



REVIEW ARTICLE

What do we know about mental health of medical personnel? A systematic review

Eka Dian Aprilia^{1,4)}*, Muhammad Adam²⁾, Zulkarnain and³⁾, Marty Mawarpury⁴⁾

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Abstract

Medical personnel is a profession with a high workload. High work demands can lead to a decline in physical and emotional health. An in-depth understanding of the impact of workload on health, especially mental health, is crucial to implementing measures for their well-being. This literature review aims to gather and compare available information to produce an apparent picture of the mental health of medical personnel and influencing factors. A comprehensive search was conducted utilizing a variety of electronic databases, including Scopus, Science Direct, Springer Link, ProQuest, EBSCO, MED-LINE, and Google Scholar. The literature search focused on papers assessed with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology. We identified 16 studies that reported the criteria for in-depth analysis. The study concluded that overburdened medical personnel are prone to burnout, which in turn has the potential to lead to mental health problems. Common disorders are burnout, depression, anxiety, and abnormal stress. Further research sourced from internal individuals needs to be done so that it is expected to be more robust and consistent, considering that medical personnel are very likely to work in more than one institution during the process.

Keywords: Medical Personnel; Mental Health; Systematic Review

INTRODUCTION

Internal health is a serious health problem in Indonesia. The World Health Organization (WHO) defines mental health as "a state of well-being in which individuals realize their abilities, cope with normal stresses, work productively, and contribute to their communities" (Galderisi et al., 2015). Meanwhile, Law No. 18/2014 defines Mental Health as "a state in which an individual can develop physically, internally, spiritually, and socially so that the individual realizes his or her abilities, can cope with pressure, work productively, and contribute to his or her community." (Law No. 18/2014). " (Law Number 18

Year 2014 on Mental Health, 2014). According to both definitions, internally healthy individuals can reach their full potential, manage stress, be productive, and contribute to their community.

Working is a personal choice that can improve one's mental health. However, a variety of factors might contribute to mental health issues. Mental health difficulties are incredibly challenging in high-volume employment environments like hospitals. Health-related labour, including medical staff, is unpredictable, requires shift work, and has a significant risk of working overtime and racing against the clock (time pressure). Especially if it is aggravated by unsupportive work culture, low job satisfaction, high inter-employee conflict, and inefficient control/management functions, the importance of mental health at work cannot be overlooked by health-care institutions, including mental hospitals, whose employees are undoubtedly mental health experts.

The COVID-19 epidemic has an influence on the health sector, including strain and excessive effort in health-care institutions, which can harm health professionals' psychological well-being by causing tension, anxiety, sleeplessness, and even depression (Luo et al., 2020). More than 75% of medical staff had a mental illness, according to noteworthy study conducted at tertiary care facilities during the severe acute respiratory syndrome (SARS) epidemic and published in the British Journal of Psychiatry. These psychological impacts have been shown to persist for up to three years beyond the end of the epidemic

¹ Graduate School of Mathematics and Applied Sciences, Universitas Syiah Kuala, Banda Aceh

² Department of Management, Faculty of Economics, Universitas Syiah Kuala, Banda Aceh

³ Faculty of Psychology, Universitas Sumatera Utara, Medan

⁴ Department of Psychology, School of Medicine, Universitas Syiah Kuala, Banda Aceh

**) corresponding author*

Eka Dian Aprilia

Email: eka.aprilia@usk.ac.id

(Daryanto et al., 2022; Naslund et al., 2021; Schneider et al., 2021). These statistics serve as a reminder of how serious the problem is.

Medical personnel are, more specifically, health workers; included in the medical personnel category are specialists, dentists, and general practitioners (*Undang-Undang et al. 36 Tahun 2014 Tanggal 17 Oktober 2014 / JDIH Kementerian BUMN*, n.d.). In carrying out their duties, medical personnel aim to provide the best possible public services accurately and safely, provide satisfaction and comfort, and accelerate and facilitate services. According to the World Medical Association, doctors in many countries are frustrated for a variety of reasons, such as limited resources, poor management in health services, sensational media reports of medical errors, unethical behavior of doctors, and challenges from patients and other health workers to their authority and skills (Hayes et al., 2019; Purba et al., 2019; Srivastava et al., 2019; Williams et al., 2007). In recent years, attention to the mental health of healthcare providers has increased as an important issue in society and threatens the quality of healthcare.

Heavy workloads, long shifts, high work speeds, lack of physical or psychological security, chronic care, moral dilemmas, perceived job security, bullying at work, and a lack of social support are just a few of the many factors that can lead to increased stress among medical professionals (Miyasaki et al., 2017; Schäfer et al., 2020; Tran et al., 2019). A person experiencing psychological stress may experience fatigue, depression, anxiety, insomnia, and other health problems. Workplace stress may have an impact on healthcare workers' productivity, general quality of life, and the kind of care they deliver. To safeguard healthcare workers' mental health and wellbeing, it is crucial to identify and lower these work-related risk factors (Munir et al., 2012; Nurudeen et al., 2021; Simpson et al., 2023; Watson et al., 2018).

