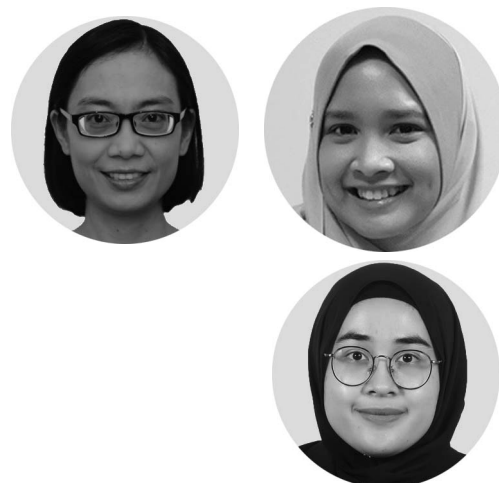


Editorial

A Global Call for Action to Prioritize Healthcare Worker Suicide Prevention During the COVID-19 Pandemic and Beyond

Lai Fong Chan, Hajar Mohd Salleh Sahimi, and
Anissa Raudhah binti Mokhzani

Department of Psychiatry, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia



The mental health sequelae of the COVID-19 pandemic have far-reaching consequences globally. As front-liners and first responders, healthcare workers are an at-risk population in terms of psychological distress and suicidal behavior. Healthcare worker suicide risk may be exacerbated by preexisting or emergent mental health conditions, occupational hazards, structural gaps in organizational systems, and socioeconomic factors. In this editorial, we highlight the urgency of prioritizing healthcare worker suicide prevention. Focus areas include risk and protective factors for suicidal behavior, the impact of COVID-19 through the lens of work-life balance, gender disparities, and moral injury. The evidence base for interventions, including the therapeutic potential of post-traumatic growth from lived and living experience, are outlined.

The tragic loss of healthcare workers to suicide in the wake of the pandemic has galvanized stakeholder advocacy for policy reform within the institution of medicine. The Dr. Lorna Breen Health Care Provider Protection Act was unanimously passed in the United States Senate on August 6, 2021. If this legislation becomes a law, relevant agencies will be mandated to improve mental and behavioral health among healthcare providers with governmental funding. Its aims include reducing and preventing suicide, burnout, and mental/behavioral health conditions in healthcare professionals. In addition, the study and development of policy

recommendations on improving mental and behavioral health among healthcare providers, removing barriers to accessing care and treatment, and identifying strategies to promote resiliency will be required (S.610 – 117th Congress [2021–2022]: Dr. Lorna Breen Health Care Provider Protection Act, 2021).

Rates of and Risk Factors for Healthcare Worker Suicidal Behavior

A systematic review and meta-analysis by Dutheil et al. (2019) showed a significant burden of suicidal behavior among physicians prior to the COVID-19 pandemic. According to these authors, the standardized mortality ratio for suicide deaths in physicians was 1.44, and the rates of suicide ideation and attempt were 17% and 1%, respectively. Factors associated with a higher suicide risk were female gender, being based in the United States, and specializing in anesthesia, psychiatry, general practice, and general surgery. An American study by Davis et al. (2021), which included nonphysicians, showed that nurses had a significant risk of suicide. There is a lack of data on suicidal behavior among other healthcare workers (Dutheil et al., 2019; Stanley et al., 2016).

Impact of the COVID-19 Pandemic

Niederkrötenhaller et al. (2020) have noted that in the context of the COVID-19 pandemic, healthcare workers are faced with formidable challenges such as exposure to SARS-CoV-2, loss and grief both personally and professionally, and the ethical challenges of triaging critically ill patients in the midst of limited resources. As a result, these authors have raised the concern of a potential increase in suicidal behavior among healthcare workers.

