

# Distress and Burnout as Outcomes of Psychological Flexibility and Emotional Exhaustion among Healthcare Workers of COVID-19 Isolation Centers

Najma Iqbal Malik, Tehmina Kousar, Summayya, Shahida Perveen, Mohsin Atta, Noman Ramzan,

(PhD), Professor, Department of Psychology, University of Sargodha, Sargodha.

Email: [najmamalik@gmail.com](mailto:najmamalik@gmail.com)

ORCID ID: <https://orcid.org/0000-0002-3521-1014>

Lecturer, Department of Psychology, University of Lahore, Sargodha Campus, Sargodha.

Email: [tehminkaousar@psy.uol.edu.pk](mailto:tehminkaousar@psy.uol.edu.pk)

Lecturer, Department of Psychology, The University of Lahore, Sargodha.

Email: [Summayya.waseem@psy.uol.edu.pk](mailto:Summayya.waseem@psy.uol.edu.pk)

PhD scholar, Department of Psychology, University of Sargodha, Sargodha.

Email: [shahidaperveen11@gmail.com](mailto:shahidaperveen11@gmail.com)

Assistant Professor, Department of Psychology, University of Sargodha, Sargodha.

Email: [gotamabbasi@gmail.com](mailto:gotamabbasi@gmail.com)

Student Counselor, Counseling Center, University of Sargodha, Sargodha.

Email: [kinzakhali33@gmail.com](mailto:kinzakhali33@gmail.com)

ADCP, Department of Psychology, University of Sargodha, Sargodha.

Email: [nomanramzan@gmail.com](mailto:nomanramzan@gmail.com)

\*Correspondence author: Najma Iqbal Malik ([najmamalik@gmail.com](mailto:najmamalik@gmail.com))

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## Abstract

**Objective:** To study distress and burnout as outcomes of psychological flexibility and emotional exhaustion among healthcare workers of COVID-19 isolation centres. **Methodology:** The study purposively selected a sample of 518 healthcare workers, including Doctors, Psychologists, Physiotherapists, Nurses, and Dispensers. A convenient sampling technique was used. The Acceptance and Action Questionnaire II (AAQ-II), Maslach Burnout Inventory -- Human Services Survey (HSS) Emotional exhaustion subscale (MHI-HSS-EE), and Distress and Burnout Symptom Checklist for Covid-19 Healthcare Workers were used to assess the study variables. **Results:** Pearson correlation indicated that psychological flexibility is significantly negatively correlated with emotional exhaustion and burnout. It also revealed that emotional exhaustion is positively correlated with burnout. Multiple regression analysis indicated that psychological flexibility negatively predicted distress and burnout, while emotional exhaustion positively predicted distress and burnout. Findings from ANOVA depicted the significant mean difference among types of healthcare workers on the study variables. **Conclusion:** Psychological flexibility was negatively linked with both exhaustion and burnout. Emotional exhaustion was positively linked with burnout. Moreover, burnout can be managed by having high psychological flexibility.

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## Keywords

Psychological Flexibility, Emotional Exhaustion, Burnout, Covid-19 Isolation Centres, Healthcare Worker.

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The world has faced most health crises in the previous decades, affecting some areas or countries. However, the

COVID-19 pandemic badly hit the global population, and everyone has faced many problems in every field of

