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FEAR OF COVID-19 AMONG HEALTHCARE WORKERS: A NARRATIVE REVIEW

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ABSTRACT

The review examined the published literature on fear of COVID-19 among healthcare workers (HCWs), covering its measurement, prevalence, risk factors, occupational consequences, and psychological interventions. Sources were identified through PubMed and Google Scholar, restricted to English-language peer-reviewed publications from January 2020 to December 2024. We integrated findings from meta-analyses and systematic reviews, cross-sectional and prospective studies, a national multisite workforce survey, and psychometric validation studies conducted in HCW and community samples across Europe, North America, and East Asia. Primary instruments included the Fear of COVID-19 Scale (FCV-19S), validated anxiety and depression measures, and Big Five personality inventories.

The FCV-19S demonstrated robust and cross-culturally stable psychometric properties, with criterion validity established against generalised anxiety disorder and intention to leave the profession, supporting its use in occupational health screening. Anxiety, depression, and sleep disturbances were substantially and consistently elevated among HCWs throughout the pandemic, with nurses, women, and frontline staff disproportionately affected across all major meta-analyses. Substantial heterogeneity across studies, driven by differences in measurement instruments, case thresholds, and clinical context, precluded a single reliable prevalence estimate. Female sex, older age, neuroticism, and fearful attachment style emerged as the most consistently reported individual-level predictors of fear of COVID-19, while resilience and hope functioned as protective factors, attenuating the translation of pandemic-related anxiety into fear of infection. At the occupational level, fear of viral exposure independently predicted both intention to reduce working hours and intention to leave clinical practice, with nurses carrying the highest attrition risk. Feeling valued by one's organisation independently reduced both intentions, indicating that institutional climate operates alongside individual psychological vulnerability. Mindfulness-based interventions reduced perceived stress and improved general wellbeing, though effects on burnout, anxiety, and depression remained inconclusive owing to methodological heterogeneity across trials.

Embedding the FCV-19S in routine occupational health screening would enable early identification of at-risk staff and support timely, targeted intervention. Effective workforce protection requires combining resilience- and mindfulness-based programmes with institutional measures - workload management, transparent communication, and organisational recognition of clinical staff - and treating psychological wellbeing investment as a core component of occupational health strategy rather than a supplementary one.

KEYWORDS

Fear of COVID-19; Healthcare Workers; FCV-19S; Anxiety; Burnout; Occupational Stress; Frontline Workers; Nurses; Physicians; Mental Health

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1. Introduction

The COVID-19 pandemic stands among the most severe public health crises in recent history. The World Health Organization declared COVID-19 a global pandemic on 11 March 2020. Healthcare systems worldwide faced an acute and rapidly escalating threat.

Healthcare workers (HCWs) occupied a uniquely exposed position throughout the crisis. Unlike the general public, they faced continuous occupational contact with infected patients. This occurred under conditions of inadequate personal protective equipment, staff shortages, and intense institutional pressure to remain on duty [3]. The psychological consequences were considerable. A meta-analysis reported a pooled anxiety prevalence of 23.2% among HCWs, depression prevalence of 22.8%, and insomnia prevalence of 38.9 % [2]. A broader synthesis encompassing anxiety, depression, post-traumatic stress, and sleep disorders across 70 studies confirmed that psychological morbidity in HCWs was not confined to a single domain [6].

Within this wider picture of psychological morbidity, fear of COVID-19 emerged as a distinct and clinically relevant construct. It refers specifically to the apprehension of becoming infected with SARS-CoV-2 - a response with its own emotional profile, determinants, and downstream effects. Among HCWs, this fear was compounded by occupationally inherent infection risk. The consequences extended beyond individual distress to include impaired professional functioning, workforce attrition, and reduced quality of patient care [5,6].

Despite growing recognition of this problem, the literature on fear of COVID-19 among HCWs remains fragmented. Available studies vary considerably in the measurement tools employed, the population examined, and the outcomes reported. The aim of this narrative review is to provide an overview of the literature on fear of COVID-19 among healthcare workers, including measurement tools, prevalence, risk factors, consequences, and psychological interventions.