There are limited data with regard to the impact of the COVID-19 pandemic on suicide deaths in healthcare workers, according to a systematic review by Eyles et al. (2021). Existing literature has highlighted the rates of healthcare worker nonfatal suicidal behavior at different time points in the pandemic. A longitudinal Austrian study that was conducted between April and December 2020 by Niederkrötenhaller et al. (2022) showed that healthcare workers were at higher risk of experiencing suicidal ideation than nonhealthcare workers, even after controlling for occupational risk of exposure to COVID-19. However, a cross-sectional study conducted by Mamun et al., (2020) in Bangladesh (April 2020) did not show any increased risk of nonfatal suicidal behavior in healthcare workers compared to the general population. There seemed to be a differential impact of gender on rates of suicidal behavior whereby female healthcare workers had a significantly higher rate of suicidal behavior in Bangladesh (8.1%, OR = 2.62; Mamun et al., 2020). In Spain, a study by Mortier et al. (2021) found that female healthcare workers had higher rates of passive suicidal ideation but lower rates of active suicidal ideation compared to male healthcare workers. Being married and having children were protective against suicidal behavior in the Spanish sample. In China, poor marital relationships were significantly associated with higher rates of suicidal or self-harm ideation (Xu et al., 2021). The presence of a mood disorder was consistently among one of the most significant factors associated with increased suicidal behavior in high-income countries and low- and middle-income countries. In a Malaysian sample, subthreshold depressive symptoms were also found to be significantly associated with suicidal ideation (Sahimi et al., 2021). Seniority in terms of age (Mortier et al., 2021) and career (Sahimi et al., 2021) seemed to be protective against suicidal behavior. These findings highlight the importance of junior and mid-career healthcare workers as target populations for early suicide prevention strategies. A rapid review by De Kock et al. (2021) showed that mental health problems such as depression, anxiety, and sleep disturbances were intensified in healthcare workers in studies that were mostly conducted in China during the pandemic.

A noteworthy finding in the context of COVID-19 exposure is that family member rather than personal infection was significantly associated with suicidal behavior in China, whereas personal COVID-19 exposure acted as a risk factor in Spain. In the Spanish sample, financial stress and occupational factors were also significantly associated with suicidal behavior. For example, organizational issues such as perceived lack of support, communication, supervision, and personal protective equipment were significant factors. Such findings highlight the importance of both modifiable individual and institutional factors as potential targets for early intervention and suicide prevention. A major limitation of these studies is that, with the exception of Niederkrötenhaller's (2022) longitudinal study, they involve cross-sectional designs. Hence, the cause and effect of such factors on healthcare worker suicidal behavior cannot be clearly disentangled.

Gender and Work–Life Balance

Prior to the pandemic, a meta-analysis by Schernhammer and Colditz (2004) showed that globally, female physicians had more than twice the risk of suicide compared to women in the general population. Robinson (2003) highlighted the microinequities faced by female physicians and the work-related stressors that might contribute to their suicide risk. Female nurses in America had twice the risk of suicide compared to the general population prior to the pandemic (Davis et al., 2021). Davidson et al' (2021) qualitative study proposed a conceptual model of nurse suicide in the context of job loss spiral that included factors such as substance use disorder, chronic pain, and mental health challenges. Having access to potentially lethal medications has been identified as a unique occupational risk factor for suicide in healthcare workers (Milner et al., 2016). This may play a role in female healthcare workers' higher rate of suicide than women in the general population (Fox et al., 2017). Thus, the storage, prescribing, and dispensing of prescription medications are important workplace safety considerations as interventional targets for suicide prevention among healthcare workers.

Women in medicine have been shown to experience gender bias in both the West and the East. The study by Janjua et al. (2020) of surgeons in Pakistan showed a significant negative impact of gender bias that was disadvantageous to female surgeons in terms of access to leadership positions, career opportunities, and referrals from other doctors. Compared to their male counterparts, female physician faculty members in an American sample reported more challenges and less support at work for family-related work life integration, especially in terms of

pregnancy and childcare-related issues (Morgan et al., 2020). Gender disparities may have been amplified by the pandemic, as evidenced by significantly more women than men physicians with children considered leaving the academic medicine faculty (Matulevicius et al., 2021).

According to the World Health Organization, approximately 70% of the global healthcare workforce consist of women (Boniol et al., 2019). They are a major force at the frontline of the COVID-19 pandemic (Rabinowitz & Rabinowitz, 2021). However, women are underrepresented at the forefront of academia, with only 30% being leaders in medicine and science and authors of academic journal articles on COVID-19 (Gabster et al., 2020). Previous studies in the general population based on Organisation for Economic Co-Operation and Development global data demonstrated that the male:female suicide ratio is narrowed with increased gender equality (Chang et al., 2019). Reduction in suicide rates for both genders was significantly associated with an increase in men's family care work (Chen et al., 2021). These findings offer potential solutions, suggesting that addressing gender equanimity and meeting childcare needs are important strategies for the well-being and retention of talent and human resources in medicine and critical healthcare.

