



Caught in the Crossfire: Doctors' Battle with Emotional Strain and Resource Shortages (Lesson Learned from Covid-19 Pandemic)

Diyah Woro Dwi Lestari^{*1,2}, Arfi Nurul Hidayah¹, Miko Ferine¹, Raditya Bagas Wicaksono^{1,4}, Ageng Bella Dinata^{1,3}, Amalia Muhaimin¹, Ernasiwi Astri Oktavilia¹, Nisaul Maghfiroh¹, Isran Kamal¹

¹Departemen Bioethics and Humanities, Faculty of Medicine Universitas Jenderal Soedirman Purwokerto, Indonesia

²Student, Doctor Psychology Study Program, Faculty of Psychology, Universitas Gadjah Mada, Yogyakarta, Indonesia

³Resident, Department of Internal Medicine, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

⁴PhD researcher, Department of Ethics, Law, and Humanities, Amsterdam UMC, University of Amsterdam, The Netherlands

ARTICLE INFO

Article history:

Received February 17, 2025

Revised July 3, 2025

Accepted July 5, 2025

Available online August 2, 2025

Keywords:

Empathy, emotional strain, compassion fatigue, healthcare professionals, resource shortage

ABSTRACT

Healthcare professionals, particularly doctors, navigate a delicate balance between empathy and emotional resilience, a challenge that became more pronounced during the COVID-19 pandemic. This study explores the experiences of doctors in managing empathy while coping with burnout, compassion fatigue, and resource scarcity. Through in-depth interviews with general practitioners and specialists, four key themes emerged: the emotional impact of patient conditions on doctors, the heightened burnout caused by excessive workloads, the distress of resource shortages, and the struggle to maintain professionalism despite emotional strain. Findings highlight the dual nature of empathy—while

essential for patient care, it also contributes to emotional exhaustion. The study underscores the urgent need for systemic support, including psychological interventions and institutional strategies, to sustain healthcare professionals' well-being and ensure compassionate yet sustainable medical practice.

1. INTRODUCTION

Healthcare professionals, particularly physicians, operate in clinical environments that demand both technical expertise and emotional labor. Among the core competencies in patient care, empathy plays a vital role in fostering trust, improving treatment adherence, and enhancing clinical outcomes (Han et al., 2021; Jaiswal et al., 2019; Łagód & Suchodolska, 2021; Lampus & Wuisan, 2024; Wu & et al., 2020). Beyond its benefits to patients, empathy also contributes to provider well-being and supports a more compassionate and relational healthcare environment (Decety & Fotopoulou, 2015; Eby, 2018; Smith et al., 2017). Through empathic connection, physicians address not only patients' physical symptoms but also their psychological and emotional concerns. However, sustained emotional engagement can place physicians at risk of psychological distress, particularly when faced with high-pressure situations, moral dilemmas, and constant exposure to patient suffering (Kerasidou & Horn, 2016).

The literature consistently highlights empathy as a dual-edged phenomenon in clinical practice. While it enhances the quality of care, it may simultaneously contribute to emotional exhaustion, compassion fatigue, and professional burnout (Eby, 2018; Łagód & Suchodolska, 2021; Lampus & Wuisan, 2024). Prolonged empathic involvement, coupled with long working hours and the emotional burden of caring for critically ill patients, often leads to cumulative psychological strain (Fernando & Consedine, 2014). Compassion fatigue—marked by emotional depletion and a reduced capacity to empathize—has been well documented among healthcare professionals, especially during large-scale health crises such as the COVID-19 pandemic (Lluch-

*Corresponding author

E-mail addresses: dyah.woro.dwi.lestari@unsoed.ac.id (Diyah Woro Dwi Lestari)

Sanz et al., 2022; Yi et al., 2021). During this period, many physicians and nurses encountered heightened emotional demands due to ethical dilemmas, high mortality rates, and limitations in healthcare resources (Garnett et al., 2023; McKinley et al., 2020). In emergency and intensive care settings, increased reports of burnout and compassion fatigue have been linked to impaired mental health and reduced clinical performance (El-bar et al., 2013; Ma et al., 2022)

Individual differences, including personality traits, gender, and professional experience, influence how empathy affects physicians' mental health and susceptibility to burnout (Gleichgerrcht & Decety, 2013). Without adequate institutional support, the emotional costs of empathic engagement can compromise healthcare providers' psychological resilience and professional functioning (Ghazanfar et al., 2018; Ruiz-Fernández et al., 2021). To address these challenges, evidence-based interventions such as peer support, psychological services, ethical counseling, and structured debriefing have been recommended to help sustain the mental health of physicians while preserving the benefits of empathic care (Garnett et al., 2023; McKinley et al., 2020; Ruiz-Fernández et al., 2021).

