were affected by COVID-19 (20.4%), dealt with any corona patient (78.7%) and is family got infected by COVID-19 (34.7%). The three reliable and valid scales with a 5-point Likert response format were used to collect data. The formal permissions were taken by respective authors and the study was approved by the Research Committee of Lahore Garrison University, Lahore, Pakistan. Consent of the participants was taken and their information was strictly kept anonymous and confidential. All the data were entered into IBM SPSS software for descriptive and inferential statistical analysis.

## Measurements of variables

The 24-item psychological capital questionnaire (Avey, Luthans, & Youssef, 2010) is translated by Abbasi, Kamal and Masood (2020). The scale is used to assess the construct of psychological capital. The scale consists of four elements: hope, self-efficacy, optimism, and resilience, each component is composed of six items. The reliability of the scale in the current study is 0.92. The fear of the COVID-19 scale is developed by Ahorsu et al., (2020) due to the outbreak of COVID-19 and is used to measure the escalated fear of death. The scale is translated by Khalid (2020) and consists of 7 items on which participants indicate their level of agreement. The reliability of the current study for this scale is 0.83. The perceived stress scale (Cohen, 1983) translated by Sabina (2011) is used to measure the perception of stress in an individual based on 10 items. The reliability of the current study for this scale is 0.65

## Results and Findings

### Correlation Matrix

Table 1

*Intercorrelation of Psychological capital, Fear of COVID-19 and Stress (N = 216)*

Variables	1	2	3
1. Psychological capital	-	-.22**	-.30**
2 Fear of COVID-19		-	.35**
3. Stress			-

<i>M</i>	10.16	15.86	17.27
<i>SD</i>	15.00	5.55	5.79

\*\* $p < .01$ .

Pearson Product Moment Correlation was used to explore the association of psychological capital, fear of COVID-19, and stress. Findings indicated a significant negative association of psychological capital and fear of COVID-19 ( $r = -.22, p < .01$ ). Furthermore, findings also suggested a significant negative association between psychological capital and stress ( $r = -.30, p < .01$ ) and a significant positive association between fear of COVID-19 and stress ( $r = .35, p < .01$ ).

### Mediation Analysis

The current study fulfilled the assumptions of Baron and Kenny (1986) as well as Hayes and Preacher (2013). Therefore, in the current research, Hayes's (2018) bootstrapping approach was used to investigate the mediating role of fear of COVID-19 in the association between psychological capital and stress. The hypothetical model is presented in Figure 1

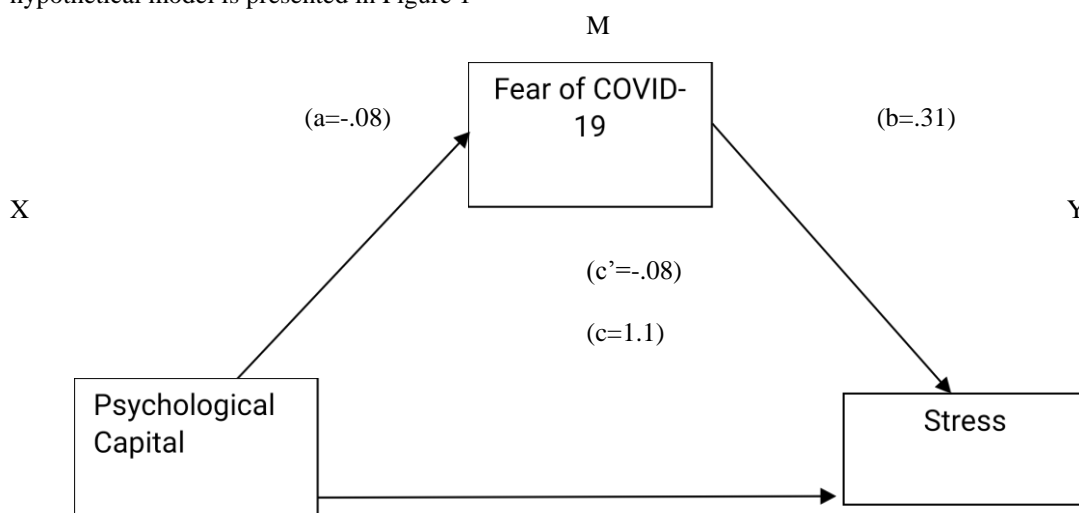


Table 2

Regression Coefficients, Standard Error, and Model Summary Information for the Psychological Capital, Fear of COVID-19 and Stress ( $N=216$ )

Antecedent	Consequent							
	FOC(M)			S(Y)			P	
	B	SE	P	$\beta$	SE	P		
PC(X)	<i>a</i>	-.08	.03	.00**	<i>c'</i>	-.08	.03	.00**
FOC(M)	---	---	---	---	<i>b</i>	.31	.08	.00**
Constant	<i>i</i>	24.35	3.24	.00**	<i>i</i>	21.25	3.82	.00**
$R^2 = .05$				$R^2 = .59$				
$F(1, 198) = 6.98, p = .00**$				$F(2, 197) = .17, p = .00**$				

Note. FOC = PC= Psychological Capital, Fear of COVID-19, S = Stress

\*\* $p < .01$ .