In a sample of surgical residents in the United States, it was shown that rates of all mistreatment measures were higher among women; 65.1% of the women reported gender discrimination and 19.9% reported sexual harassment. Mistreatment was found to be significantly associated with burnout and suicidal thoughts (Hu et al., 2019). There is some preliminary evidence of the utility of an educational approach to combat gender discrimination in academic medicine. A study by Girod et al. (2016) showed that exposure to an online educational intervention on strategies to counter gender bias may reduce some level of implicit gender bias in medical faculty members.

Healthcare Worker Moral Injury and Suicidal Behavior

The concept of moral injury encompasses psychological harm, the lack of professional agency, and powerlessness against forced decisions or actions incongruent with one's own core moral values (Litz et al., 2009; Čartolovni et al., 2021). In the context of healthcare workers, Koenig and Al Zaben (2021) demonstrated that although overlapping with posttraumatic stress disorder (PTSD), moral injury has its own distinctive features such as existential, spiritual, and/or religious components.

Williamson et al. (2018) conducted a systematic review that found a significant association between moral injury and suicidal behavior (ideation and attempt) in military personnel. In healthcare workers, the relationship between moral injury and other mental health problems was more apparent in alcohol misuse, depression, and PTSD. Recent literature has highlighted the impact of moral injury and collective trauma experienced by healthcare workers in the wake of the pandemic. An editorial by Sheather and Fidler (2021) has also homed in on the foundational role of institutions to support healthcare workers amidst overwhelming occupation-related dilemmas of ethically fraught decision-making and resource challenges such as inadequate personal protective equipment, ventilators, etc. Nevertheless, further research is needed to establish whether moral injury will emerge as an independent risk factor for suicide in healthcare worker after controlling for well-established suicide risk factors. For patients in general, Koenig and Al Zaben (2021) highlighted the diverse psychotherapeutic modalities that can potentially mitigate moral injury such as cognitive behavior therapy (CBT), cognitive processing therapy, acceptance and commitment therapy, eye movement desensitization and reprocessing, as well as spiritual or religious-based therapy and pastoral care.

Stigma and Strategic Interventions

Modifiable risk factors for suicide that are amenable to treatment are psychiatric disorders such as mood (unipolar and bipolar depression) and anxiety disorders. Web-based CBT has been shown to reduce the risk of suicidal ideation in medical interns (Guille et al., 2015). However, despite the existence of such evidence-based interventions, healthcare workers in suicidal crises have low rates of engagement with professional care. Only 19.2% of medical trainees or physicians (Mortali & Moutier, 2018) and 26% of surgeons (Shanafelt et al., 2011) with suicidal ideation in American samples reported accessing any professional help. This phenomenon bears serious negative consequences with regard to the risk of compromised patient care and safety due to untreated mental illness in healthcare workers, which may spiral into a vicious cycle of further healthcare worker functional impairment. In order for healthcare worker suicide prevention to be effective, broader institutional and systemic occupational issues beyond individual factors need to be strategically targeted. Stigma is still a major prevailing barrier for healthcare workers in crisis to access and receive much needed available interventions (Casanova Dias et al., 2021; Hankir et al., 2015). The fear of loss of confidentiality, career

progression impediment, and medical licensing issues compound barriers to seeking help. Further disincentives include resource gaps such as time constraints as well as lack of specialized treatments and healthcare worker-friendly services (Petrie et al., 2019).

Examples of care models that show some promise include specific in-house suicide prevention programs tailored to meet the needs of healthcare workers. The Interactive Screening Program (ISP) by the American Foundation for Suicide Prevention has been adopted in several medical schools in the United States. The ISP facilitates anonymous online screening and triaging of medical trainees' and physicians' suicidal risk. Some level of crisis intervention was included, as well as facilitation of referrals to appropriate mental health services (Mortali & Moutier, 2018). The Healer Education, Assessment and Referral program has been similarly implemented among nurses (Davidson et al., 2020). Preliminary findings suggest that such programs may improve engagement between healthcare workers and professional help, with nearly 40% of healthcare workers in suicidal crisis either receiving urgent in-person or remote counseling, or being willing to be referred to mental health services.