2. Methods

This article is a narrative review of the published literature on fear of COVID-19 among healthcare workers. Unlike systematic reviews, narrative reviews do not follow a pre-registered protocol or apply formal quality appraisal tools. Quantitative pooling of results was not intended.

A literature search was conducted in PubMed and Google Scholar. The search combined terms related to the population of interest and the outcome: "fear of COVID-19", "FCV-19S," "healthcare workers," "nurses," "physicians," "frontline staff," "mental health," "anxiety," and "burnout." Boolean operators (AND, OR) were used to combine terms as appropriate. The search was restricted to publications in English, published between January 2020 and December 2024. PRISMA reporting guidelines were not applied.

Studies were included if they reported original data or synthesised findings on fear of COVID-19 among healthcare workers, used a validated measurement instrument, and were published in peer-reviewed journals. Editorials, commentaries, and studies focusing exclusively on the general population without a healthcare worker subsample were excluded. No formal risk-of-bias assessment or quality scoring was applied. Data were extracted and synthesised thematically, organised around the key topics of measurement, prevalence, risk factors, consequences, and interventions.

3. The Fear of COVID-19 Scale (FCV-19S)

The Fear of COVID-19 Scale (FCV-19S) is the most widely used instrument for measuring fear of COVID-19. It was developed in Iran and first published in 2020. The scale comprises seven items rated on a five-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. Total scores range between 7 and 35, with higher scores indicating greater fear [1]. Item content spans both cognitive and somatic dimensions, covering apprehension about infection, discomfort when thinking about the virus, sleep disturbance due to worry, and physical symptoms such as palpitations and clammy hands [1].

The psychometric properties of the original scale were evaluated using classical test theory and Rasch analysis. Internal consistency was good (Cronbach's $\alpha = 0.82$), composite reliability was 0.88, and the average variance extracted exceeded the recommended threshold of 0.50 [1]. Test-retest reliability, assessed via the intraclass correlation coefficient, was 0.72, indicating adequate temporal stability [1]. Convergent validity was confirmed through significant positive correlations with the Hospital Anxiety and Depression Scale and the Perceived Vulnerability to Disease Scale [1].

The scale was initially reported as having a unidimensional structure, and this single-factor model has been replicated across numerous language adaptations. The Polish validation was conducted in two independent community samples totalling 708 participants, confirming a one-factor structure with good fit indices and internal consistency values of $\alpha = 0.89$ and $\alpha = 0.85$ across both samples [8]. Measurement

invariance was demonstrated across gender and age groups, supporting score comparability across subpopulations [8].

Validation among healthcare professionals has revealed a more complex picture. A prospective study in Spanish HCWs identified a two-factor structure comprising emotional responses and somatic responses to fear of COVID-19, with high overall internal consistency ($\alpha = 0.89$) [7]. The scale demonstrated convergent, divergent, and incremental validity against measures of anxiety, depression, burnout, and perceived health [7]. Criterion validity was established with respect to generalised anxiety disorder and intention to leave the profession [7]. The FCV-19S performs robustly in clinical populations and captures dimensions of fear directly relevant to occupational outcomes [1,7,8].

4. Prevalence of Fear and Anxiety among Healthcare Workers

Estimating the prevalence of fear of COVID-19 among HCWs is complicated by the heterogeneity of measurement tools used across studies. Much of the available evidence draws on validated scales for anxiety and psychological distress rather than the FCV-19S specifically, making direct comparisons difficult. The accumulated data nevertheless paint a consistent picture of elevated psychological burden in this occupational group throughout the pandemic.

A meta-analysis reported a pooled anxiety prevalence rate of 23.2% (95% CI 17.8–29.1), depression prevalence of 22.8%, and insomnia prevalence of 38.9% among HCWs [2]. A separate meta-regression focused exclusively on frontline staff caring for COVID-19 patients reported a higher anxiety prevalence of 25.8% (95% CI 20.5–31.9), a depression prevalence of 24.3%, and a stress prevalence of 45% [3]. A larger synthesis incorporating 70 studies and 101,017 participants found an anxiety prevalence of 30.0% (95% CI 24.2–37.0), with depression at 31.1%, and sleep disorders at 44.0% [6]. The range across these analyses - approximately 23% to 30% for anxiety - reflects both genuine variation across settings and methodological differences in case thresholds and instruments.