In Indonesia, particularly in Central Java, the COVID-19 pandemic exposed vulnerabilities in the healthcare system, placing extraordinary demands on healthcare professionals. Hospitals faced overwhelming patient surges, critical shortages of oxygen and personal protective equipment, and frequent staff infections that led to workforce depletion. These systemic strains translated into significant psychological burdens for healthcare workers, who reported high rates of depression, anxiety, stress, and burnout during the pandemic ((Handayani et al., 2022; Pramukti et al., 2021). A national study indicated that emotional exhaustion and depersonalization affected over one-third of healthcare workers, with rates in Java reflecting these concerning trends ((Oktavia et al., 2023). Among medical residents, elevated emotional exhaustion and reduced personal accomplishment were also reported, highlighting the persistent challenges in sustaining well-being during prolonged crises (Wardani et al., 2023). Furthermore, frontline physicians and nurses working directly with COVID-19 patients were found to have significantly higher risks of psychological distress compared to their lower-risk counterparts, with resilience identified as a critical protective factor (Setiawan et al., 2022; Sulistyowati et al., 2022). Despite these challenges, many physicians in Central Java continued to provide patient care while grappling with fears of infecting their families, ethical dilemmas in care prioritization, and ongoing emotional strain.

Given this context, the present study aims to explore how physicians in Banyumas, Central Java, navigated the emotional complexities of clinical work during the COVID-19 crisis, with a particular focus on how empathy was experienced, expressed, and managed under these high-pressure conditions. It investigates the psychological burden faced by physicians, the challenges in sustaining empathic care amidst burnout and compassion fatigue, and the strategies employed to maintain emotional resilience and professionalism. By examining these lived experiences, this study seeks to contribute to a deeper understanding of the interplay between empathy, emotional strain, and resilience, providing evidence to inform institutional policies and mental health interventions that can support physicians in delivering compassionate yet sustainable care during future healthcare crises.

2. METHOD

The method of this study was a qualitative research design using a phenomenological approach, which emphasizes exploring the lived experiences of physicians working during the COVID-19 pandemic. This approach was chosen to capture the depth and complexity of doctors' emotional and professional experiences during a prolonged health crisis. Participants were regarded as experts of their own lived experiences and were expected to provide in-depth insights into the challenges of providing medical care under crisis conditions. The study was conducted in Banyumas Regency, Indonesia, involving in-depth interviews with practicing general practitioners and specialists working in hospitals during the pandemic.

Participants and Data Collection

A total of 13 medical doctors (general practitioners and specialists) who were actively working in hospitals during the COVID-19 pandemic were recruited using purposive sampling to ensure that participants had relevant experiences aligned with the study's objectives. Data collection was conducted through in-depth interviews via online communication platforms or face-to-face, depending on participants' availability and safety considerations. A semi-structured interview format was employed, allowing participants to openly share their experiences while ensuring consistency in the data collected across interviews. Informed consent was obtained from all participants before interviews, ensuring voluntary participation and confidentiality.

Data Analysis

Data were analyzed using phenomenological analysis guided by Moustakas' framework (1994), which involves four key stages:

- 1) *Epoche*: Researchers set aside personal biases and preconceptions to focus objectively on the participants' experiences.
- 2) *Phenomenological Reduction*: Researchers systematically described the participants' narratives, identifying key thoughts and emotions related to their professional duties to generate a comprehensive description of the phenomenon.
- 3) *Imaginative Variation*: Contextual elements such as time, space, and social interactions influencing the participants' experiences were identified to uncover underlying structural themes.
- 4) *Synthesis*: The textural and structural descriptions were integrated to develop a deeper understanding of the essence of physicians' experiences during the pandemic.

This structured analysis allowed for a systematic and rigorous interpretation of the participants' lived experiences while remaining accessible to readers unfamiliar with phenomenological methods.

Trustworthiness and Credibility

To ensure the trustworthiness and credibility of the findings, the study adhered to criteria of credibility, dependability, confirmability, and transferability (Ahmed, 2024; Creswell, 2018). Peer debriefing was conducted by discussing emerging findings with fellow researchers to validate interpretations and minimize bias (Creswell, 2018). Data coding and interpretation involved three researchers (DW, RB, and MF), with discrepancies in coding and theme identification resolved through inter-coder discussions to ensure consistency and rigor in the analysis process.