As a response to the mental health needs of healthcare workers at the frontline of the pandemic, innovative remote, in-person, and hybrid help-seeking pathways and platforms have emerged. The Essential Network is a multifaceted electronic health hub offering synchronous and asynchronous tele-mental health services and facilitation of referral for in-person clinical care (<https://www.blackdoginstitute.org.au/the-essential-network/>). Pro bono support lines, online therapy, discounted subscription mobile applications, and recommendations for organizational psychosocial support are also available for healthcare workers in the East and West (Kita Jaga Kita, 2021; Samaritans, n. d.; Shute, 2020; Tomlin et al., 2020).

Religious attendance has been shown to be associated with a 48–75% reduction in suicide risk among healthcare professionals in the United States (Chen et al., 2020). Further research is needed to evaluate the effectiveness of suicide prevention among healthcare workers by means of these approaches, including online religious service attendance.

Lived Experience Advocacy and Policy Implications

Healthcare workers with lived experience of mental health challenges and suicidal behavior are potential advocates for recovery. A randomized controlled trial showed that physician self-disclosure of lived experience improved

mental health attitudes among medical students (Martin et al., 2020). Ahmad Hankir has demonstrated the power of his recovery narrative as a medical trainee and psychiatrist with lived experience of bipolar and suicidal crisis. A pilot study of his documentary film, a motion picture-based, antistigma program, showed that this medium could reduce some domains of stigma (Linton et al., 2017). Whether or not such reductions in stigma translate into improved help-seeking requires further study.

There is evidence to show that patients respond positively to caregivers such as nurses and social workers who have had a similar lived experience of mental illness (Byrne et al., 2016). On the contrary, little has been found regarding psychiatrists disclosing their lived experiences to a patient in the same context. Many barriers exist that prevent them from doing so, including the possible negative repercussions on their professional capacity as the treating clinician, stigma, and the fear of judgment and feelings of shame that may arise (Karbouniaris & Van Os, 2021). In The Netherlands, pilot studies are being carried out involving psychiatrists jointly sharing their lived experiences of mental health challenges through peer consultation groups. Lived experiences may give rise to more empathetic clinicians. Although a fine line to tread, proper training of psychiatrists to harness their own experience should be considered. This can better inform their practice and ultimately serve as a powerful tool to positively impact a patient's overall management and recovery. Lived experience advocate and psychiatry resident Dr. Justin Bullock has published on and spoken out about the need for policy reform on medical board licensing requirements, which currently disincentivizes mental health help-seeking by physicians (Mock, 2021). Postvention efforts from family members and loved ones bereaved by physician suicide in partnership with healthcare organizations and policy-makers demonstrated the impact of the lived experience movement on clinician suicide prevention advocacy (Moutier et al., 2021). Future research is required to better understand the potential implications of legislation such as the Dr. Lorna Breen Health Care Provider Protection Act in moving the needle away from punitive regulations toward restorative and suicide-prevention-focused policies in diverse cultural contexts around the world.

Conclusion

Suicide prevention in healthcare workers is not only critical for individual well-being, but also imperative in ensuring the integrity of healthcare systems. Stigma remains a formidable barrier to help-seeking and equitable access to effective and culturally sensitive interventions. The COVID-19 pandemic has amplified gender,

workplace, and systemic disparities faced by healthcare professionals worldwide. Nevertheless, the collective trauma and moral injury faced by healthcare workers have also served as an impetus for creative innovations in terms of more accessible and confidential delivery of mental health services (i.e., through digital/hybrid platforms). Posttraumatic growth, spiritual/religious approaches, and lived experience disclosure by healthcare professionals seem to offer potential avenues for breaking down treatment barriers. Future suicide prevention research in non-physician healthcare workers is needed. Political will, funding, and continued advocacy for engagement and collaboration of relevant stakeholders are crucial elements for successful real-world implementation of healthcare worker suicide prevention policies.