Subgroup analyses reveal occupational differences. In one meta-analysis, nurses reported higher rates of anxiety and depression than physicians, with a pooled anxiety prevalence of 22.8% among nurses - a figure that, while coincidentally identical to the frontline-staff estimate reported above, derives from a separate subgroup analysis within a different meta-analysis - compared to 21.7% among doctors, and a parallel pattern for depression [2]. Substantial heterogeneity was observed across all meta-analyses, with I^2 values consistently exceeding 75% [2,3,6]. The authors attributed this heterogeneity to differences in geographic region and the specific scales and cut-offs applied [2,3,6]. A single global prevalence estimate is therefore unreliable. Fear and anxiety among HCWs varied considerably depending on local context.

5. Risk Factors for Fear of COVID-19 among Healthcare Workers

Sociodemographic Factors and occupational factors

Gender is one of the most consistently reported correlates of fear of COVID-19. Female HCWs reported higher levels than male HCWs across multiple study populations [7]. In a Spanish sample, women exhibited significantly higher FCV-19S scores than men, and nurses scored higher than physicians [7]. A similar pattern was found in a Japanese nursing sample, where female sex was associated with elevated anxiety risk, with an odds ratio of 2.93 (95% CI 1.09-9.08) [10]. Age shows a less uniform relationship. Among Italian HCWs, older age independently predicted greater fear of COVID-19, with a standardised beta of 0.26 ($p < 0.01$) [4]. In the Japanese sample, higher age was associated with greater anxiety rather than fear specifically [10]. The relationship also varied by clinical context and nursing experience [10]. Frontline staff caring directly for COVID-19 patients reported high rates of anxiety and stress, with a pooled anxiety prevalence of 25.8% and stress prevalence of 45% [3].

Psychological Factors

Personality characteristics are among the strongest individual-level predictors of fear of COVID-19 in HCWs. Neuroticism was an independent predictor of fear of COVID-19. The study measured this construct via its inverse pole, emotional stability, which showed a standardised beta of -0.26 ($p < 0.01$) in sample of 101 Italian HCWs, indicating that lower emotional stability - that is, higher neuroticism - was associated with greater fear of infection, independently of age [4]. In a Japanese nursing sample, neuroticism was the only Big Five trait independently associated with depression (OR = 1.06, 95% CI 1.03-1.09) [10]. It also independently predicted anxiety, alongside FCV-19S scores (OR = 1.09, 95% CI 1.06-1.13) [10]. Fearful attachment style independently predicted fear of COVID-19 beyond the effect of neuroticism (beta = 0.25, $p < 0.01$) [4].

Psychological resources operated in the opposite direction. In a Turkish sample of HCWs, resilience mediated the relationship between coronavirus anxiety and fear of COVID-19, while hope moderated this mediating path, such that the indirect effect was significant at moderate and high levels of hope [9]. Resilience and hope functioned as protective psychological resources, partially attenuating the effect of coronavirus anxiety on fear of COVID-19 [9].

6. Consequences of Fear of COVID-19

Burnout and Work Intentions

Fear of COVID-19 translated into measurable occupational consequences. In a large cross-sectional study of over 20,000 US HCWs across 124 institutions, fear of viral exposure independently predicted both intention to reduce work hours within 12 months (OR = 1.29; 95% CI 1.18-1.42) and intention to leave current practice within 24 months (OR = 1.16; 95% CI 1.05-1.29) [5]. Burnout showed the strongest association with these intentions, with odds ratios of 2.15 and 2.57 for reducing hours and leaving practice, respectively [5]. Among nurses, 40.0% indicated a moderate or high likelihood of leaving their position within two years. A further 33.7% planned to reduce their clinical hours. Both rates were substantially higher than those seen in administrative or clerical staff [5]. Feeling valued by one's organisation was independently protective, lowering the odds of both reducing hours (OR = 0.65) and leaving practice (OR = 0.40) [5]. This suggests institutional acknowledgement may complement individually targeted psychological interventions.