Ethical Approval

Ethical approval for the study was obtained from the Health Research Ethics Committee of the Faculty of Medicine, Universitas Jenderal Soedirman (FK Unsoed) with the registration number 109/KEPK/IV/2021

3. RESULT AND DISCUSSION

Result

This study explores the experiences of healthcare professionals in balancing empathy and emotional resilience in medical practice. A total of thirteen (13) doctors participated in the study, representing diverse clinical settings, including private hospitals, state hospitals, and clinics. The participants consisted of both general practitioners (GPs) and specialists, with ages ranging from 27 to 48 years. The sample included seven male and six female doctors, reflecting a relatively balanced gender distribution. The duration of interviews varied from 25 to 56 minutes, allowing for in-depth exploration of their perspectives. The participants' workplaces spanned multiple

healthcare settings, with some working in both private and state institutions, highlighting the varied contexts in which medical professionals navigate the emotional demands of patient care.

The findings of this study were categorized into key themes that emerged from the participants' narratives. These themes illustrate the challenges faced by doctors in maintaining empathy, the emotional toll of patient care, strategies for coping with compassion fatigue, and the impact of workplace conditions on their psychological well-being. The themes are presented in detail below.

1. The Condition of Patients Affects the Condition of Doctors

Participants reported being significantly affected by the condition of their patients. Emotionally, they experienced anxiety and apprehension before going to work. All participants had previously tested positive for COVID-19, either from patients or colleagues at the workplace. Notably, four participants experienced repeated exposure and had to undergo multiple isolation periods. The impact extended beyond emotional distress, such as anxiety and stress, to physical symptoms that mirrored those of their patients. During the data collection period, a large number of patients visited the hospital reporting COVID-19 symptoms, leading participants to recommend COVID-19 testing. Upon patient confirmation, participants reported experiencing similar symptoms themselves, such as sore throat and general discomfort upon returning home. This experience is illustrated in the following interview excerpt:

"Kadang-kadang banyak keluhan kalau denger temen yang positif gitu ikut-ikutan pegal harus ketemu visit pasien apalagi merasa terpapar agak banyak itu di rumah kayak agak-agak semlenget gitu tu tiba-tiba tenggorokan sakit." (Sometimes, when hearing that a colleague tested positive, I feel aches too. Especially after visiting patients and feeling significantly exposed, I start feeling somewhat feverish and suddenly experience a sore throat.) – (Dr. T, 43 years old)

2. The Pandemic Led to Burnout

During the peak of the pandemic in 2020–2021, several surges in COVID-19 cases were observed. Between May and August 2021, a significant increase in the number of infected individuals occurred, resulting in a corresponding rise in severe cases requiring hospitalization. During this period, hospitals experienced an unprecedented surge in patient admissions, necessitating the expansion of emergency rooms and inpatient wards. The capacity of these wards, which typically accommodated 20 patients, increased to as many as 40 patients. This overwhelming situation left participants feeling powerless and exhausted, which in turn affected their psychological well-being. Participants also reported extended working hours due to the increase in patient load, further exacerbating their sense of fatigue. The challenges they faced are reflected in the following statement:

"Bulan Juli itu—karena di akhir bulan Juni udah meningkat ya—bulan Juli terpaksa membuka satu bangsal lagi. Jadi kayak bed pasien itu ada 40 lebih lah untuk di ruang isolasi belum lagi IGD-nya kita tambahkan, luas dan sebagainya.. Dengan kondisi orang yang berkurang karena beberapa COVID. Jadi, itu rasanya capek banget ya, exhausted banget." (In July—because at the end of June cases had already increased—we were forced to open another ward. So, there were more than 40 patient beds in the isolation ward, not to mention the expanded emergency room and other adjustments. With fewer personnel due to COVID-19 cases among staff, it was extremely exhausting.) – (Dr. N)

3. Resource Scarcity Made Doctors Feel Helpless

In addition to the increased number of patients, the severity of their conditions also intensified. One of the most critical challenges was the widespread respiratory distress experienced by patients, which required a steady supply of oxygen to alleviate their symptoms. However, at the hospital where the participants worked, an oxygen supply crisis occurred, lasting for several days. This shortage left participants feeling helpless as they witnessed patients struggling to breathe without being able to provide the necessary treatment. One participant shared their emotional distress after witnessing a patient's suffering and subsequent death due to the unavailability of oxygen. Despite their efforts to secure oxygen by contacting suppliers, the

high demand led to stock shortages, leaving requests unfulfilled. Another participant described how constant exposure to such situations led to emotional desensitization. The following excerpts illustrate their experiences:

"Nah karena sering dihadapkan kondisi seperti ini jadi kaya ga terlalu kek tumpul gitu emosinya ga tumpul jadi ya udah wong oksigen juga ga ada ya udah." (I was frequently face situations like this, my emotions become somewhat numb—there's nothing I can do when there's no oxygen available.) – (Dr. K)

"Itu rasanya kayak... Bersalah iya, tapi nggak bisa ngapa-ngapain iya, gitu. Lha memang enggak ada oksigen, ya mau gimana? Itu satu yang paling berat." (It feels like... yes, I feel guilty, but there's nothing I can do. If there's no oxygen, what can I do? That was the hardest part.) – (Dr. N).