References

- Boniol, M., McIsaac, M., Xu, L., Wuliji, T., Diallo, K., & Campbell, J. (2019). *Gender equity in the health workforce: Analysis of 104 countries*. <https://apps.who.int/iris/handle/10665/311314>
- Byrne, L., Happell, B., & Reid-Searl, K. (2016). Lived experience practitioners and the medical model: World's colliding? *Journal of Mental Health*, 25(3), 217–223. <https://doi.org/10.3109/09638237.2015.1101428>
- Čartolovni, A., Stolt, M., Scott, P. A., & Suhonen, R. (2021). Moral injury in healthcare professionals: A scoping review and discussion. *Nursing Ethics*, 28(5), 590–602. <https://doi.org/10.1177/2F0969733020966776>
- Casanova Dias, M., Sönmez Güngör, E., Dolman, C., De Picker, L., & Jones, I. (2021). 20 years on: The legacy of Daksha Emson for perinatal psychiatry. *Archives of Women's Mental Health*. <https://doi.org/10.1007/s00737-021-01146-z>
- Chang, Q., Yip, P. S. F., & Chen, Y.-Y. (2019). Gender inequality and suicide gender ratios in the world. *Journal of Affective Disorders*, 243, 297–304. <https://doi.org/10.1016/j.jad.2018.09.032>
- Chen, Y., Koh, H. K., Kawachi, I., Botticelli, M., & VanderWeele, T. J. (2020). Religious service attendance and deaths related to drugs, alcohol, and suicide among US health care professionals. *JAMA Psychiatry*, 77(7), 737–744. <https://doi.org/10.1001/jamapsychiatry.2020.0175>
- Chen, Y.-Y., Cai, Z., Chang, Q., Canetto, S. S., & Yip, P. S. F. (2021). Caregiving as suicide-prevention: An ecological 20-country study of the association between men's family carework, unemployment, and suicide. *Social Psychiatry and Psychiatric Epidemiology*, 56, 2185–2198. <https://doi.org/10.1007/s00127-021-02095-9>
- Davidson, J. E., Accardi, R., Sanchez, C., Zisook, S., & Hoffman, L. A. (2020). Sustainability and outcomes of a suicide prevention program for nurses. *Worldviews on Evidence-Based Nursing*, 17(1), 24–31. <https://doi.org/10.1111/wvn.12418>
- Davis, M. A., Cher, B. A. Y., Friese, C. R., & Bynum, J. P. W. (2021). Association of US nurse and physician occupation with risk of suicide. *JAMA Psychiatry*, 78(6), 651–658. <https://doi.org/10.1001/jamapsychiatry.2021.0154>
- De Kock, J. H., Latham, H. A., Leslie, S. J., Grindle, M., Munoz, S.-A., Ellis, L., Polson, R., & O'Malley, C. M. (2021). A rapid review of the impact of COVID-19 on the mental health of healthcare workers: Implications for supporting psychological well-being. *BMC Public Health*, 21(1), 104. <https://doi.org/10.1186/s12889-020-10070-3>
- Dutheil, F., Aubert, C., Pereira, B., Dambrun, M., Moustafa, F., Mermillod, M., Baker, J. S., Trousselard, M., Lesage, F.-X., & Navel, V. (2019). Suicide among physicians and health-care workers: A systematic review and meta-analysis. *PLoS One*, 14(12), e0226361. <https://doi.org/10.1371/journal.pone.0226361>
- Eyles, E., Moran, P., Okolie, C., Dekel, D., Macleod-Hall, C., Webb, R. T., Schmidt, L., Knipe, D., Sinyor, M., McGuinness, L. A., Arensman, E., Hawton, K., O'Connor, R. C., Kapur, N., O'Neill, S., Olorisade, B., Cheng, H., Higgins, J. P. T., John, A., & Gunnell, D. (2021). Systematic review of the impact of the COVID-19 pandemic on suicidal behaviour among health and social care workers across the world. *Journal of Affective Disorders Reports*, 6, 100271. <https://doi.org/10.1016/j.jad.2021.100271>
- Fox, K. R., Millner, A. J., Mukerji, C. E., & Nock, M. K. (2017). Examining the role of sex in self-injurious thoughts and behaviors. *Clinical Psychology Review*, 66, 3–11. <https://doi.org/10.1016/j.cpr.2017.09.009>
- Gabster, B. P., van Daalen, K., Dhatt, R., & Barry, M. (2020). Challenges for the female academic during the COVID-19 pandemic. *The Lancet*, 395(10242), 1968–1970. [https://doi.org/10.1016/s0140-6736\(20\)31412-4](https://doi.org/10.1016/s0140-6736(20)31412-4)
- Girod, S., Fassiotto, M., Grewal, D., Ku, M. C., Sriram, N., Nosek, B. A., & Valantine, H. (2016). Reducing implicit gender leadership bias in academic medicine with an educational intervention. *Academic Medicine*, 91(8), 1143–1150.
- Guille, C., Zhao, Z., Krystal, J., Nichols, B., Brady, K., & Sen, S. (2015). Web-based cognitive behavioral therapy intervention for the prevention of suicidal ideation in medical interns: A randomized clinical trial. *JAMA Psychiatry*, 72(12), 1192–1198. <https://doi.org/10.1001/jamapsychiatry.2015.1880>
- Hankir, A., Zaman, R., & Evans-Lacko, S. (2015). The wounded healer: An effective anti-stigma intervention targeted at the medical profession? *European Psychiatry*, 30(Suppl. 1), 28–31. [https://doi.org/10.1016/S0924-9338\(15\)31082-8](https://doi.org/10.1016/S0924-9338(15)31082-8)
- Hu, Y.-Y., Ellis, R. J., Hewitt, D. B., Yang, A. D., Cheung, E. O., Moskowitz, J. T., Potts, J. R., Buyske, J., Hoyt, D. B., Nasca, T. J., & Bilimoria, K. Y. (2019). Discrimination, abuse, harassment, and burnout in surgical residency training. *New England Journal of Medicine*, 381(18), 1741–1752. <https://doi.org/10.1056/nejmsa1903759>
- Janjua, M. B., Inam, H., Martins, R. S., Zahid, N., Sattar, A. K., Khan, S. M., Khan, S., Darbar, A., Faruqi, N., Akram, S., Enam, S. A., Haider, A. H., & Malik, M. A. (2020). Gender discrimination against female surgeons: A cross-sectional study in a lower-middle-income country. *Annals of Medicine and Surgery*, 57, 157–162. <https://doi.org/10.1016/j.jamsu.2020.07.033>
- Karbouniaris, S., & Van Os, J. (2021). Heal thyself, then heal others? The power of lived experiences. *Psychiatric Times*, 38(11). <https://www.psychiatrictimes.com/view/heal-thyself-then-heal-others-the-power-of-lived-experiences>
- Kita Jaga Kita. (2021). *Products*. <https://kitajagakita.com/frontliners.html>
- Koenig, H. G., & Al Zaben, F. (2021). Moral injury: An increasingly recognized and widespread syndrome. *Journal of Religion and Health*, 60(5), 2989–3011. <https://doi.org/10.1007/s10943-021-01328-0>
- Linton, S., Hankir, A., Anderson, S., Carrick, F. R., & Zaman, R. (2017). Harnessing the power of film to combat mental health stigma. A University College London Psychiatry Society event. *Psychiatra Danubina*, 29(Suppl. 3), 300–306.
- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, 29(8), 695–706. <https://doi.org/10.1016/j.cpr.2009.07.003>

