



# International Journal of Research Publication and Reviews

Journal homepage: [www.ijrpr.com](http://www.ijrpr.com) ISSN 2582-7421

## Psychological Distress of Healthcare Workers in ASEAN Countries: A Review

***Sheena Gail M. Alingalan, Phoebe Kyla A. Adlaon, Kayla Marri N. Dalagan, Stefany F. Dizon, Kristine Charisse S. Gaila, Erwin M. Faller.\****

*Pharmacy Department, School of Allied Health Sciences, San Pedro College, Davao City, Philippines*

DOI: <https://doi.org/10.55248/gengpi.2022.31255>

### ABSTRACT

Psychological distress has long been present among healthcare workers in a global scope for years. The vulnerability of HCWs towards psychological discomfort is heightened due to the nature of their work such as lengthy shifts, fast paced environment, and lack of necessary social support. It is also hard to assess. There is a pressing need to know the types and factors of healthcare workers' psychological distress as this does not only affect them, but also their family, patients and the society. Highlighting the psychological well-being of HCWs impact their productivity, competence and lower any risk factors related. The goal of this review is to provide a summary of the prevalence of psychological distress among healthcare workers in countries belonging to the Association of Southeast Asian Nations (ASEAN). The articles and journals used for this review were gathered and collected from electronic databases such as PubMed Central, Google Scholar, and ResearchGate. The results generated in this review had the same perspectives with the other studies. Among all the types of psychological distress reported by various sources within ASEAN countries, stress was the most common. This is followed by anxiety and depression, respectively. Other types include fear, burnout, sadness, PTSD, fatigue, emotional weariness, and mental exhaustion. Healthcare workers are most exposed to various cases of conditions in their workplace and/or problems of society in relation to their work. This makes them susceptible to psychological distress which affects their quality of life and performance. There is a need to address this concern, and provide effective physical and mental support by the healthcare system and policymakers for the betterment of healthcare access and delivery to the general population. Future researchers should focus on investigating existing and psychological interventions and probable support towards the vulnerable HCWs in ASEAN and other countries.

**Keywords:** Psychological Distress, ASEAN countries, Healthcare workers, interventions

### INTRODUCTION

While everybody experiences the infrequent lack of enthusiasm or try to concentrate and sometimes even starts to feel deeply disturbed from time to time, psychological distress frequently has a more tremendous effect on a person. Psychological distress, also known as mental distress, is described as "any variety of signs and generally refers to a person's internal state; feelings of being deeply disturbed, confused, or out of the ordinary." [1]. In actuality, psychological suffering can coexist with mental illness [51]. It is indeed crucial to remember, though, that a serious mental health problem is rarely present when someone is experiencing psychological distress [48].

Professional expectations, long periods of shifts, a quick pace, insufficient physical or psychological protection, chronic care, moral conflict, assumed employment prospects, engaging in conflict at work, and a poor amount of social support are still a handful of the elements that contribute to depression. In addition, excessive pressure from many healthcare workers also contributes with the psychological distress of the healthcare workers. The resulting psychological suffering may lead to fatigue, depression, anxiety symptoms, sleeping issues and other illnesses. Job pressure can negatively influence on a healthcare professional's competency, performance, and overall life satisfaction. Identifying and mitigating these occupational risk factors is essential to identify and mitigate these occupational risk factors in order to protect the psychological wellness of healthcare personnel. [2]. The common psychological distress that the ASEAN healthcare workers are experiencing are stress, depression and anxiety. Just as people vary greatly in terms of how delicate they may be to stressful situations, how they comprehend them, and also how they respond to them. In comparison to other risk factors, psychological risk

\* Corresponding author.

E-mail address: [adlaonphoebe@gmail.com](mailto:adlaonphoebe@gmail.com)

factors are unique in that, depending on the circumstance, they may even have beneficial consequences. They are also more challenging to evaluate [49]. Stressor may harm the mental and physical comfort of healthcare workers by decreasing their productivity and degrading their general quality of life. One of the top six most demanding jobs is in the healthcare industry. Not most healthcare workers exhibit signs of occupational stress or endure relatively similar level of stress[50]. The objective of this review is to compare and contrast on how the different kinds of psychological distress affects the different healthcare workers in ASEAN countries.

## METHODS

A search of published reviews, systematic reviews, journals and articles were conducted relating to the reported types of psychological distress among ASEAN countries. Electronic databases were utilized which included PubMed, PubMed Central, Google Scholar, Biomed Central, Springer Link, Research gate, Science Direct, Cambridge Core, and SAGE Journals. There was no limitation on language or year for the search. The collected articles and journals were reviewed and screened by the researchers. The keywords utilized are as follows: psychological distress, anxiety, stress, fatigue, fear, burnout, PTSD, healthcare workers, ASEAN.

## RESULTS

**Table 1: Locale and type of psychological distress**

Author and year	Locale	Type of Psychological Distress	Result
1. Siau C, Wee L, Ibrahim N, Visvalingam U, Yeap L, Yeoh SH, et. al. 2017	Malaysia	Despair, Stress, Emotional Weariness	The findings showed that physicians were much more likely than other healthcare professionals to experience signs of psychological distress, with 70% of doctors reporting such symptoms. Fully adjusted statistical models used in this study's findings showed how much more difficult doctors' mental health was than that of other healthcare professionals. Earlier studies on doctors' poor psychological health suggested that they were far more prone to feel despair, stress, emotional weariness, as well as low levels of personal success. This may be as a result of greater responsibility and duty among them compared to professionals in other fields
2. Taib S, Siti Nor Mat NI, Rahmat F, Rusdi Abd Rahman NAS, Shah SA, 2021	Malaysia	Anxiety, depression	Anxiety (14%) and depression (7.0%) were the two conditions that affected healthcare professionals in Pejabat Kesihatan Daerah Melaka Tengah more frequently than stress (4.3%) and anxiety (14%) combined. The age group of 50 and above had the highest frequency of both depression and anxiety. 14.0%, and 25.6% are anxious). Anxiety prevalence was discovered to be related to age, working environment, and employment, whereas depression prevalence was found to have a substantial connection with occupational characteristics. The study involves medical physicians, nurses, and other healthcare professionals.
3. Marzo RR, Iii EQV, Chandra U, Htay MNN, Shrestha R, Shrestha S et. al., 2021	Philippines	Depression, Anxiety	516 HCWs in all took part in the research. Only 50% of them exhibit depressive symptoms, whereas the majority (70.74%) have anxious symptoms. Additionally, there was a strong correlation between the participants' anxiety symptoms and their gender, age, relationship status, housing situation, profession, place of employment, and accessibility to psychological services. In contrary, there was a strong correlation between depressive symptoms and gender, relationship status, profession, and place of employment.
4. Idaiani, S. and Waris, L. 2022	Indonesia	Depression, Stress	In remote areas of Indonesia, healthcare workers reported to have depression and psychological stress. Among them, 7.1% experienced depression and 10.0% experienced psychological stress. The prevalence of these types were dependent on their