life. Coronaviruses comprise a cluster of viruses accountable for various severe conditions such as the common cold, severe acute respiratory syndrome, and Middle East respiratory syndrome. Key indicators encompass fever, cough, and fatigue. Additional symptoms may involve chills, muscle soreness, chest discomfort, headaches, altered taste or smell, breathing difficulties, and a sore throat (Carfi et al., 2020). These symptoms may appear after two weeks of infection or exposure to the virus. This time between exposure to the virus and before having symptoms is said to be the incubation. It is spread by air droplets from person to person and by touching others. It started in December 2019 in Wuhan, China, and spread worldwide. In March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic because of its wide and rapidly spreading and increasing number of deaths worldwide. The world has faced a complete shutdown due to the rapid spread and increasing death rates worldwide. During the lockdown, every individual has faced many issues, including financial, physical, and psychological. Various factors affect the psychological health of the individual due to the lockdown, including financial problems, stress, anxiety, social isolation, lack of physical communication, losing jobs, etc. This psychological impact affects the general public, sufferers of COVID-19, their families and friends, and the person with pre-existing health issues and the health care professionals/workers (Haider & Tiwana, 2020). Psychological flexibility stands as a crucial aspect in comprehending mental well-being. It encompasses the capacity to remain present amidst uncomfortable thoughts, emotions, and bodily sensations, while making behavioral choices aligned with personal values and situational demands. According to Lebh and the insights of Kashdan and Rotterburg (2010), this flexibility measures how individuals respond to situations, reallocate mental resources, adopt different perspectives, and balance aspirations, needs, and various life domains.

It's important to note that psychological flexibility doesn't equate to a constant state of happiness or ease, but rather an ability to flexibly navigate life's evolving demands when faced with challenging thoughts and emotions. Multiple studies indicate a positive correlation between psychological flexibility and mental well-being, while inversely associating it with various forms of distress, such as depression, anxiety, and general psychological strain (Karoska et al., 2020).

Emotional exhaustion signifies feeling emotionally drained due to accumulated stress from personal or

professional spheres, or a blend of both. Research suggests that inadequate coping strategies in handling challenging job-related events can trigger emotional exhaustion. These triggers vary from person to person, where what causes stress for one might be manageable for another. Common emotional exhaustion triggers include high-pressure professions like nursing, medicine, law enforcement, and education, as well as factors like extensive schooling, long work hours, or dissatisfaction with one's job, starting a family, caring for children, financial struggles, homelessness, providing care for a loved one, enduring lengthy divorce processes, bereavement, and coping with chronic illness or injury (Wright & Cropanzano, 1998). Experiencing emotional exhaustion can be a sign of burnout, a condition characterized by prolonged or recurrent stress leading to emotional, mental, and sometimes physical fatigue. Burnout significantly impacts our functionality and interactions with others. It's akin to an unreachable itch at the back, profoundly affecting our existence, as highlighted by Jalili et al. (2020). Recognized as one of the hallmarks of burnout, emotional exhaustion is a component within Maslach and Jackson's (1981) three-part model, alongside depersonalization and diminished personal achievement. This gradual process manifests initially through subtle signs that worsen over time, akin to red flags signaling an underlying issue requiring attention. By actively addressing stress during its early stages, a major breakdown can potentially be prevented; otherwise, ignoring these signs may lead to burnout. Anyone can be susceptible to emotional burnout, particularly those in demanding occupations or undergoing significant life changes like loss, chronic illness, financial strain, or caregiving responsibilities. Especially during periods of heightened stress and uncertainty, prioritizing self-care among NHS staff becomes increasingly critical (Unadkat & Farquhar, 2020). A report by Health Education England in February 2019, known as the Pearson report, emphasized the necessity of enhancing self-care and support systems for NHS personnel to better cater to patient needs. Studies like those by Bond and Bunce (2003) highlight the correlation between higher psychological flexibility and benefits in workplace control, stress management, and overall life functioning among healthcare professionals. McCracken and Yang (2008) discovered that psychological flexibility, mindfulness, and actions based on personal values emerged as influential indicators of stress levels and overall life performance within a cohort of ninety-eight rehabilitation professionals representing diverse roles such as nursing, physiotherapy, occupational therapy, medicine, and speech and language therapy in Singapore.

In the pandemic situation, where even a normal person can feel frustrated and emotionally exhausted and get into the signs and symptoms of burnout, it is important to investigate it in the healthcare providers of COVID-19 isolation centres. The present study explores how psychological flexibility and emotional exhaustion predict

burnout among healthcare providers working in Pakistan's COVID-19 isolation centres. Although previous research investigated this in other countries with some other psychological construct, this combination of variables has not been studied yet in Pakistan. So, this study intends to study these variables in Pakistani culture to check how these variables prevail and interact in this culture.