4. Striving to Maintain Professionalism Despite Emotional Strain

Participants experienced significant emotional distress while performing their professional duties during the peak of the pandemic. Various thoughts and feelings arose regarding patient care, particularly with non-compliant patients who did not follow medical advice. Coupled with an increased workload, participants reported feeling both physically and mentally exhausted. Despite these challenges, they emphasized the importance of maintaining professionalism in their interactions with patients. Participants made a conscious effort to remain patient and empathetic, recognizing that patients were in a vulnerable state and thus did not deserve to be treated harshly. Concerns about the risk of infection and the potential of transmitting the virus to their families were prevalent among participants. Despite being confronted by their families regarding the risks, they accepted their responsibilities as an inherent part of their profession. One participant recounted how their spouse and children expressed concern over repeated COVID-19 infections acquired at work, but they reassured their family that exposure is an inevitable risk for doctors. This commitment to professionalism is reflected in the following statement:

"Kita tetep ke pasien care, kita tetep ke pasien ee apa adanya, saya ga kemudian kemudian jadi lebih, lebih anger ke pasien ya engga lah, masa saya marah-marahin pasien, engga dong. karna (kita..) pasien dateng karna butuh bantuan, kita bantu, gitu. cuma mungkin karna saya tipikel orang yang lebih ke diri sendiri ya, dampak emosi itu ya ke diri sendiri aja, gitu."

(We continue to care for patients as we should. I don't become angrier at patients—no, I can't yell at them. Patients come because they need help, so we help them. Maybe I just internalize the emotional impact on myself.) – (Dr. R)

Discussion

The qualitative findings highlight the profound emotional and professional challenges faced by healthcare professionals during the COVID-19 pandemic. The first theme, "Patient conditions influencing doctors' conditions," underscores the bidirectional impact of patient outcomes on healthcare providers' mental and physical well-being. This aligns with existing literature emphasizing emotional contagion, where healthcare workers experience secondary trauma through their patients (Jobe et al., 2021; Roden-Foreman et al., 2017). The study's participants reported somatic symptoms resembling their patients, mirroring findings from studies on vicarious trauma in healthcare (Roden-Foreman et al., 2017). Emotional distress, such as anxiety and fear, has been reported as a common psychological response among healthcare workers exposed to COVID-19 cases, reinforcing the need for emotional support interventions (de Melo Silva Júnior et al., 2023; Galbraith et al., 2020a; Guraya et al., 2023a).

The second theme, "COVID-19 pandemic triggering burnout," reflects the overwhelming workload and psychological strain documented in prior research. The connection between prolonged high-pressure environments and burnout is well-documented. Burnout is not only linked to workload but also to moral distress arising from witnessing preventable deaths and resource constraints (Guraya et al., 2023a; Macaron et al., 2023). Similar studies have emphasized that healthcare workers experiencing burnout often struggle with emotional disengagement and decreased professional efficacy (Alkhamees et al., 2023).

The third theme, "Resource scarcity leading to helplessness," echoes findings in global studies highlighting the psychological toll of insufficient medical supplies (D'Errico et al., 2021; Smallwood et al., 2021). A study by (Sindwani & Suri, 2021) on Indian hospitals and (Bhatt et al., 2022) in rural Nepal revealed that oxygen shortages occur in LMICs. Resource limitations have been shown to exacerbate emotional exhaustion and even contribute to long-term psychological trauma, as healthcare professionals feel unable to fulfill their ethical duties (D'Errico et al., 2021; Smallwood et al., 2021; The Workplace et al., 2022). This helplessness can further contribute to decision fatigue, where medical professionals struggle with prioritizing care due to limited resources (Smallwood et al., 2021).