- Mamun, M. A., Akter, T., Zohra, F., Sakib, N., Bhuiyan, A. K. M. I., Banik, P. C., & Muhit, M. (2020). Prevalence and risk factors of COVID-19 suicidal behavior in Bangladeshi population: Are healthcare professionals at greater risk? *Heliyon*, 6(10), e05259. <https://doi.org/10.1016/j.heliyon.2020.e05259>
- Martin, A., Chilton, J., Gothelf, D., & Amsalem, D. (2020). Physician self-disclosure of lived experience improves mental health attitudes among medical students: A randomized study. *Journal of Medical Education and Curricular Development*, 7, 2382120519889352. <https://doi.org/10.1177/2382120519889352>
- Matulevicius, S. A., Kho, K. A., Reisch, J., & Yin, H. (2021). Academic medicine faculty perceptions of work-life balance before and since the COVID-19 pandemic. *JAMA Network Open*, 4(6), e2113539. <https://doi.org/10.1001/jamanetworkopen.2021.13539>
- Milner, A. J., Maheen, H., Bismark, M. M., & Spittal, M. J. (2016). Suicide by health professionals: A retrospective mortality study in Australia, 2001-2012. *Medical Journal of Australia*, 205(6), 260–265. <https://doi.org/10.5694/mja15.01044>
- Mock, J. (2021). *Resident doctor who attempted suicide three times fights for change*. https://www.medscape.com/viewarticle/961700?uac=97643CZ&faf=1&so=true&impID=3813243&src=mkm_ret_21121_mscpmrk_psych_bpd#vp_2. <https://doi.org/10.5694/mja15.01044>
- Morgan, H. K., Singer, K., Fitzgerald, J. T., Brower, K. J., Spencley, B. M., Owens, L. E., & Burrows, H. L. (2020). Perceptions of parenting challenges and career progression among physician faculty at an academic hospital. *JAMA Network Open*, 3(12), e2029076. <https://doi.org/10.1001/jamanetworkopen.2020.29076>
- Mortali, M., & Moutier, C. (2018). Facilitating help-seeking behavior among medical trainees and physicians using the interactive screening program. *Journal of Medical Regulation*, 104(2), 27–36. <https://doi.org/10.30770/2572-1852-104.2.27>
- Mortier, P., Vilagut, G., Ferrer, M., Serra, C., Molina, J. D., López-Fresneña, N., Puig, T., Pelayo-Terán, J. M., Pijoan, J. I., Emparanza, J. I., Espuga, M., Plana, N., González-Pinto, A., Ortí-Lucas, R. M., Salazar, A. M., Rius, C., Aragonès, E., Cura-González, I., Aragón-Peña, A. . . & Alonso, J.; MINDCOVID Working Group. (2021). Thirty-day suicidal thoughts and behaviors among hospital workers during the first wave of the Spain COVID-19 outbreak. *Depression and Anxiety*, 38(5), 528–544. <https://doi.org/10.1002/da.23129>
- Moutier, C. Y., Myers, M. F., Feist, J. B., Feist, J. C., & Zisook, S. (2021). Preventing clinician suicide: A call to action during the COVID-19 pandemic and beyond. *Academic Medicine*, 96(5), 624–628. <https://doi.org/10.1097/acm.0000000000003972>
- Niederkrötenhaler, T., Gunnell, D., Arensman, E., Pirkis, J., Appleby, L., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R. C., Platt, S., & International COVID-19 Suicide Prevention Research Collaboration. (2020). Suicide research, prevention, and COVID-19. *Crisis*, 41(5), 321–330. <https://doi.org/10.1027/0227-5910/a000731>
- Niederkrötenhaler, T., Laido, Z., Kirchner, S., Braun, M., Metzler, H., Waldhör, T., Strauss, M. J., Garcia, D., & Till, B. (2022). Mental health over nine months during the SARS-CoV2 pandemic: Representative cross-sectional survey in twelve waves between April and December 2020 in Austria. *Journal of Affective Disorders*, 296, 49–58. <https://doi.org/10.1016/j.jad.2021.08.153>