			kind of work. For depression and stress, both were associated with gender, musculoskeletal disorders and workplace violence. Work motivation also contributes to it.
5. Nguyen Ngoc A, Le Thi Thanh X, Le Thi H, Vu Tuan A, Nguyen Van T, 2019	Vietnam	Stress	The results showed a rate of 6.4% for the occupational stress among doctors and nurses of the hospital.
6. Teo I, Nadarajan GD, Ng S, Bhaskar A, Sung SC, Cheung YB, et al., 2022	Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam	Depression, stress, sadness	The average levels of mild anxiety, fairly severe depression, and job stress were reported by healthcare workers across all countries at 10%, 4%, and 20%, respectively. The largest percentages were recorded by HCWs in Singapore (21%, 9%, and 39%), whereas Vietnam had just 4%, 2%, and 6%. reported the lowest percentages of sadness, stress, and work stress.
7. Teo I, Sung S, Cheung Y, Wong W, Abu Bakar Aloweni F, Ang H, et al., 2021	Singapore	Stress, burnout, anxiety	Nurses made up 60% of the sample, whereas 81% of the Health Care Workers were female. Using random-intercept logistic regression models, a rise in perceived stress, anxiety, and job burnout was seen at benchmark by 33%, 13%, and 24% of the overall sample, respectively. Every month, there was also an increase in the proportion of Health care workers who report stress and work fatigue of about 1% and 2%, correspondingly. There was no discernible rise in anxiety. Excessive working hours was linked to an increased risk of stress, anxiety, and job burnout, but collaboration and feeling valued at work were linked to a reduced risk.
8. Hoang N-A, Van Hoang N, Quach H-L, Nguyen KC, Duong LH, Pham TQ, et al, 2022	Vietnam	Depression	Before COVID-19, In Vietnam, CHWs had median depression ratings of 3, which rose to 6 during the Tet holiday pandemic. The percentage of CHWs with mild, moderately severe, and severe depression levels climbed 4.3, 4.5, and fivefold, respectively, whereas the percentage with average levels decreased from 77.1% to 50.9%. Operating in adverse conditions, getting little sleep, participating in contact tracing, and setting up quarantines for clinically suspected patients were all linked to an elevated risk of developing severe depression.
9. Sunjaya DK, Herawati DMD (2021)	Indonesia	Depression, Sadness, Burnout	The greater risk category included a larger proportion of HCP who experience anxiety (28.1%), burnout (26.8%), and depressive symptoms (22.8%). The HCP in the greater risk group is more likely to have mild and severe psychological symptoms, anxiety, and burnout at rates of 5.28. There is a 2.13 percent chance of patient-induced burnout and times greater and the greatest among the other burnout characteristics (CI: 1.51-3.007; p 0.05). Between groups, people in both reported feeling lonely, having trouble sleeping, having trouble focusing, and not being able to start new hobbies. Among the symptoms, sadness has the greatest logistic regression value.
10. Kaur et al, 2020	Malaysia	Depression, Anxiety, Stress	The prevalence rate for anxiety was recorded to be 26.3%, 16.2% for depression, and 11.4% for stress among 395 respondents which were district healthcare workers. Occupation is the major factor for these psychological distresses. It is also influenced by their age, workplace location.