Finally, the theme of "Maintaining professionalism despite emotional strain" aligns with the notion of ethical resilience in medical practice. Doctors' ability to managing emotions while adhering to professional standards has been discussed in resilience literature (Guraya et al., 2023b; Harkin, 2020). Despite personal hardships, the participants displayed a strong commitment to patient care, resonating with findings from studies on altruism in medical professionals during crises. Research suggests that professionalism is often upheld through coping mechanisms such as cognitive reframing and emotional regulation strategies (Alora et al., 2022; Goddard & Patel, 2021). However, studies also caution that prolonged suppression of emotions may lead to emotional burnout in the long term if not properly addressed through institutional support (Alora et al., 2022; D'Errico et al., 2021; Galbraith et al., 2020b).

These findings contribute to the growing evidence of the pandemic's multifaceted impact on healthcare workers, emphasizing the need for systemic support to address burnout, resource scarcity, and emotional well-being. The comparative analysis underscores the universality of these challenges across contexts while highlighting the unique resilience strategies employed by medical professionals in different settings. A notable insight from this study is the limited availability of structured institutional support systems for healthcare professionals in Banyumas during the pandemic. Physicians relied primarily on peer support and personal coping mechanisms to manage stress, while institutional supports were often limited to operational protocols and infection control measures. This situation contrasts with practices in higher-resource settings. For example, Australia implemented structured peer-support networks, such as the Hand-n-Hand Peer Support program, providing confidential mental health support to healthcare workers during the pandemic (Henderson et al., 2022). Additionally, hospitals in Australia and the UK offered psychological first aid, resilience training, and flexible work arrangements to reduce burnout and sustain healthcare worker well-being (Greenberg et al., 2020; Smallwood et al., 2021). In Southeast Asia, a regional study highlighted that while formal mental health systems were often lacking, strong teamwork and informal peer support served as protective factors against psychological distress (Tan et al., 2022).

The contrast between Indonesia and Western healthcare systems highlights the importance of establishing context-appropriate support systems for healthcare workers. Implementing structured peer-support programs, accessible counseling services, and resilience-building initiatives in Indonesia could help mitigate the emotional toll on healthcare workers during future public health crises. These findings contribute to the growing evidence of the pandemic's multifaceted impact on healthcare workers, emphasizing the critical need for systemic support to address burnout, resource scarcity, and emotional well-being. The comparative analysis underscores the universality of these challenges while highlighting the unique resilience strategies employed by healthcare professionals in different settings. Future studies should explore long-term coping mechanisms and institutional interventions that can foster psychological resilience and sustain professional commitment during public health crises. This study has limitations. The qualitative, narrative nature of phenomenological research may introduce recall bias or social desirability bias, as data rely on participants' self-reported experiences. Additionally, the cross-sectional design captures experiences during a specific pandemic period and may not reflect evolving conditions or long-term impacts.

4. CONCLUSION

The findings of this study highlight the profound impact of the pandemic on healthcare professionals, affecting them emotionally, physically, and professionally. The results indicate that patient conditions directly influenced doctors' well-being, leading to emotional distress that mirrored their patients' suffering and increasing the risk of mental exhaustion. Additionally, the surge in COVID-19 cases during the pandemic significantly heightened workloads, contributing to burnout due to excessive job demands and prolonged exposure to high-pressure environments. The shortage of essential medical resources, particularly oxygen, emerged as a critical challenge, leaving doctors feeling powerless and burdened with moral distress. Despite these extreme pressures, participants demonstrated a strong commitment to maintaining professionalism in patient care, even as they internalized the emotional toll of their experiences. Overall, this study underscores the urgent need for systemic support to mitigate burnout, enhance psychological resilience, and ensure adequate resource allocation to sustain healthcare professionals during public health crises.

Several practical steps are proposed to enhance healthcare professionals' resilience and sustain empathetic care, which are resilience training (developing structured training on stress management and emotional regulation for healthcare workers), flexible work policies (Implementation of flexible scheduling and adequate rest to mitigate prolonged exposure to high-stress environments), institutional mental health support (to establish accessible counseling and psychological support services within healthcare institutions), resource planning (Strengthen preparedness planning to ensure adequate medical supplies during crises, reducing moral distress) dan ethical support frameworks (providing clear institutional guidelines for ethical decision-making to reduce uncertainty during crises)..

5. ACKNOWLEDGE

Authors would like to thank all the participants who was willingly shared their experiences in the time of pandemic. May God Almighty always blessed all of you with health and perseverance. Authors also wanted to extend regards to our research assistant who worked hard to help with the interview transcription.