Mental Health and Quality of Care

Fear of COVID-19 and its co-occurring psychological disorders also impaired HCWs at the level of clinical performance. Mental health problems in HCWs are associated with reduced quality of care, decreased productivity, and higher institutional turnover costs [6]. The co-occurrence of anxiety, depression, post-traumatic stress, and sleep disturbance - all elevated during the pandemic - represented a substantial and overlapping psychological burden on clinical staff [6]. Sleep disturbances were prevalent at 44.0% in one large meta-analysis [6]. Among Japanese nurses caring for COVID-19 patients, fear of COVID-19 (FCV-19S scores) independently predicted anxiety (OR = 1.16; 95% CI 1.09-1.23), after controlling for personality traits and demographic variables [10]. This confirmed that fear contributed to psychological morbidity over and above neuroticism [10]. Collectively, these findings indicate that the consequences extend beyond individual distress to workforce sustainability and the safety of patient care [5,6].

7. Interventions

Psychological Approaches

The evidence on fear of COVID-19 among HCWs carries direct implications for intervention design. Resilience mediates the relationship between coronavirus anxiety and fear of COVID-19, and hope moderates this mediation [9]. Interventions targeting these psychological resources represent a theoretically grounded strategy [9]. Strengths-based approaches that foster resilience- defined as the ability to adaptively respond to hardship, stress, and adversity- and build hope could reduce the degree to which pandemic-related anxiety translates into fear of infection [9]. In this model, the indirect effect of coronavirus anxiety on fear of COVID-19 via resilience was significant at moderate and high levels of hope, indicating that hope moderates the protective role that resilience plays in buffering pandemic-related anxiety [9]. Hope-building components therefore merit explicit inclusion in mental health programmes for clinical staff [9].

Mindfulness-Based Interventions

Mindfulness-based interventions (MBIs) have received the most systematic empirical attention as a category of psychological support for frontline HCWs during the pandemic. A systematic review of 28 studies, including both randomised and non-randomised controlled trials, found that MBIs reduced perceived stress and improved general mental well-being and mindfulness capacity in HCWs during the COVID-19 pandemic [11]. MBIs were delivered in both online and in-person formats. In-person and mixed-modality delivery was associated with stronger effects than virtual delivery alone [11]. The evidence for MBI effects on burnout, anxiety, depression, sleep quality, and resilience was less conclusive [11]. Methodological heterogeneity across studies limited firm conclusions in these domains [11]. Overall methodological quality was moderate [11]. The authors called for more rigorous trial designs to establish the effectiveness of specific MBI formats for distinct outcomes in this population [11].

Institutional and Organisational Factors

Psychological interventions are unlikely to be sufficient in isolation. The finding that feeling valued by one's organisation independently reduces intention to leave practice [5] suggests that institutional climate is a meaningful lever for workforce retention. Organisational measures- including transparent communication, workload management, and accessible mental health support- may therefore serve as necessary complements to individually targeted programmes. Future interventions would benefit from combining resilience- and mindfulness-based approaches with broader organisational strategies, addressing fear of COVID-19 at both individual and systemic level [5,9,11].

8. Conclusions

Fear of COVID-19 is a clinically meaningful and measurable psychological phenomenon among HCWs [4,9,10]. It is distinct from generalised anxiety and carries its own predictors and consequences [4,10]. The FCV-19S has proven to be a reliable and cross-culturally valid instrument for capturing this construct [1,7,8]. Robust psychometric properties have been confirmed across multiple language adaptations [1,7,8]. The scale has been validated in the healthcare population [7]. Pooled anxiety prevalence ranged from approximately 23% to 30% across meta-analyses [2,3,6]. Depression and stress were reported at comparable or higher rates, and sleep disturbances were prevalent across all major meta-analyses, reaching 44.0% in the largest synthesis [2,3,6]. Prevalence was consistently higher among nurses, women, and those in frontline roles [2,3,7].

Several risk factors emerged with reasonable consistency across the reviewed literature [3,4,7,9,10]. These included female sex, older age, neuroticism, fearful attachment style, and direct deployment to COVID-19 wards [3,4,7,9,10]. Psychological resources - particularly resilience and hope - appeared to buffer against fear [9], suggesting that these are viable intervention targets. The consequences of elevated fear extended beyond individual distress to include burnout, reduced care quality, and workforce attrition [5,6]. These findings suggested risks to healthcare system sustainability that warrant institutional attention [5,6].