## Materials and Methods

**Design and sample.** The data was collected by applying a purposive, convenient sampling technique. This cross-sectional survey included 518 healthcare workers aged 18 to 60 who worked in COVID-19 isolation centres in Punjab, Pakistan, especially Doctors, Psychologists, Physiotherapists, Nurses, and Dispensers. Data were only collected from different isolation centres of Punjab, including DHQ Sargodha, DHQ Faisalabad, VIP Niazi Medical Complex Sargodha, Allied Hospital Faisalabad, PIMS, and through an online survey using Google form.

**Ethical considerations.** Ethical approval of the study was obtained from the Departmental Postgraduate Committee at the University of Sargodha before the study was originally conducted. Also, hospital authorities and district health offices were given permission to conduct research. Informed consent (written and verbal) was obtained from all participants; they were further briefed about the purpose and their participation rights. Ensured confidentiality and anonymity of data and that no psychological, physical or emotional harm was involved by participating in the research. Ultimately, all the participants were thanked for their voluntary participation and valuable contribution.

## Instruments

### Acceptance and Action Questionnaire-II (AAQ-II)

The Acceptance and Action Questionnaire II (AAQ-II) measured acceptance, experiential avoidance, and psychological inflexibility. It was developed by the Bond et al. (2011). AAQ-II is a subscale that is comprised of seven items. The alpha reliability of this scale is  $\alpha = .84$ . The items are rated on a seven-point Likert-type scale. The response categories are included 1 for "Never true", 2 for "very seldom true", 3 for "Seldom true", 4 for "Sometimes true", 5 for "Frequently true", 6 for "Almost always true", 7 for "Always true".

### Maslach Burnout Inventory -- Human Services Survey (HSS) Emotional exhaustion subscale (MHI-HSS-EE)

Maslach Burnout Inventory -- Human Services Survey (HSS) Emotional exhaustion subscale (MHI-HSS-EE) was constructed to measure emotional exhaustion during work. It was developed by Maslach & Jackson (1981). MHI-HSS-EE is a subscale comprised of nine items. Alpha reliability of this scale is  $\alpha = .74$ . The response categories are included 0 for "Never", 1 for "A few times a year or less", 2 for "One a month or less", 3 for "A few times a month", 4 for "Once a week", 5 for "A few times a week", 6 for "Every day".

### Distress and Burnout Symptom Checklist for Covid-19 Healthcare Workers

Distress and Burnout Symptom Checklist for COVID-19 Healthcare Workers was applied to check the Distress and burnout symptoms that healthcare workers face while working in the COVID-19 isolation centres. This checklist was developed by Hussain et al. (2020).

## Procedure

First, various isolation centres were selected to collect the data on Covid-19 healthcare workers. The researcher obtained permission from medical superintendents and heads of isolation centres. For this purpose, the researcher visited the isolation centres and discussed the objective of the study with the concerned authorities. Informed consent was obtained from research participants, and confidentiality was assured. They were welcome to ask any query regarding the research and were given the choice to withdraw from the research at any time. Data was collected by and with the help of the head of isolation centres to accurately collect the data from desired participants.

## Statistical Analysis

The SPSS-25 version was used to analyze the data. Descriptive statistics, alpha coefficients and normality analysis were applied across different variables. The Pearson Correlation was carried out to explore the relationship among all study variables. Linear regression analysis was computed to find out the impact of Psychological flexibility and emotional exhaustion on burnout of healthcare workers in COVID-19 isolation

centres, and one-way ANOVA was done.

## Results

Reliability analysis revealed reasonable internal consistency of psychological flexibility, emotional exhaustion, and burnout. Pearson correlation indicated that psychological flexibility had a significant negative

relationship with burnout and emotional exhaustion, whereas emotional exhaustion had a significant positive relationship with burnout (Table 1). Psychological flexibility significantly negatively predicted burnout and emotional exhaustion positively predicted burnout, demonstrating a 9 % variance (Table 2). One-way ANOVA showed that psychologists had a higher level of burnout than other healthcare workers (Table 3).