6. REFERENCES

- Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 2, 100051. <https://doi.org/10.1016/J.GLMEDI.2024.100051>
- Alkhamees, A. A., Aljohani, M. S., Kalani, S., Ali, A. M., Almatham, F., Alwabali, A., Alsughier, N. A., & Rutledge, T. (2023). Physician's Burnout during the COVID-19 Pandemic: A Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*, 20(5), 4598. <https://doi.org/10.3390/IJERPH20054598>
- Alora, A. T., Angeles, M., & Alora, T. (2022). Medical Professionalism in a Time of the Covid 19 Pandemic and Beyond. *Journal of Medicine, University of Santo Tomas*, 6(S1), 4–10. <https://doi.org/10.35460/2546-1621.2022-SP02>
- Bhatt, N., Nepal, S., Pinder, R. J., Lucero-Prisno, D. E., & Budhathoki, S. S. (2022). Challenges of Hospital Oxygen Management during the COVID-19 Pandemic in Rural Nepal. *The American Journal of Tropical Medicine and Hygiene*, 106(4), 997. <https://doi.org/10.4269/AJTMH.21-0669>
- Creswell, J. (2018). *Qualitative Inquiry & Research Design 4th Ed* (4th ed.). Sage Publication.
- de Melo Silva Júnior, M. L., Sapia, A. V., Cavalcanti Neto, J. M., Barbosa, N. M. G., Neiva, V. B. C., & Sauaia Filho, E. N. (2023). The first wave of COVID-19 and mental distress of physician residents in Brazil: a comparison between two cohorts. *Human Resources for Health*, 21(1), 1–7. <https://doi.org/10.1186/S12960-022-00790-5/TABLES/3>

- Decety, J., & Fotopoulou, A. (2015). Why empathy has a beneficial impact on others in medicine: unifying theories. *Frontiers in Behavioral Neuroscience*, 8(JAN), 457. <https://doi.org/10.3389/FNBEH.2014.00457>
- D'Errico, S., Padovano, M., Scopetti, M., Manetti, F., Zanon, M., Santurro, A., Frati, P., & Fineschi, V. (2021). Supporting Decision Making in Intensive Care: Ethical Principles for Managing Access to Care During the COVID-19 Pandemic. *Frontiers in Medicine*, 8, 787805. <https://doi.org/10.3389/FMED.2021.787805/BIBTEX>
- Eby, D. (2018). Empathy in general practice: Its meaning for patients and doctors. In *British Journal of General Practice* (Vol. 68, Issue 674, pp. 412–413). Royal College of General Practitioners. <https://doi.org/10.3399/bjgp18X698453>
- El-bar, N., Levy, A., Wald, H. S., & Biderman, A. (2013). Compassion fatigue, burnout and compassion satisfaction among family physicians in the Negev area - a cross-sectional study. *Israel Journal of Health Policy Research*, 2(1). <https://doi.org/10.1186/2045-4015-2-31>
- Fernando, A. T., & Consedine, N. S. (2014). Development and initial psychometric properties of the Barriers to Physician Compassion questionnaire. *Postgraduate Medical Journal*, 90(1065), 388–395. <https://doi.org/10.1136/POSTGRADMEDJ-2013-132127>
- Galbraith, N., Boyda, D., McFeeters, D., & Hassan, T. (2020a). The mental health of doctors during the COVID-19 pandemic. *BJPsych Bulletin*, 45(2), 1. <https://doi.org/10.1192/BJB.2020.44>
- Galbraith, N., Boyda, D., McFeeters, D., & Hassan, T. (2020b). The mental health of doctors during the COVID-19 pandemic. *BJPsych Bulletin*, 45(2), 1. <https://doi.org/10.1192/BJB.2020.44>
- Garnett, A., Hui, L., Oleynikov, C., & Boamah, S. (2023). Compassion fatigue in healthcare providers: a scoping review. *BMC Health Services Research*, 23(1), 1–16. <https://doi.org/10.1186/S12913-023-10356-3/FIGURES/2>
- Ghazanfar, H., Chaudhry, M. T., Asar, Z. U., & Zahid, U. (2018). Compassion Satisfaction, Burnout, and Compassion Fatigue in Cardiac Physicians Working in Tertiary Care Cardiac Hospitals in Pakistan. *Cureus*, 10(10). <https://doi.org/10.7759/CUREUS.3416>
- Gleichgerricht, E., & Decety, J. (2013). Empathy in clinical practice: how individual dispositions, gender, and experience moderate empathic concern, burnout, and emotional distress in physicians. *PloS One*, 8(4). <https://doi.org/10.1371/JOURNAL.PONE.0061526>
- Goddard, A. F., & Patel, M. (2021). The changing face of medical professionalism and the impact of COVID-19. *The Lancet*, 397(10278), 950–952. [https://doi.org/10.1016/S0140-6736\(21\)00436-0](https://doi.org/10.1016/S0140-6736(21)00436-0)
- Greenberg, N., Docherty, M., Gnanapragasam, S., & Wessely, S. (2020). Managing mental health challenges faced by healthcare workers during COVID-19 pandemic. *BMJ*, 368, m1211. <https://doi.org/10.1136/bmj.m1211>
- Guraya, S. S., Menezes, P., Lawrence, I. N., Guraya, S. Y., & Rashid-Doubell, F. (2023a). Evaluating the impact of COVID-19 pandemic on the physicians' psychological health: A systematic scoping review. *Frontiers in Medicine*, 10, 1071537. <https://doi.org/10.3389/FMED.2023.1071537/FULL>
- Guraya, S. S., Menezes, P., Lawrence, I. N., Guraya, S. Y., & Rashid-Doubell, F. (2023b). Evaluating the impact of COVID-19 pandemic on the physicians' psychological health: A systematic scoping review. *Frontiers in Medicine*, 10, 1071537. <https://doi.org/10.3389/FMED.2023.1071537/FULL>
- Han, C., Wu, Q., Liu, C., & Wang, P. (2021). *Patient's Perceived Empathy Can Predict Doctor-Patient Relationship in Medical Interaction*. <https://doi.org/10.21203/rs.3.rs-232845/v1>
- Handayani, P. W., & et al. (2022). Mental health and health-related quality of life among Indonesian healthcare workers during the COVID-19 pandemic. *Journal of Multidisciplinary Healthcare*, 15, 2215–2225. <https://doi.org/10.2147/JMDH.S369153>
- Harkin, D. (2020). COVID-19 and medical professionalism in a pandemic. *Postgraduate Medical Journal*, 97(1143), 53. <https://doi.org/10.1136/POSTGRADMEDJ-2020-138344>
- Henderson, R., Lane, A., & Team, H.-H. P. S. (2022). Peer support for healthcare workers during COVID-19: The Hand-n-Hand initiative. *Australasian Psychiatry*, 30(1), 121–124. <https://doi.org/10.1177/10398562211063268>