- Petrie, K., Crawford, J., Baker, S. T. E., Dean, K., Robinson, J., Veness, B. G., Randall, J., McGorry, P., Christensen, H., & Harvey, S. B. (2019). Interventions to reduce symptoms of common mental disorders and suicidal ideation in physicians: A systematic review and meta-analysis. *The Lancet Psychiatry*, 6(3), 225–234. [https://doi.org/10.1016/s2215-0366\(18\)30509-1](https://doi.org/10.1016/s2215-0366(18)30509-1)
- Rabinowitz, L. G., & Rabinowitz, D. G. (2021). Women on the frontline: A changed workforce and the fight against COVID-19. *Academic Medicine*, 96(6), 808–812. <https://doi.org/10.1097/ACM.0000000000004011>
- Robinson, G. E. (2003). Stresses on women physicians: Consequences and coping techniques. *Depression and Anxiety*, 17(3), 180–189. <https://doi.org/10.1002/da.10069>
- S.610–117th Congress (2021–2022): Dr. Lorna Breen Health Care Provider Protection Act. (2021). <https://www.congress.gov/bills/117th-congress/senate-bill/610>
- Sahimi, H. M. S., Mohd Daud, T. I., Chan, L. F., Shah, S. A., Rahman, F. H. A., & Nik Jaafar, N. R. (2021). Depression and suicidal ideation in a sample of Malaysian healthcare workers: A preliminary study during the COVID-19 pandemic. *Frontiers in Psychiatry*, 12, 577. <https://doi.org/10.3389/fpsy.2021.658174>
- Samaritans. (n. d.). *Wellbeing support line for health and social care workers*. <https://www.samaritans.org/how-we-can-help/health-and-care/here-listen-support-line-nhs-people/>
- Schernhammer, E. S., & Colditz, G. A. (2004). Suicide rates among physicians: A quantitative and gender assessment (meta-analysis). *American Journal of Psychiatry*, 161(12), 2295–2302. <https://doi.org/10.1176/appi.ajp.161.12.2295>
- Shanafelt, T. D., Balch, C. M., Dyrbye, L., Bechamps, G., Russell, T., Satele, D., Rummans, T., Swartz, K., Novotny, P. J., Sloan, J., & Oreskovich, M. R. (2011). Special report: Suicidal ideation among American surgeons. *Archives of Surgery*, 146(1), 54–62. <https://doi.org/10.1001/archsurg.2010.292>
- Sheather, J., & Fidler, H. (2021). Covid-19 has amplified moral distress in medicine. *British Medical Journal*, 372, n28. <https://doi.org/10.1136/bmj.n28>
- Shute, D. A. (2020). *COVID-19: Where doctors can get help for emotional distress*. https://www.medscape.com/viewarticle/931454#vp_1
- Stanley, I. H., Hom, M. A., & Joiner, T. E. (2016). A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical Psychology Review*, 44, 25–44. <https://doi.org/10.1016/j.cpr.2015.12.002>
- Tomlin, J., Dalgleish-Warburton, B., & Lamph, G. (2020). Psychosocial support for healthcare workers during the COVID-19 pandemic. *Frontiers in Psychology*, 11, 1960. <https://doi.org/10.3389/fpsyg.2020.01960>
- Williamson, V., Stevelink, S. A. M., & Greenberg, N. (2018). Occupational moral injury and mental health: Systematic review and meta-analysis. *The British Journal of Psychiatry*, 212(6), 339–346. <https://doi.org/10.1192/bjp.2018.55>
- Xu, X., Wang, W., Chen, J., Ai, M., Shi, L., Wang, L., Hong, S., Zhang, Q., Hu, H., Li, X., Cao, J., Lv, Z., Du, L., Li, J., Yang, H., He, X., Chen, X., Chen, R., Luo, Q., . . . Kuang, L. (2021). Suicidal and self-harm ideation among Chinese hospital staff during the COVID-19 pandemic: Prevalence and correlates. *Psychiatry Research*, 296, 113654. <https://doi.org/10.1016/j.psychres.2020.113654>