11. Setiawati Y, Wahyuhadi J, Joestandari F, Maramis MM, Atika A	Indonesia	Anxiety	The online survey comprised 227 respondents, of whom 33% reported high anxiety level and 26.9% had high anxiety symptoms. The respondents' average resilience was $69 \pm 15.823$ . A substantial link between S- and T-type anxiety and resilience was found using the Spearman correlation test ( $p = 0.05$ ).
12. Guo W-P, Min Q, Gu W-W, Yu L, Xiao X, Yi W-B, et al, 2021	China	Depression, Anxiety, PTSD	There were 1,091 legitimate replies in all, 67% of which were from women and 33% of which were men. The generality was 53% for anxiety, 79% for sleeplessness, 56% for depression, and 11% for PTSD. Compared to health personnel in other Hubei cities, Wuhan workers were more likely to experience anxiety (56% vs. 52%, $P = 0.03$ ) and PTSD (15% vs. 9%, $P = 0.03$ ).
13. Guo W-P, Min Q, Gu W-W, Yu L, Xiao X, Yi W-B, et al \\	China	Depression, Anxiety	There were a total of 32 samples from 25 trials totaling 20 352 people. Depression was evaluated in 15 trials, anxiety in all 25, and the incidence rate were 22% and 16%, respectively. Insomnia was only investigated in two studies, and its prevalence was calculated at 19%. Although it was substantially higher in the general population (27%), the frequency of anxiety and depression was comparable among frontline HCWs (18%), general HCWs (17%), and students (20%).
14. (Hsien Chan et al., 2021)	Malaysia	Poor Mental Health Literacy	There were 11,356 working adults in Malaysia polled for the Malaysian Healthiest Workplace study. One study found that mental illness (odds ratio [OR] of 6.7) and cardiovascular disease were both linked to emotional distress (OR 2.17). Awareness and use of mental health support services and resources were associated with less psychological distress.
15. (Tan, B.Y.Q et.al., 2020)	Singapore	depression, stress, anxiety, and posttraumatic stress disorder (PTSD)	Screening positive for anxiety was found in 68 (14.5%) of participants, depression in 42 (8.9%), stress in 31 (6.6%), and PTSD in 36 (7.7%). The prevalence of anxiety was higher among nonmedical health care workers than among medical personnel (20.7% vs. 10.8%; adjusted prevalence ratio, 1.85 [95% CI, 1.15 to 2.99]; $P = 0.011$ ). This difference persisted after controlling for age, sex, ethnicity, marital status, survey completion date, and the presence of comorbidities. Similarly, the mean anxiety and stress subscale scores on the DASS-21 as well as the total and subscale scores on the IES-R were higher among non-medical health care workers.
16. Samy AL, Awang Bono S, Tan, S.L, Low W.Y., 2021	Asia Pacific Region	Depression, Anxiety, Stress	Many people, especially young adults, have suffered from depression, anxiety, and stress as a result of the global COVID-19 pandemic. Concerns about contracting and contracting illness from COVID-19 have been percolating in the minds of people everywhere, fueled in part by the flood of news and information about the virus that has been appearing in both traditional and social media outlets. Recent studies have shown a correlation between infection anxiety, stress, and even depression. The published research, however, is replete with examples of the correlation between environmental stress and the pathophysiology of anxiety and depression. Negative health behaviors like smoking, substance abuse, physical inactivity, and suicidal ideation have also been linked to depression, anxiety, and stress.

17. Zhang Q, Dong G, Meng W, Chen Z, Cao Y, Zhang M., 2021	China	Stress	In the first COVID-19 outbreak, this study found that 33.6% of healthcare workers at the tertiary hospital experienced some form of psychological distress. Additionally, there was a correlation between subjective stress and emotional anguish. The effects of stress were greatly reduced by the presence of resilience and social support.
18. Rahman HA, Mumin KA, & Naing L., 2017	Brunei	Psychological stressors, work-related fatigue	201 ER and CC nurses (82.0%) participated. CC nurses have more quantitative requirements than ER nurses. ER nurses were 4.0 times more likely to receive threats of violence and 2.8 times more likely to report chronic tiredness. Nurses faced high quantitative demands, work pressure, stress, and burnout. Chronic weariness, threats of violence and bullying, neck, shoulder, upper, lower back, and foot pain were common.
19. Chan L. G., <i>et al.</i> , 2020	Singapore	Trauma-related	Despite SARS experience, 28% of healthcare professionals in the study had substantial trauma-related psychiatric symptoms. However, individuals with previous experience felt safer and more prepared, had an easier workload, and had greater trust in hospital executives. It is suggested that HCWs, especially those from racial minority groups who are foreign-born and separated from their families, need more trauma-informed assistance.
20. Chinvararak C., <i>et al.</i> , 2022	Thailand	Burnout syndrome, anxiety, depression, Post-traumatic disorders (PTSD)	986 healthcare professionals, 89.1% female, aged 23–45, replied to the poll. 16.3%, 16%, and 53.3% of respondents experienced emotional weariness, depersonalization, and lower personal success. 33.1%, 13.8%, and 2.3% had anxiety, depression, and PTSD.
21. Pekurinen, V. <i>et al.</i> , 2017	Hongkong, China	Physical Violence and Verbal Aggression. Anxiety, guilt, fear and sleep disturbances	The study's researchers concluded that nurses in psychiatric facilities were more likely than their counterparts in other specialties to experience patient aggression. This result agrees with what has been found before. However, we also discovered that emergency rooms had a higher prevalence of physical aggression and psychological abuse than psychiatric hospitals did. Previous studies have shown that emergency rooms are high-risk areas for physical aggression, but this finding is inconsistent with those results. However, some research has shown that the incidence of non-physical aggression is higher in emergency rooms than in psychiatric hospitals. Working in psychiatry, however, increases the likelihood of being diagnosed with depression, using antidepressant medication, and taking sick leave due to depression and psychiatric conditions; thus, the finding of a high incidence of patient aggression in psychiatric settings is worrisome.
22. Reme SE, Dennerlein JT, Hashimoto D, Sorensen G., 2012		Musculoskeletal Pain	Health care workers experiencing musculoskeletal pain reported significantly higher levels of psychological distress compared to their pain-free colleagues. Pain and demographics were taken into account, and still, psychological distress had a significant association with pain-related work interference (OR = 1.05; 95% CI = 1.01-1.01). Those experiencing both upper and lower body pain had the strongest association (OR = 1.12; 95% CI = 1.06-1.18). Multiple points of pain were independently associated with emotional distress.