- Jaiswal, C., Anderson, K., & Haesler, E. (2019). A Self-Report of the Healer's Art by Junior Doctors: Does the Course Have a Lasting Influence on Personal Experience of Humanism, Self-Nurturing Skills and Medical Counterculture? *BMC Medical Education*, 19(1). <https://doi.org/10.1186/s12909-019-1877-3>
- Jobe, J. A., Gillespie, G. L., & Schwytzer, D. (2021). A National Survey of Secondary Traumatic Stress and Work Productivity of Emergency Nurses Following Trauma Patient Care. *Journal of Trauma Nursing: The Official Journal of the Society of Trauma Nurses*, 28(4), 243. <https://doi.org/10.1097/JTN.0000000000000592>
- Kerasidou, A., & Horn, R. (2016). Making space for empathy: Supporting doctors in the emotional labour of clinical care Ethics in Clinical Practice. *BMC Medical Ethics*, 17(1), 1–5. <https://doi.org/10.1186/S12910-016-0091-7/PEER-REVIEW>
- Łagód, K. P., & Suchodolska, M. (2021). The Relationship between Doctor and Patient as an Indicator of the Level of Trust in Medical Care. *Global Journal of Health Science*, 13(7), p56. <https://doi.org/10.5539/GJHS.V13N7P56>
- Lampus, N. S., & Wuisan, D. S. S. (2024). Correlation Between Doctor-Patient Communication With Patient Satisfaction and Loyalty. *Medical Scope Journal*, 6(2), 149–158. <https://doi.org/10.35790/msj.v6i2.53161>
- Lluch-Sanz, C., Galiana, L., Doménech-Vañó, P., & Sansó, N. (2022). The Impact of the COVID-19 Pandemic on Burnout, Compassion Fatigue, and Compassion Satisfaction in Healthcare Personnel: A Systematic Review of the Literature Published during the First Year of the Pandemic. *Healthcare (Basel, Switzerland)*, 10(2). <https://doi.org/10.3390/HEALTHCARE10020364>
- Ma, H., Huang, S. Q., We, B., & Zhong, Y. (2022). Compassion fatigue, burnout, compassion satisfaction and depression among emergency department physicians and nurses: a cross-sectional study. *BMJ Open*, 12(4). <https://doi.org/10.1136/BMJOPEN-2021-055941>
- Macaron, M. M., Segun-Omosehin, O. A., Matar, R. H., Beran, A., Nakanishi, H., Than, C. A., & Abulseoud, O. A. (2023). A systematic review and meta analysis on burnout in physicians during the COVID-19 pandemic: A hidden healthcare crisis. *Frontiers in Psychiatry*, 13, 1071397. <https://doi.org/10.3389/FPSYT.2022.1071397/BIBTEX>
- McKinley, N., McCain, R. S., Convie, L., Clarke, M., Dempster, M., Campbell, W. J., & Kirk, S. J. (2020). Resilience, burnout and coping mechanisms in UK doctors: a cross-sectional study. *BMJ Open*, 10(1), e031765. <https://doi.org/10.1136/BMJOPEN-2019-031765>
- Moustakas, C. (1994). Phenomenological research methods. *Phenomenological Research Methods*. <https://doi.org/10.4135/9781412995658>
- Oktavia, D., & et al. (2023). Burnout and associated factors among healthcare workers during the COVID-19 pandemic in Indonesia. *Journal of Public Health Research*, 12, 2648. <https://doi.org/10.4081/jphr.2023.2648>
- Pramukti, I., & et al. (2021). Anxiety and suicidal thoughts during the COVID-19 pandemic in Indonesia. *Journal of Affective Disorders*, 278, 402–407. <https://doi.org/10.1016/j.jad.2020.09.072>
- Roden-Foreman, J. W., Bennett, M. M., Rainey, E. E., Garrett, J. S., Powers, M. B., & Warren, A. M. (2017). Secondary traumatic stress in emergency medicine clinicians. *Cognitive Behaviour Therapy*, 46(6), 522–532. <https://doi.org/10.1080/16506073.2017.1315612>
- Ruiz-Fernández, M. D., Ramos-Pichardo, J. D., Ibáñez-Masero, O., Carmona-Rega, M. I., Sánchez-Ruiz, M. J., & Ortega-Galán, Á. M. (2021). Professional quality of life, self-compassion, resilience, and empathy in healthcare professionals during COVID-19 crisis in Spain. *Research in Nursing & Health*, 44(4), 620–632. <https://doi.org/10.1002/NUR.22158>
- Setiawan, H., & et al. (2022). Anxiety and resilience among healthcare workers during the COVID-19 pandemic in Indonesia. *Enfermería Clínica*, 32, S11–S14. <https://doi.org/10.1016/j.enfcli.2021.11.005>
- Sindwani, G., & Suri, A. (2021). Acute hospital oxygen shortage during COVID-19 pandemic surge: how can we prevent the apocalypse? *Brazilian Journal of Anesthesiology*, 72(2), 311. <https://doi.org/10.1016/J.BJANE.2021.10.003>