The majority of healthcare professionals are trained to constantly provide patients their utmost attention. Because they may feel selfish about taking care of themselves or fear criticism from others, clinicians often do not prioritize self-care. Nonetheless, self-care is crucial for helping medical professionals manage their workload and responsibilities. In addition to protecting their health, well-being, and job and life happiness, it may assist them in striking a balance between work and play. Pertiwi and colleagues, 2021; Tran and colleagues, 2019; Irving and colleagues, 2017).

Furthermore, few studies have examined the mental well-being of healthcare workers in terms of protective and risk factors beyond the global pandemic impact to identify the mental health of healthcare workers. Instead, previous studies have limited themselves to COVID-19 or the coronavirus. This may lead to important data and broader patterns being missed or limited in their methods. In addition, consideration of risk factors, protective factors and the quality of the studies reviewed is also minimal (Handayani et al., 2020; Murdiana & Ismail, 2021; Ulfa & Muchlis, 2021).

Therefore, practical ways to support the mental health and well-being of healthcare workers during this pandemic remain uncertain (Bashir et al., 2021; Forbes et al., 2019; Li, 2018; West et al., 2018a; Zhang et al., 2019). We conducted a systematic review to find mental health issues in medical personnel dealing with the impact of the global pandemic as well as other medical personnel. The findings from this review will point to ways in which measures might be targeted to safeguard the mental health of healthcare workers amid the COVID-19 pandemic and future emergencies. Systematic studies on mental health during

outbreaks have highlighted various factors that may affect the mental health of healthcare workers. However, these studies are limited to social and occupational variables. Mental health impacts vary depending on factors such as age, gender, education, and more. Thus, it is important to recognize and address these factors in order to reduce their negative impact on healthcare workers (Forbes et al., 2019; Khanal et al., 2020; van Agteren et al., 2021).

Over the years, several studies have been conducted on mental health issues. However, these studies were conducted in different places, in different ways, and sometimes produced different results (Spence et al., 2014; Wallace et al., 2009). The researchers conducted an in-depth literature search of all studies that have been published over the past decade on mental health in healthcare workers. The researchers' search involved research on the mental health of medical personnel such as general practitioners, dentists, and specialists. The aim was to collect, compare and contrast the available information to produce a clear picture of mental health in medical personnel (Knaak et al., n.d.; Miyasaki et al., 2017; Rosyid et al., 2021). This study provides a clear picture of the psychological state of medical personnel, mental health during the epidemic, and psychological factors influenced by the epidemic and job demands. It is necessary to map the current psychological state of medical workers, as the psychological effects often continue for a long period of time after control, even up to three years after the outbreak.

Mental health is the peace of mind that allows a person to face life's problems, know their abilities, learn and work well, and provide support to the community. It is critical to our health and well-being. It helps us to make decisions, build relationships, and influence our reality. Mental health is something that everyone should have as a basic right. Mental health is critical to the development of individuals, communities, and economies. Mental health is not just about not experiencing mental illness. Mental health exists on a complex continuum, with varying degrees of distress and discomfort, and diverse social and clinical outcomes. Mental health problems include mental illness and psychosocial difficulties.

Based on the background and problems mentioned above, the researcher outlines the formulation of the research problem as follows: (1) How is the development of mental health research on medical personnel? (2) What factors influence the mental health of medical personnel?

METHODS

Systematic literature research (SLR) is a specific approach to conducting literature research. Despite its intended function, SLR highlights a search process that other researchers can easily replicate. SLR aims to make the subjective literature review objective to minimize researcher bias. The search process is divided into several steps: identification, screening, eligibility, and inclusion. This step adheres to the guidelines provided by Prisma (preferred reporting items for systematic reviews and meta-analyses). Prisma is a collection of evidence-based minimal items designed to assist authors in reporting different types of systematic reviews and meta-analyses that evaluate the benefits of interventions. Prisma emphasizes the importance of authors providing transparent and comprehensive reporting of this type of research (Sastypatiwi & Nyoto, 2020).

Data was collected by searching for journals through electronic media such as digital libraries and the internet and manually searching the researcher's journal collection. The literature search was conducted on articles analyzed using the PRISMA model. Literature searches were conducted using five databases: Scopus, Science Direct, Springer Link, ProQuest, EBSCO, MED-LINE, and Google Scholar to obtain articles that meet the following criteria: (a) Published in accredited English and Bahasa Indonesia journals. (b) Published in peer-reviewed journals according to the keywords.

The search was divided into two stages to limit the results and find the most suitable articles. In the first level, we set some specific keywords as inclusion criteria related to the mental health outcomes sought, for example 'mental health' and 'psychological health'. At the second level, the terms searched had to use group-specific terms, such as 'doctor', 'health worker', 'physician', 'medical personnel', and 'medical personnel'. The coarse search criteria were limited to news years between 2010-2022. The study collected data for 12 years to cover all aspects so that information before, during, and after the pandemic could be collected completely and fairly. Identified citations were logged and then screened for duplicate articles. Articles selected for further reading included different types of designs such as original articles, systematic reviews, narrative reviews, commentaries and letters, and qualitative surveys. These articles were in full text and scientific journal format. We excluded topics on hospital and healthcare facility management, such as hospitals, universities, and primary healthcare centers. Article titles were screened to remove titles that did not match the keywords. Abstracts of the remaining articles were scanned to narrow down the pool of articles and maintain relevance. Finally, all remaining papers from the articles

were filtered to ensure they met the inclusion requirements.