**Table 1.** Descriptive statistics, Alpha reliability and Pearson correlation of variables.

Variable	M	SD	α	1	2	3
1. Psychological flexibility	18.76	9.91	.94	-	-.69**	-.30**
2. Emotional exhaustion	15.40	11.93	.94		-	.17*
3. Distress and Burnout	84.09	9.05	.88			-

\**p* < .05. \*\**p* < .01.

**Table 2.** Multiple Regression Analysis Showing the Effect of Psychological Flexibility and Emotional Exhaustion on Burnout.

Predictor	β	95%CI LL, UL
Psychological flexibility	-.320***	[-.43,-.22]
Emotional exhaustion	.15*	[.13, .24]
R2		.094
F		26.60***

\**p* < .05. \*\*\**p* < .001.

**Table 3.** Mean, Standard Deviation and F-Values for Type of Healthcare Workers on Psychological Flexibility, Emotional Exhaustion and Burnout of Healthcare Workers In COVID-19 Isolation Centres.

Variable	MBBS ( <i>n</i> = 168)		Psychologist ( <i>n</i> = 120)		Physiotherapist ( <i>n</i> = 96)		Nurse ( <i>n</i> = 112)		Dispenser ( <i>n</i> = 22)		F	<i>p</i>	Post-Hoc	η <sup>2</sup>
	M	SD	M	SD	M	SD	M	SD	M	SD				
Psychological Flexibility	17.84	8.62	18.13	8.1	18.50	12.47	20.03	10.64	23.90	14.51	1.07	.37	-	.01
Emotional Exhaustion	15.66	11.26	15.40	9.14	13.25	15.35	15.39	12.49	23.00	14.01	1.15	.33	-	.01
Distress and Burnout	82.21	5.92	87.33	15.22	86.41	3.96	81.53	7.40	83.63	3.26	2.46	.04	2>3>5>1>4	.04

\**p* < .05

## Discussion

Psychological flexibility and emotional exhaustion are important factors to consider due to the rise of burnout in isolation centre workers. Distress and burnout heavily affected the general population because of the fear of getting the COVID-19 virus, and also, with the implementation of the lockdown situation, some huge issues were faced. So, it was really important to study this specific variable in the healthcare workers continuously dealing with the COVID-19 patients in the isolation centres. The study ensured the reliability of the scales. The reliability coefficient of all the scales was found by applying the alpha reliability analysis. The coefficients of all the scales were above .80, which

indicated that these scales can be used for further analysis (Kline, 2023).

Psychological flexibility was negatively correlated with distress and burnout in COVID-19 healthcare workers. Psychological flexibility in the COVID-19 healthcare workers was low because of the different stressors, including getting infected by the virus and, more importantly, the consequences for their health and their family's health. So, the distress and burnout in the healthcare workers of Covid-19 isolation centres were high during the pandemic. A study conducted by the Society of Critical Care Medicine (2020) encompassing nearly 9,500 critical care professionals revealed a notable surge in self-reported stress levels, escalating from a median score of 3 to 8.3. Among the

primary stressors reported were the scarcity of personal protective equipment, apprehension regarding contracting COVID-19, and concerns about transmitting the virus to family members. These occupational stressors have been linked to heightened levels of anxiety and depression, underscoring the tangible physical and emotional risks confronted by frontline healthcare providers. Alongside these anxieties, a recent survey also highlighted concerns regarding the potential requirement to care for patients whose conditions surpass their training and the restricted access to current information (Dawson & Moghaddam, 2020). Previous research also explains that work-related psychological flexibility accounts for the additional variance in burnout symptoms. Research revealed that interventions aiming to increase psychological flexibility might prevent the development of burnout symptoms (Ruiz & Odriozola, 2017). A study conducted in 2013 explains the relationship between occupational burnout and psychological flexibility. The study's results suggested that psychological flexibility is negatively associated with occupational burnout (Navenpera et al., 2013). Another study was conducted in 2018, which explained the burnout in athletes. The study results revealed that psychological flexibility is negatively associated with burnout (Chang, 2018).