23.	Palmer J, Ku M, Wang H, Crosse K, Bennett A, Lee E. et.al., 2022	China	PTSD	Based on the results of this scoping review, it is clear that there is a dearth of literature on organizational interventions to alleviate mental health professionals' suffering during times of public health emergencies and natural disasters. For example, numerous studies have shown that frontline healthcare workers dealing with patients during a pandemic face an elevated risk of psychological stress due to factors like job stress, personal fear, and a lack of support. Individual interventions have also been shown to be helpful in improving mental health, according to the available research.
24.	Maravilla, J. et. al	Philippines	Stress and Mental tiredness	Stress and mental tiredness were noted by public health professionals. Public health professionals and university personnel also faced job stress, pressure to acquire new technologies, and webinar weariness in addition to their worry of contracting an illness while providing services. As young adults and healthcare professionals have become increasingly impacted but support services are still lacking, mental health issues have emerged. Professionals in public health have acknowledged taking steps including combining social media and telemedicine to carry on service delivery in the modern day. Adaptation was challenging, nevertheless, due to issues with staff well-being and digital equity. Collaboration with colleges and universities was recognized by participants as being crucial to setting local health systems for recovery.
25.	Hao, Q et al. 2021	China	Insomnia, PTSD, OCD, Sadness	10,886 healthcare professionals' data from 20 research were combined and examined. There were 24.1, 28.6, 44.1, 25.6, 35.0, 16.2, and 10.7% prevalence rates for depression, anxiety, insomnia, post-traumatic stress disorder, phobia, and obsessive-compulsive symptoms, respectively. Sadness and anxiousness were more common among women and nurses. Compared to individuals on the second line, frontline healthcare workers exhibited greater levels of anxiety and lower levels of depression. Additionally, the frontline has a greater prevalence of modest depression and anxiety. Four researchers also discussed the risk factors for mental health issues.
26.	Yang, S, Meredith, P, Khan, A	Singapore	Stress, Burnout	The outcomes of this research show that healthcare professionals in Singapore who work in a psychological health context are more stressed than healthy persons in the US, Sweden, and the Netherlands. Nevertheless, health employees with lower yearly earnings, younger ages, and fewer years of expertise reports of problems with higher degrees of stress and burnout.. There is proof that high employee stress levels are linked to low patient outcomes and significant high turnover.
27.	Kumar Ranjan L, Gupta PR, Gujar NM, Baraik S., 2021	India	Depression, Stress and Anxiety	This study found that 5.9% of hospital workers experienced stress, 6.3% experienced anxiety, and 2.4% experienced depression during the COVID-19 pandemic's peak. Our results showed that nurses, lab techs, and primary care doctors were more likely to suffer from stress, anxiety, and depression than psychiatrists and therapists. The results of similar studies corroborate this.
28.	Bangalan, 2020	Philippines	Stress, Anxiety, Depression	From a total of 324 respondents in the study, 10% presented indicators of stress, 26% with anxiety and 18% with depression.

29.	Than et al, 2020	Vietnam	Depression, Anxiety, Stress	Of the 173 HCW participants, 20.2% showed symptoms of depression, 33.5% of anxiety, and 12.7% of stress.
30.	Apisarnthanarak et al, 2020	Thailand	Fear, Anxiety	Of the 160 participants, 90% were fearful and 48% had a mild anxiety disorder.
31.	Khaing et al, 2022	Singapore	Distress, Anxiety	Psychological distress had a 24.7% prevalent rate, while the COVID-19-related dysfunctional anxiety had 13.4%. Factors that contributed to the psychological distress were social and workplace support. Social connectivity was associated with dysfunctional anxiety.
32.	Zakaria et al, 2020	Malaysia	Burnout, Fatigue	With the 216 respondents, 51.3% had burnout. Among these, 52.2% experienced fatigue even with enough sleep, 48.2% had frequent physical illness, and 45.9% felt unacknowledged or taken for granted on the job.
33.	Yuan, Z., Yu, D., Zhao, H., Wang, Y., Jiang, W., Chen, D., Liu, X., & Li, X., 2021.	China	Burnout	<p>Burnout among healthcare workers results in lowered care quality and even treatment errors. Burnout also has significant effects on workers and overlaps with depressive and psychiatric disorders including anxiety and depression.</p> <p>The emotional motivations behind overcommitting are a fear of losing control over their work and a desire for acknowledgment. Workers who are overcommitted have inflated expectations for their work and exert unwarranted effort. They are therefore experiencing ongoing strain reactions. In fact, negative outcomes may be amplified when overcommitted workers are placed in high effort/low reward environments. It is important to look into how overcommitting affects the relationship between stressful job and personal results, especially in the case of hospital staff.</p>
34.	Deng, J., Sun, Y., Lei, R., & Yang, T. 2019.	China	Job stress	Participants' stress levels related to challenges and hindrances were highly connected ( $r = 0.59$ ; $p .001$ ). PSM ( $= 0.14$ ; $p .001$ ) and healthcare quality ( $= 0.16$ ; $p .001$ ) were both significantly and positively correlated with challenge stress, whereas PSM ( $= -0.29$ ; $p .001$ ) and healthcare quality ( $= -0.10$ ; $p .001$ ) were both substantially and adversely correlated with hindrance stress. PSM was positively correlated with healthcare quality and indirectly moderated the relationship between barrier stress and healthcare quality. ( $= 0.59$ ; $p .001$ ).
35.	Tan, B., Kanneganti, A., Lim, L., Tan, M., Chua, Y. X., Tan, L., Sia, C. H., Denning, M., Goh, E. T., Purkayastha, S., Kinross, J., Sim, K., Chan, Y. H., & Ooi, S. 2020	Singapore	Burnout	Due to a combination of work-related anxieties and personal fears, pandemics exert a heavy psychological strain on medical workers. According to a meta analysis, the odds ratio for acute or posttraumatic stress (PTS) and psychological distress when contrasting high-risk exposure groups with low-risk exposure groups was 1.71 and 9.94, respectively <sup>9</sup> . Similar outcomes were seen during the SARS pandemic in 2003. The Maslach Burnout Inventory has been the main tool used in the few studies on burnout among healthcare workers in Singapore, which report burnout rates ranging from 40% to 60% <sup>37e40</sup> . The only pre-pandemic study in Singapore using the OLBI involved 37 mental health healthcare workers and reported mean exhaustion and disengagement scores of 2.38 and 2.25, respectively, which were lower than the 2.50 and 2.38 in this study.