The reviewed literature has several methodological limitations. Most studies are cross-sectional, precluding causal inference [7]. Longitudinal data on how fear of COVID-19 evolves over time remain relatively scarce. Studies conducted in low- and middle-income countries are underrepresented, limiting generalisability. Future research would benefit from employing longitudinal designs, expanding geographic diversity, and examining the long-term trajectory of fear among HCWs beyond the acute pandemic phase. Practically, the FCV-19S could be embedded in routine occupational health screening to identify vulnerable staff early, enabling timely, personalised support. Institutional investment in psychological wellbeing programmes should be treated as a core component of occupational health strategy, not an optional supplement to clinical services [5,9,11].

REFERENCES

1. Ahorsu, D. K., Lin, C.-Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2022). The Fear of COVID-19 Scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 20(3), 1537–1545. <https://doi.org/10.1007/s11469-020-00270-8>
2. Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsis, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, Behavior, and Immunity*, 88, 901–907. <https://doi.org/10.1016/j.bbi.2020.05.026>
3. Salari, N., Khazaie, H., Hosseini-Far, A., Ghasemi, H., Erfani, R., Zarei, H., et al. (2020). The prevalence of stress, anxiety and depression within front-line healthcare workers caring for COVID-19 patients: A systematic review and meta-regression. *Human Resources for Health*, 18(1), Article 100. <https://doi.org/10.1186/s12960-020-00544-1>
4. Troisi, A., Croce Nanni, R., Riconi, A., Carola, V., & Di Cave, D. (2021). Fear of COVID-19 among healthcare workers: The role of neuroticism and fearful attachment. *Journal of Clinical Medicine*, 10(19), Article 4358. <https://doi.org/10.3390/jcm10194358>
5. Sinsky, C. A., Brown, R. L., Stillman, M. J., & Linzer, M. (2021). COVID-related stress and work intentions in a sample of US health care workers. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, 5(6), 1165–1173. <https://doi.org/10.1016/j.mayocpiqo.2021.08.007>
6. Marvaldi, M., Mallet, J., Dubertret, C., Moro, M. R., & Guessoum, S. B. (2021). Anxiety, depression, trauma-related, and sleep disorders among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Neuroscience & Biobehavioral Reviews*, 126, 252–264. <https://doi.org/10.1016/j.neubiorev.2021.03.024>
7. Cabrera-Aguilera, I., Ruiz-Hernández, J. A., Ferrer-Cascales, R., Albaladejo-Blázquez, N., & Sánchez-SanSegundo, M. (2024). The effects of fear of COVID-19 among Spanish healthcare professionals in three years after the pandemic onset via validation of the FCV-19S: A prospective study. *Current Psychology*, 43, 33640–33657. <https://doi.org/10.1007/s12144-024-06113-2>
8. Pilch, I., Kurasz, Z., & Turska-Kawa, A. (2021). Experiencing fear during the pandemic: Validation of the Fear of COVID-19 Scale in Polish. *PeerJ*, 9, Article e11263. <https://doi.org/10.7717/peerj.11263>
9. Yıldırım, M., & Güler, A. (2021). Coronavirus anxiety, fear of COVID-19, hope and resilience in healthcare workers: A moderated mediation model study. *Health Psychology Report*, 9(4), 388–397. <https://doi.org/10.5114/hpr.2021.106512>
10. Odachi, R., Adachi, M., Ueda, I., Hayashi, M., Endo, S., Okamoto, N., et al. (2022). The Big Five personality traits and the fear of COVID-19 in predicting depression and anxiety among Japanese nurses caring for COVID-19 patients: A cross-sectional study in Wakayama prefecture. *PLOS ONE*, 17(10), Article e0276803. <https://doi.org/10.1371/journal.pone.0276803>
11. García-Sierra, R., Rodríguez-Nogueira, Ó., Leirós-Rodríguez, R., Álvarez-Álvarez, M. J., & Pinto-Carral, A. (2024). Mindfulness-based interventions for improving mental health of frontline healthcare professionals during the COVID-19 pandemic: A systematic review. *Systematic Reviews*, 13(1), Article 160. <https://doi.org/10.1186/s13643-024-02574-5>