Emotional exhaustion was positively correlated with distress and burnout among COVID-19 isolation centre healthcare workers. Healthcare workers with COVID-19 face many emotional exhaustion triggers that include the duration of work in the isolation centre, family pressure or stress, and physical or emotional isolation from family and friends. The results showed that those healthcare workers who scored high in emotional exhaustion tended to feel more distressed and burned out. Individuals grappling with emotional exhaustion frequently perceive a loss of agency or control over life circumstances, often sensing a sense of being confined or immobilized within a situation. The presence of diminished energy levels disrupted sleep patterns, and a decline in motivation further compounds the challenge of surmounting emotional exhaustion (Maslach, 2007). It is also supported by the research that explains the relationship between emotional exhaustion and burnout (Fiabane et al., 2021). A study conducted on nurses aimed to identify burnout in nurses, which mainly focuses on performance and emotional exhaustion while working. The study's results explained that burnout in nurses is positively associated with emotional exhaustion (Kowalski, 2010). Emotional exhaustion and psychological flexibility were negatively correlated to each other. This is explained by the previous research that studied the role of

psychological flexibility in the exhaustion-performance relationship and revealed that psychological flexibility is negatively associated with emotional exhaustion (Onwezen et al., 2014).

There were significant mean differences in burnout. Psychologists were more prone to burnout than others because they had to spend more time in the isolation centres than the other healthcare workers. Their work is really difficult and psychologically frustrating, and they need more time to heal a person's psychologically and emotionally disturbed state of mind. It also shows that the Nurses were least affected by burnout in the COVID-19 isolation centres. It is also supported by previous research that illustrates burnout among healthcare professionals (Jalili et al., 2020). A study conducted in Australia during the COVID-19 pandemic assessing psychological distress and professional burnout in health professionals found similar results, showing that mental healthcare workers reported high levels of anxiety, depression, and professional burnout (Northwood et al., 2021).

## Conclusion

Psychological flexibility is vital in dealing with burnout symptoms in COVID-19 isolation centre workers. Training healthcare workers in psychological flexibility is an important factor that will decrease the risk of burnout. This research offers a crucial perspective for researchers and mental health professionals regarding the foundations of this phenomenon, its progression, and the necessary preventive strategies achievable through policies and practices.

### Top of Form

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**Running Title:** Distress, Burnout, Psychological Flexibility and Emotional Exhaustion among HCWs of COVID-19 Isolation Centers