36. Fadzil, N. A., Heong, W. O., Kueh, Y. C., & Phang, C. K. 2021	Malaysia	Stress, anxiety	In a cross-sectional study of ward nurses at a public hospital in Malaysia, this level of stress is similar to the 25% of reports by nurses describing high levels of perceived strain. By "turning down" negative evaluation of unfavorable situations, mindful attention can encourage better cognitive change and adaptation for stress feelings. According to research, practicing mindfulness can help nurses become more aware of the value of self-kindness and teach them to recognize challenging feelings and sensations without reacting to them in a high-stress work setting. They are more capable of handling difficult and painful life events and experiences as long as they maintain a non-judgmental condition of full awareness of thoughts, feelings, or sensations.
37. Al-Dubai, S. A., Ganasegeran, K., Perianayagam, W., & Rampal, K. G. 2013	Malaysia	Emotional burnout and perceived sources of job stress	<p>Residency training demanding emotional, psychological, and physical requirements were created to produce caring, vivacious, and knowledgeable medical professionals who will enhance patient-centered care. These attempts, despite having such noble intentions and goals, have had the opposite effects. Most medical professionals, both in wealthy and developing nations, leave the field because of excessive stress. Medical residents were overworked, which has a severe impact on their health. It deflates motivation, resulting in diminished focus, attention, and compromised cognitive function. These consequences put residents at risk for medical mistakes and injuries, substance misuse, workplace conflict, and suicide attempts.</p> <p>Rare data exist on how often medical residents in Asian countries experience emotional fatigue. This study found that 36.6% of trainees reported severe emotional burnout during their residency training. According to research, prevalence rates in western nations ranged from 13.0% to 56.6%.</p>
38. Pham, H. N., Protsiv, M., Larsson, M., Ho, H. T., de Vries, D. H., & Thorson, A. 2012. (PubMed.gov)	Vietnam	Stigma	<p>HIV services are seen as having both good and poor aspects by Vietnamese healthcare practitioners. Training opportunities, social recognition, and meaningful work are just a few of the variables that might affect how satisfied you are with your job. Unhappy employees were affected by a number of reasons, including poor compensation, a lack of supportive feedback from management, a heavy workload, work-related stress brought on by fear about getting sick, and HIV-related stigma due to the stigma associated with PLHIV. These results inspired the creation of a modified Spector's model of work satisfaction for HIV service health workers.</p> <p>This study demonstrated the connection between stigmatization of PLHIV and stigmatization of workers brought on by association with PLHIV from families, coworkers, and society. Stigmatization results in higher levels of work-related stress, low self-esteem, unfavorable opinions of one's profession, and lower income.</p>



39.	Mai, H. B., & Kim, J. 2022.	Vietnam	Burnout, stress, workload	Nurses and midwives make up the majority of the workers in the Vietnamese healthcare industry. As a result, 87.4% of health professionals in Vietnam think that being a nurse always entails a strong sense of responsibility, significant work pressure, a stressful work environment compared to other industries, and a dangerous work environment with various possible risk factors for chronic exposure.
40.	Pinyopornpanish, M., Pinyopornpanish, K., Soontornpun, A., Tanprawate, S., Nadsasarn, A., Wongpakaran, N., & Wongpakaran, T. 2021.	Thailand	Perceived stress and depressive symptoms	As a result, 87.4% of health professionals in Vietnam believe that working as a nurse always entails a high sense of responsibility, intense work pressure, and a stressful work environment compared to other professions. Caregiver load is indirectly linked to patients' neuropsychiatric symptoms because of the caregiver's depressive symptoms and stress perception. Whatever the cause, it involves the caregiver going through stress and depression symptoms. It's possible that depression and perceived stress are more strongly related to caregiver burden than patient symptoms because they fully moderate the relationship between neuropsychiatric symptom intensity and sadness and perceived stress. The difference in caregiver load was explained by up to 28% using the parallel mediation model with depression and perceived stress included. These results were in line with other studies that have been done that indicate the caregiver element is significant, particularly when it comes to depression.
41.	Lai J., Ma D., <i>et. al</i> , 2019	China	Depression, anxiety, insomnia, and distress	Women, nurses, Wuhan residents, and front-line health care personnel diagnosing, treating, or nursing COVID-19 patients reported high rates of sadness, anxiety, sleeplessness, and discomfort.
42.	Teo, Y. H., Xu, J., Ho, C., Leong, J. M., Tan, B., Tan, E., Goh, W. A., Neo, E., Chua, J., Ng, S., Cheong, J., Hwang, J. Y., Lim, S. M., Soo, T., Sng, J., & Yi, S. 2021 (PubMed.org)	Singapore	Burnout	At the individual, interpersonal, and institutional levels, burnout has a negative effect on outcomes. Burnout is linked, on an individual basis, to decreased job satisfaction, increased absenteeism, medical mistakes, sickness, injury, and accidents among healthcare providers. These effects on the particular patient may result in poorer care and higher patient mortality. Interpersonally, burnout is linked to emotional dissonance brought on by constant fatigue and pessimism. Conflict between individual feelings and organizational demands is referred to as emotional dissonance. Burnout has a significant financial impact on the healthcare system since it is associated with higher turnover of healthcare professionals and poorer workforce productivity at the institutional level.
43.	Labrague LJ, 2021	Philippines	Fatigue	Less fatigue was noted in their units when there was enough staff. Resilience decreased the negative impacts of exhaustion on the mental health, sleep quality, and work satisfaction of clinical nurses.
44.	Carascal MB., <i>et. al.</i> , (2022)	Philippines	Uncertainty, distress, fatigue	A mixed-method research examines 19 Tertiary Hospital healthcare personnel. The qualitative phase included focus group talks and the Impact of Event Scale-revised and Depression, Anxiety, and Stress Scale-21. The research participants had Covid-19 distress (mean score= 25.5; partial effect), moderate anxiety, and distress.