- Smallwood, N., Pascoe, A., Karimi, L., & Willis, K. (2021). Moral distress and perceived community views are associated with mental health symptoms in frontline health workers during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(16), 8723. <https://doi.org/10.3390/IJERPH18168723/S1>
- Smith, K. E., Norman, G. J., & Decety, J. (2017). The complexity of empathy during medical school training: evidence for positive changes. *Medical Education*, 51(11), 1146–1159. <https://doi.org/10.1111/MEDU.13398>
- Sulistyowati, S., & et al. (2022). Psychological distress and burnout among frontline healthcare workers during the COVID-19 pandemic in Indonesia. *BMC Public Health*, 22, 232. <https://doi.org/10.1186/s12889-022-12601-2>
- Tan, B. Y. Q., Chew, N. W. S., Lee, G. K. H., & others. (2022). Psychological impact of the COVID-19 pandemic on health care workers in Southeast Asia: A multinational study. *Journal of Medical Internet Research*, 24(3), e32455. <https://doi.org/10.2196/32455>
- The Workplace, N., Lockie, R., Orr, R., Joyce, J., Tran, J., Willis, K., Kay, M., Hutt, K., & Smallwood, N. (2022). The Workplace and Psychosocial Experiences of Australian Senior Doctors during the COVID-19 Pandemic: A Qualitative Study. *International Journal of Environmental Research and Public Health* 2022, Vol. 19, Page 3079, 19(5), 3079. <https://doi.org/10.3390/IJERPH19053079>
- Wardani, E. K., & et al. (2023). Burnout and coping strategies among resident physicians in Indonesia during COVID-19. *BMC Medical Education*, 23, 71. <https://doi.org/10.1186/s12909-023-04023-6>
- Wu, Y., & et al. (2020). The impact of empathy on healthcare outcomes: A systematic review. *Journal of General Internal Medicine*, 35, 558–566. <https://doi.org/10.1007/s11606-019-05314-y>
- Yi, X., & et al. (2021). Burnout and compassion fatigue among healthcare providers during COVID-19: A systematic review. *Frontiers in Psychology*, 12, 771980. <https://doi.org/10.3389/fpsyg.2021.771980>