Published online February 18, 2022

Conflict of Interest

The authors have no conflicts of interest to disclose.

Lai Fong Chan

Department of Psychiatry
Hospital Canselor Tuanku Muhriz
(HCTM, UKM Medical Centre)
Jalan Yaacob Latif
Bandar Tun Razak
Cheras, 56000
Kuala Lumpur
Malaysia
laifchan@ppukm.ukm.edu.my

Lai Fong Chan, MD, MMedPsych, MSc, is associate professor of psychiatry and consultant psychiatrist at Universiti Kebangsaan Malaysia. Dr. Chan is the 3rd Vice-President of IASP and is involved in suicide prevention consultation work with the World Health Organization. Dr. Chan has lived experience of anxiety and depression.

Hajar Mohd Salleh Sahimi, MBBS BCh BAO, MRCPsych, is a lecturer and psychiatrist at Universiti Kebangsaan Malaysia. Her leadership roles include coordinating undergraduate psychiatry

medical education and managing the COVID-19 control plan among psychiatry department healthcare workers.

Anissa Raudhah binti Mokhzani, MB, BCh, BAO (NUI, RCSI), graduated from the Royal College of Surgeons in Ireland in 2021. She was previously a marketing executive for Toyspital Kuala Lumpur and Vice President of Malaysian Medics International-RCSI (MMI-RCSI) in 2017. Dr Anissa is currently a research assistant funded by the Centre for Pesticide Suicide Prevention, University of Edinburgh, before pursuing her foundation training in the UK.