45. 2021	Thatrimontrichai A., <i>et. al.</i> ,	Asia	Mental exhaustion, burnout, fear, depression, anxiety, insomnia, and psychological stress	Due to the prevalence of Chinese-origin data in the literature, the restricted sample size, and Asian culture, HCP working on other continents cannot generalize results concerning mental health status concerns and treatments for mental health disorders. Why the Chinese HCP had higher anxiety and lower fear rates is unknown. This thorough investigation provides useful information on mental health risk factors and treatments during Asian pandemics.
-------------	---------------------------------------	------	---	--

## CONCLUSION

In conclusion, the results provide insight on predictors of mental health issues in the healthcare workplace. By helping to identify employees most at risk of psychological distress, this study highlights the need for a greater focus on mental health among our working population in terms of preventative measures. Information gathered from employees' use of services can also be used to better understand the interventions that have the greatest potential to improve their mental health at work.

Hospital staff are susceptible to depression, anxiety, and stress while working, which is recognized here. Professionals in mental health, policymakers, and the government can all take measures to safeguard the well-being of healthcare workers, which will in turn improve the quality of care patients receive. Healthcare professionals and systems can better work together and improve if they have access to basic necessities like stress management programs, counseling facilities, an adequate workforce supply, etc. Medical professionals are highly susceptible to the same risks as the general population, including social isolation, and diminished support networks. Health care workers may experience mental health problems as a result of increased workload, physical exhaustion, inadequate personal equipment, and unsettling changes in their work experiences.

## Conflict of Interest

No conflict of interest among authors

## REFERENCES

1. Viertiö S, Kiviruusu O, Piirtola M, Kaprio J, Korhonen T, Marttunen M, et al. Factors contributing to psychological distress in the working population, with a special reference to gender difference. *BMC Public Health*. 2021 Mar 29;21(1).
2. Søvold LE, Naslund JA, Kousoulis AA, Saxena S, Qoronfleh MW, Grobler C, et al. Prioritizing the Mental Health and Well-Being of Healthcare Workers: An Urgent Global Public Health Priority. *Frontiers in Public Health* [Internet]. 2021 May 7;9(1). Available from: <https://www.frontiersin.org/articles/10.3389/fpubh.2021.679397/full>
3. Taib S, Siti Nor Mat NI, Rahmat F, Rusdi Abd Rahman NAS, Shah SA. PREVALENCE AND ASSOCIATED FACTORS OF DEPRESSION, ANXIETY AND STRESS AMONG HEALTHCARE WORKERS IN PEJABAT KESIHATAN DAERAH MELAKA TENGAH. *International Journal of Public Health and Clinical Sciences* [Internet]. 2021 Mar 7 [cited 2022 Oct 31];8(1):14–29. Available from: <http://publichealthmy.org/ejournal/ojs2/index.php/ijphcs/article/view/1053/778>
4. Siau C, Wee L, Ibrahim N, Visvalingam U, Yeap L, Yeoh SH, et al. Predicting burnout and psychological distress risks of hospital healthcare workers. *undefined* [Internet]. 2018 [cited 2022 Oct 31]; Available from: <https://www.semanticscholar.org/paper/Predicting-burnout-and-psychological-distress-risks-Siau-Wee/d876b059bd81bbe8fca2aba0d3048f01a7ed48c9>
5. Marzo RR, Iii EQV, Chandra U, Htay MNN, Shrestha R, Shrestha S. Risk perception, mental health impacts and coping strategies during COVID-19 pandemic among Filipino healthcare workers. *Journal of Public Health Research* [Internet]. 2021 Dec 15;10(2). Available from: <https://jphres.org/index.php/jphres/article/view/2604>
6. Teo I, Nadarajan GD, Ng S, Bhaskar A, Sung SC, Cheung YB, et al. The Psychological Well-Being of Southeast Asian Frontline Healthcare Workers during COVID-19: A Multi-Country Study. *International Journal of Environmental Research and Public Health*. 2022 May 24;19(11):6380.
7. Teo I, Sung S, Cheung Y, Wong W, Abu Bakar Aloweni F, Ang H, et al. Burnout, anxiety and depression in healthcare workers during the early COVID-19 period in Singapore. *Singapore Medical Journal*. 2021 Oct 7;