## References

- Bond, F. W., & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology, 88*(6), 1057. <https://doi.org/10.1037/0021-9010.88.6.1057>
- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., ... & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior therapy, 42*(4), 676-688. <https://doi.org/10.1016/j.beth.2011.03.007>
- Carfi, A., Bernabei, R., & Landi, F. (2020). Persistent symptoms in patients after acute COVID-19. *Jama, 324*(6), 603-605. <https://doi.org/10.1001/jama.2020.12603>
- Chang, W. H., Wu, C. H., Kuo, C. C., & Chen, L. H. (2018). The role of athletic identity in the development of athlete burnout: The moderating role of psychological flexibility. *Psychology of Sport and Exercise, 39*, 45-51. <https://doi.org/10.1016/j.psychsport.2018.07.014>
- Dawson, D. L., & Golijani-Moghaddam, N. (2020). COVID-19: Psychological flexibility, coping, mental health, and well-being in the UK during the pandemic. *Journal of Contextual Behavioral Science, 17*, 126-134. <https://doi.org/10.1016/j.jcbs.2020.07.010>
- Fiabane, E., Gabanelli, P., La Rovere, M. T., Tremoli, E., Pistarini, C., & Gorini, A. (2021). Psychological and work-related factors associated with emotional exhaustion among healthcare professionals during the COVID-19 outbreak in Italian hospitals. *Nursing & Health Sciences, 23*(3), 670-675. <https://doi.org/10.1111/nhs.12871>
- Haider, I. I., Tiwana, F., & Tahir, S. M. (2020). Impact of the COVID-19 Pandemic on Adult Mental Health. *Pakistan Journal of Medical Sciences, 36*(COVID19-S4). <https://doi.org/10.12669/pjms.36.covid19-s4.2756>
- Jalili, M., Niroomand, M., Hadavand, F., Zeinali, K., & Fotouhi, A. (2020). Burnout among healthcare professionals during COVID-19 pandemic: a cross-sectional study. *medRxiv*. <https://doi.org/10.1101/2020.06.12.20129650>
- Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review, 30*(7), 865-878. <https://doi.org/10.1016/j.cpr.2010.03.001>
- Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.
- Kowalski, C., Ommen, O., Driller, E., Ernstmann, N., Wirtz, M. A., Köhler, T., & Pfaff, H. (2010). Burnout in nurses—the relationship between social capital in hospitals and emotional exhaustion. *Journal of Clinical nursing, 19*(11-12), 1654-1663. <https://doi.org/10.1111/j.1365-2702.2009.02989.x>
- Kroska, E. B., Roche, A. I., Adamowicz, J. L., & Stegall, M. S. (2020). Psychological flexibility in the context of COVID-19 adversity: Associations with Distress. *Journal of Contextual Behavioral Science, 18*, 28-33. <https://doi.org/10.1016/j.jcbs.2020.07.011>
- Maslach, C. (2007). Burnout. *Encyclopedia of Stress, 2*, 368-371. <https://doi.org/10.1016/B978-012373947-6.00062-3>
- Maslach, C., & Jackson, S. E. (1981). MBI: Maslach burnout inventory. *Palo Alto, CA, 1*(2), 49-78.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of organizational behavior, 2*(2), 99-113. <https://doi.org/10.1002/job.4030020205>
- McCracken, L. M., & Yang, S.-Y. (2008). A contextual cognitive-behavioral analysis of rehabilitation workers' health and well-being: Influences of acceptance, mindfulness, and values-based action. *Rehabilitation Psychology, 53*(4), 479-485. <https://doi.org/10.1037/a0012854>
- Nevanperä, N., Lappalainen, R., Kuosma, E., Hopsu, L., Uitti, J., & Laitinen, J. (2013). Psychological flexibility, occupational burnout and eating behavior among working women. *Open Journal of Preventive Medicine, 3*(4) <https://doi.org/10.4236/ojpm.2013.34048>
- Northwood, K., Siskind, D., Suetani, S., & McArdle, P. A. (2021). An assessment of psychological distress and professional burnout in mental health professionals in Australia during the COVID-19 pandemic. *Australasian Psychiatry, 29*(6), 628-634. <https://doi.org/10.1177/10398562211038906>
- Onwezen, M. C., Van Veldhoven, M. J. P. M., & Biron, M. (2014). The role of psychological flexibility in the demands-exhaustion-performance relationship. *European Journal of Work and Organizational Psychology, 23*(2), 163-176. <https://doi.org/10.1080/1359432X.2012.742242>
- Ruiz, F. J., & Odriozola-González, P. (2017). The Predictive and moderating role of psychological flexibility in the development of job burnout. *Universitas Psychologica, 16*(4), 282-289. <https://doi.org/10.11144/javeriana.upsy16-4.pmrp>
- Society of Critical Care Medicine. (2020). Clinicians report high stress in COVID-19 response.
- Unadkat, S., & Farquhar, M. (2020). Doctors' well-being: self-care during the covid-19 pandemic. *BMJ, 368*. <https://doi.org/10.1136/bmj.m1150>
- Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology, 83*(3), 486-493. <https://doi.org/10.1037/0021-9010.83.3.486>