Figure 1 shows significant total effect of psychological capital on stress ( $\beta = 1.1, SE = .03, p < .01$ ). Furthermore, findings also depict significant direct effects of psychological capital on fear of COVID-19 ( $\beta = -.08, SE = .03, p < .01$ ) and fear of COVID-19 on stress ( $\beta = .31, SE = .08, p < .01$ ). Findings indicate that fear of COVID-19 partially mediates the association between psychological capital and stress, as after controlling the fear of COVID-19, the direct effect of psychological capital on stress is reduced ( $\beta = -.08, SE = .03, p < .01$ ) but the  $c'$  path is still significant.

Table 3

*The indirect effect Psychological Capital on Stress through Fear of COVID-19 (N=216)*

Indirect Path	Unstandardized Path	Standardized Estimate	Lower Level	Upper Level
FOC	-.02	.01	-.06	-.003

Note. FOC= fear of COVID-19

Indirect effects were also investigated over 5000 bootstrap samples by taking estimates at a 95% confidence interval. Findings depict that the total indirect effect (the difference between the total and the direct effect/c-c') of psychological capital via fear of COVID-19 is statistically significant.

### Discussion

COVID-19 is a novel disease that is relevantly a new phenomenon, causing a pandemic worldwide. This pandemic has caused a fear known as the "fear of COVID-19" which has been a major threat to the physical and psychological health of nurses and doctors (Elbay et al., 2020; Galbraith et al., 2021; Kramer et al., 2021). For this study, the first hypothesis was accepted as it indicated there is a negative association between psychological capital and stress, findings are consistent with many previous findings (Bakker et al., 2017; Wang et al., 2021; Zheng et al., 2021; Alyami et al., 2020; Mamun et al., 2021). The main reason for this finding is that psychological capital is a personality trait that does not only enables an individual to determine goals but also practice self-attribution in finding solutions, to envision challenges and determine new and more enhancing ways to overcome the problem, lastly, to realize new skills in the process. It is suggested that psychological capital has a significant negative relationship with fear of COVID-19, the findings are consistent with Mubarak et al., (2020). The result indicated that the fear of COVID-19 has a significant negative impact on the mental health of healthcare professionals. Health care professionals are becoming increasingly concerned and scared of its dreadful consequences because the death toll of this novel disease is high, and doctors and nurses witnessed it on daily basis. Furthermore, Fear of COVID-19 mediates the relationship between psychological capital and stress, indicated that after controlling fear of COVID-19 the relationship between psychological capital and stress got weak in medical professionals. It is explored that fear of COVID-19 seems to be the main reason for stress in medical professionals in the current situation and it also decreases their personality resources to cope with stress. Recent research evidence revealed that the fear of getting the COVID-19 virus is growing with each changing variant and passing day which is associated with psychological health problems (Hong et al., 2020). Constant fear can grow more acute and intense over time, eventually leading to stress (Hobfoll et al., 2018). These negative effects arise because of constant exposure of patients of COVID-19 which decreases the personality resources of health care professionals as well, over time. Counseling services in hospital settings can help medical professionals to rationalize their fear of COVID-19 so, they can utilize their psychological capital at the optimal level to reduce stress in a pandemic situation. Besides, optimism and resilience workshops would also help the medical professionals significantly to cope with the fear of COVID-19 and it would boost up their mental health as well.

### Implication

Hospital administration should provide proper safety measures in the current scenario and take care of the physical needs of the doctors and nurses as most of the Government hospitals of Pakistan, necessities like restrooms, and private space to lay down, etc for medical professionals are not available.

### Limitations

The first limitation is that it's a correlational research design so, other factors that may affect psychological capital, fear of COVID-19, and stress are not controlled for. Moreover, the data was collected from the Urban area's hospital of Lahore, Pakistan. Doctors working in rural areas were not targeted so, the generalizability of the findings is limited.

### Conclusion

The result of the current study empirically found that fear of COVID-19 mediates the relationship between psychological capital and stress. The findings of the present study shed light on the aspect that medical professionals are human too and their mental health is also got affected by the current situation of the COVID-19 pandemic. Medical professionals are the saviors of the nation, and their psychological capital and mental health is must of prime importance to the Government of Pakistan to fight against this deadly virus.

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