8. Sunjaya DK, Herawati DMD, Siregar AYM. Depressive, anxiety, and burnout symptoms on health care personnel at a month after COVID-19 outbreak in Indonesia. *BMC public health* [Internet]. 2021 Jan 28;21(1):227. Available from: <https://pubmed.ncbi.nlm.nih.gov/33509159/>
9. Setiawati Y, Wahyuhadi J, Joestandari F, Maramis MM, Atika A. Anxiety and Resilience of Healthcare Workers During COVID-19 Pandemic in Indonesia. *Journal of Multidisciplinary Healthcare*. 2021 Jan;Volume 14:1–8.
10. Pappa S, Chen J, Barnett J, Chang A, Dong RK, Xu W, et al. A Systematic Review and Meta-Analysis of the Mental Health Symptoms during the Covid-19 Pandemic in Southeast Asia. *Psychiatry and Clinical Neurosciences*. 2021 Oct 26;
11. Guo W-P, Min Q, Gu W-W, Yu L, Xiao X, Yi W-B, et al. Prevalence of mental health problems in frontline healthcare workers after the first outbreak of COVID-19 in China: a cross-sectional study. *Health and Quality of Life Outcomes*. 2021 Mar 22;19(1).
12. Hoang N-A, Van Hoang N, Quach H-L, Nguyen KC, Duong LH, Pham TQ, et al. Assessing the mental effects of COVID-19-related work on depression among community health workers in Vietnam. *Human Resources for Health* [Internet]. 2022 Aug 19;20(1):64. Available from: <https://pubmed.ncbi.nlm.nih.gov/35986294/>
13. Idaiani S, Waris L. Depression and Psychological Stress Among Health Workers in Remote Areas in Indonesia. *Frontiers in Public Health* [Internet]. 2022 Apr 27 [cited 2022 Aug 4];10(743053). Available from: <http://dx.doi.org/10.3389/fpubh.2022.743053>
14. Nguyen Ngoc A, Le Thi Thanh X, Le Thi H, Vu Tuan A, Nguyen Van T. Occupational Stress Among Health Worker in a National Dermatology Hospital in Vietnam, 2018. *Frontiers in Psychiatry*. 2020 Jan 24;10.
15. Kaur N, Husain SS, Dony JF, Naing AM, Musleh AS, Lukman KA, et al. Prevalence and socio-demography risk factors of depression, anxiety and stress in Kota Kinabalu district healthcare workers, Sabah. *Asia Pacific Environmental and Occupational Health Journal* [Internet]. 2020 Oct;6(1):1–12. Available from: [t: https://www.researchgate.net/publication/344785917](https://www.researchgate.net/publication/344785917)
16. Maravilla J, Catiwa J, Guariño R, Yap JF, Pagatpatan C, Orolfo DD, et al. Exploring indirect impacts of COVID-19 on local health systems from the perspectives of health workers and higher education stakeholders in the Philippines using a phenomenological approach. *The Lancet Regional Health - Western Pacific* [Internet]. 2022 Sep;100585. Available from: <https://www.thelancet.com/action/showPdf?pii=S2666-6065%2822%2900200-0>
17. Hao Q, Wang D, Xie M, Tang Y, Dou Y, Zhu L, et al. Prevalence and Risk Factors of Mental Health Problems Among Healthcare Workers During the COVID-19 Pandemic: A Systematic Review and Meta-Analysis. *Frontiers in Psychiatry*. 2021 Jun 15;12.
18. Bangalan SG. Mental health and protective strategies among community-based health workers in region 3, Philippines during COVID-19 pandemic. *Behavioral Medicine* [Internet]. 2022 May 9;1–8. Available from: <https://doi.org/10.1080/08964289.2022.2069666>
19. Tan BYQ, Chew NWS, Lee GKH, Jing M, Goh Y, Yeo LLL, et al. Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore. *Annals of Internal Medicine*. 2020 Apr 6;173(4):317–20.
20. Apisarnthanarak A, Apisarnthanarak P, Siripraparat C, Saengaram P, Leeprechanon N, Weber DJ. Impact of anxiety and fear for COVID-19 toward infection control practices among Thai healthcare workers. *Infection Control & Hospital Epidemiology*. 2020 Jun 8;41(9):1093–4.
21. Manh Than H, Minh Nong V, Trung Nguyen C, Phu Dong K, Ngo HT, Thu Doan T, et al. Mental Health and Health-Related Quality-of-Life Outcomes Among Frontline Health Workers During the Peak of COVID-19 Outbreak in Vietnam: A Cross-Sectional Study. *Risk Management and Healthcare Policy*. 2020 Dec;13:2927–36.
22. Khaing NEE, Lim CS, Soon SP, Oh HC. Prevalence and correlates of psychological distress and coronavirus anxiety among hospital essential services workers in Singapore. *Annals of the Academy of Medicine, Singapore* [Internet]. 2022 May 27 [cited 2022 Nov 1];51(5):283–91. Available from: <https://doi.org/10.47102/annals-acadmedsg.202219>
23. Zakaria MI, Remeli R, Ahmad Shahamir MF, Md Yusuf MH, Azizah Ariffin MA, Noor Azhar AM. Assessment of burnout among emergency medicine healthcare workers in a teaching hospital in Malaysia during COVID-19 pandemic. *Hong Kong Journal of Emergency Medicine*. 2021;28(4):254–9.
24. Yuan Z, Yu D, Zhao H, Wang Y, Jiang W, Chen D, et al. Burnout of Healthcare Workers Based on the Effort-Reward Imbalance Model: A Cross-Sectional Study in China. *International Journal of Public Health*. 2021 Feb 25;66.

25. Deng J, Sun Y, Lei R, Yang T. Job Stress and Healthcare Quality among Chinese Healthcare Workers: The Mediating Effects of Public Service Motivation. *American Journal of Health Behavior*. 2019 Jul 1;43(4):705–16.
26. Tan BYQ, Abhiram K, Lim LJH, Tan M, Chua YX, Tan L, et al. Burnout and Associated Factors Amongst Healthcare Workers in Singapore during the COVID-19 pandemic. *Journal of the American Medical Directors Association* [Internet]. 2020 Oct;21(12). Available from: [https://www.jamda.com/article/S1525-8610\(20\)30835-5/pdf](https://www.jamda.com/article/S1525-8610(20)30835-5/pdf)
27. FADZIL NA, HEONG WO, KUEH YC, PHANG CK. The Effect of a Mindfulness-Based Intervention on Nurses in Kelantan, Malaysia. *The Malaysian Journal of Medical Sciences : MJMS* [Internet]. 2021 Dec 1 [cited 2022 Mar 13];28(6):121–8. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8715875/>
28. Al-Dubai SAR, Ganasegeran K, Perianayagam W, Rampal KG. Emotional Burnout, Perceived Sources of Job Stress, Professional Fulfillment, and Engagement among Medical Residents in Malaysia. *The Scientific World Journal*. 2013;2013:1–9.
29. Pham HN, Protsiv M, Larsson M, Ho HT, Vries DH de, Thorson A. Stigma, an important source of dissatisfaction of health workers in HIV response in Vietnam: a qualitative study. *BMC Health Services Research*. 2012 Dec;12(1).
30. Pinyopornpanish M, Pinyopornpanish K, Soontornpun A, Tanprawate S, Nadsasarn A, Wongpakaran N, et al. Perceived stress and depressive symptoms not neuropsychiatric symptoms predict caregiver burden in Alzheimer's disease: a cross-sectional study. *BMC Geriatrics*. 2021 Mar 12;21(1).
31. Pinyopornpanish M, Pinyopornpanish K, Soontornpun A, Tanprawate S, Nadsasarn A, Wongpakaran N, et al. Perceived stress and depressive symptoms not neuropsychiatric symptoms predict caregiver burden in Alzheimer's disease: a cross-sectional study. *BMC Geriatrics*. 2021 Mar 12;21(1).
32. Teo YH, Xu JTK, Ho C, Leong JM, Tan BKJ, Tan EKH, et al. Factors associated with self-reported burnout level in allied healthcare professionals in a tertiary hospital in Singapore. *Wilkinson J, editor. PLOS ONE*. 2021 Jan 6;16(1):e0244338.
33. Abdul Rahman H, Abdul-Mumin K, Naing L. Psychosocial Work Stressors, Work Fatigue, and Musculoskeletal Disorders: Comparison between Emergency and Critical Care Nurses in Brunei Public Hospitals. *Asian Nursing Research*. 2017 Mar;11(1):13–8.
34. Chinvararak C, Kerdcharoen N, Pruttithavorn W, Polruamngern N, Asawaroekwisoot T, Munsukpol W, et al. Mental health among healthcare workers during COVID-19 pandemic in Thailand. *Wang T (Alison), editor. PLOS ONE*. 2022 May 20;17(5):e0268704.
35. Chan LG, Tan PLL, Sim K, Tan MY, Goh KH, Su PQ, et al. Psychological impact of repeated epidemic exposure on healthcare workers: findings from an online survey of a healthcare workforce exposed to both SARS (severe acute respiratory syndrome) and COVID-19. *BMJ Open*. 2021 Nov;11(11):e051895.
36. Labrague LJ. Pandemic Fatigue And Clinical Nurses' Mental Health, Sleep Quality And Job Contentment During The COVID-19 Pandemic: The Mediating Role Of Resilience. *Journal of Nursing Management*. 2021 May 21;29(7).
37. Thatrimontrichai A, Weber DJ, Apisarnthanarak A. Mental health among healthcare personnel during COVID-19 in Asia: A systematic review. *Journal of the Formosan Medical Association*. 2021 Feb;33581962.
38. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Network Open*. 2020 Mar 2;3(3):e203976–6.
39. Carascal MB, Capistrano PE, Figueras MDL, Cataylo OLAC, Zuñiga SMS, Reyes MES, et al. Experiences of COVID-19-Recovered Healthcare Workers in a Tertiary Hospital in the Philippines: A Mixed-Method Inquiry. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*. 2022 Jan;59:004695802211070.
40. Chan CMH, Ng SL, In S, Wee LH, Siau CS. Predictors of psychological distress and mental health resource utilization among employees in Malaysia. *Int J Environ Res Public Health* [Internet]. 2021 [cited 2022 Oct 31];18(1):314. Available from: <https://www.mdpi.com/1660-4601/18/1/314/html>
41. Tan BYQ, Chew NWS, Lee GKH, Jing M, Goh Y, Yeo LLL, et al. Psychological impact of the COVID-19 pandemic on health care workers in Singapore. *Ann Intern Med* [Internet]. 2020;173(4):317–20. Available from: <http://dx.doi.org/10.7326/M20-1083>
42. Samy AL, Awang Bono S, Tan SL, Low W-Y. Mental health and COVID-19: Policies, guidelines, and initiatives from the Asia-Pacific region. *Asia Pac J Public Health* [Internet]. 2021;33(8):839–46. Available from: <http://dx.doi.org/10.1177/10105395211025901>

- 
43. Zhang Q, Dong G, Meng W, Chen Z, Cao Y, Zhang M. Perceived stress and psychological impact among healthcare workers at a tertiary hospital in China during the COVID-19 outbreak: The moderating role of resilience and social support. *Front Psychiatry* [Internet]. 2021 [cited 2022 Oct 31];12:570971. Available from: <http://dx.doi.org/10.3389/fpsy.2021.570971>
44. Pekurinen V, Willman L, Virtanen M, Kivimäki M, Vahtera J, Välimäki M. Patient aggression and the wellbeing of nurses: A cross-sectional survey study in psychiatric and non-psychiatric settings. *Int J Environ Res Public Health* [Internet]. 2017 [cited 2022 Oct 31];14(10):1245. Available from: <https://www.mdpi.com/1660-4601/14/10/1245/htm>
45. Reme SE, Dennerlein JT, Hashimoto D, Sorensen G. Musculoskeletal pain and psychological distress in hospital patient care workers. *J Occup Rehabil* [Internet]. 2012;22(4):503–10. Available from: <http://dx.doi.org/10.1007/s10926-012-9361-5>
46. Palmer J, Ku M, Wang H, Crosse K, Bennett A, Lee E, et al. Public health emergency and psychological distress among healthcare workers: a scoping review. *BMC Public Health* [Internet]. 2022;22(1):1396. Available from: <http://dx.doi.org/10.1186/s12889-022-13761-1>
47. Kumar Ranjan L, Gupta PR, Gujar NM, Baraik S. Psychological distress and quality of life among hospital staff in India during COVID-19 pandemic. *ash* [Internet]. 2021 [cited 2022 Nov 1];8(3):55–60. Available from: <https://pdfs.semanticscholar.org/153f/fca1a36228b3ab69406a6dc24a7180b14577.pdf>
48. Drapeau A, Marchand A, Beaulieu-Prevost D. Epidemiology of psychological distress. In: L'Abate L, editor. *Mental Illnesses - Understanding, Prediction and Control*. London, England: InTech; 2012.
49. Cox T, Griffiths A, Barlowe C, et al. *Organizational interventions for work stress: a risk management approach*. HSE Contract Research Report 286/2000. Sudbury: HSE Book; 2000.
50. Koinis A, Giannou V, Drantaki V, Angelaina S, Stratou E, Saridi M. The impact of healthcare workers job environment on their mental-emotional health. Coping Strategies: The case of a local general hospital. *Health Psychol Res* [Internet]. 2015 [cited 2022 Nov 1];3(1):1984. Available from: <http://dx.doi.org/10.4081/hpr.2015.1984>
51. Arvidsdotter T, Marklund B, Kylén S, Taft C, Ekman I. Understanding persons with psychological distress in primary health care. *Scand J Caring Sci* [Internet]. 2016;30(4):687–94. Available from: <http://dx.doi.org/10.1111/scs.12289>