The study is divided into two stages. These stages are (a) Collecting data from various sources accessible to researchers, (b) sorting the data that has been obtained according to the theme and relevance of the research, and (c) preparation of the research report.

Data Extraction

A spreadsheet was created to systematically enter data about each article to obtain a "broad view" of the literature. The variables involved, the year and location of the study, the type of study, the nature of the study sample, the number of respondents, the results, and the study constraints were all recorded.

Data Synthesis

A list was created to record all the factors that affected the mental health of medical personnel over the course of a decade (before and during the pandemic). These factors were then grouped by common themes into sub-groups. If a factor caused different effects in the study population, it was explained. There were several factors that significantly contributed to two or more epidemic-related studies. The authors also suggest some recommendations to mitigate the negative impact of the epidemic that have been noted.

Research Stages

This research is a data-driven study based on the literature review conducted. A flowchart relating to the methodology of screening and selecting articles is outlined in Figure 1:

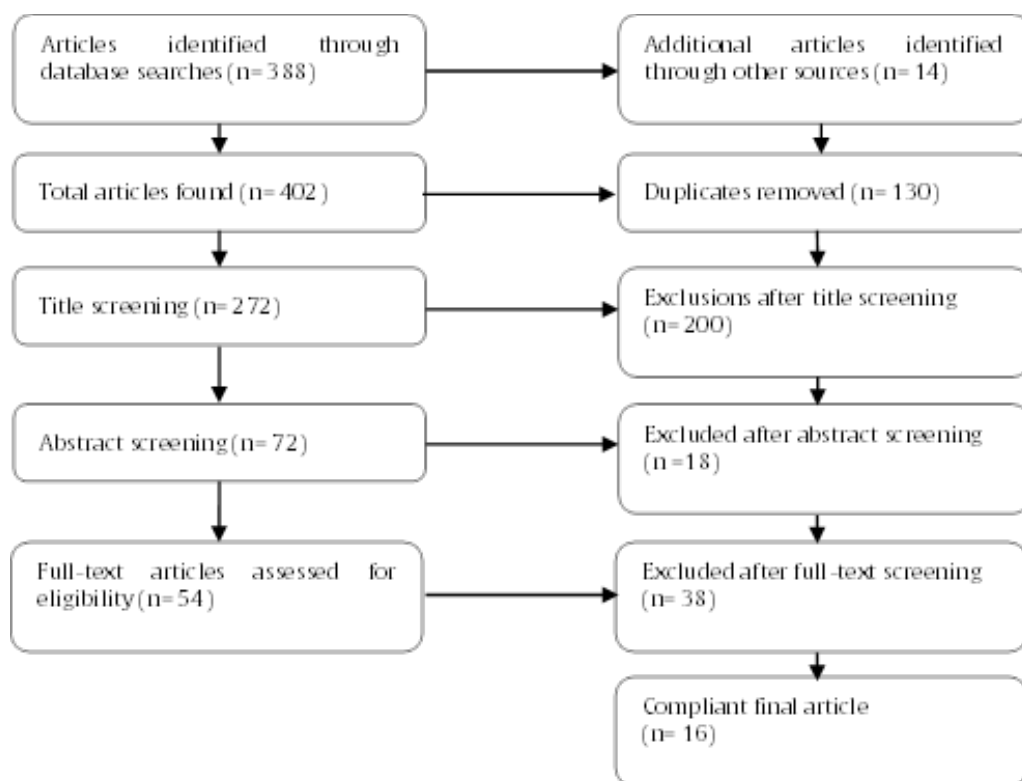


Figure 1. Flow Chart of Screening and Inclusion/Exclusions of Article

RESULT OF STUDY**Table 1.** Articles related to Mental Health on Medical Personnel

No	Author	Country	Population	Instrument/Method	Themes	Result
1	Lam et al. (2010).	China	General practitioner	Focus Group Discussion, measurement scales (DASS-21)	Stress, depression, anxiety, psychological well-being	35.8% of the people surveyed felt sad, 35.4% felt anxious, and 29.2% felt abnormally stressed. Receiving calls while working nights, long working hours, and heavy tasks can cause stress in us.
2	Munir et al. (2012)	Denmark	Health care workers	Longitudinal study with three measurement scales, namely leadership, job satisfaction, and mental health	work-life conflict, transformational leadership, healthcare workers' job satisfaction, psychological well-being	Regression research found that transformational leadership style is strongly related to perceived work-life conflict, job satisfaction, and mental health. Transformational leadership and well-being, not job happiness, can reduce work-life conflict.
3	Shanafelt, et al (2012)	United States of America	US Physician	Cross-sectional study with measurement scales (Maslach et al.)	Burnout, Satisfaction With Work-Life Balance	45.8% of healthcare workers reported experiencing at least one burnout symptom. Medical staff felt burnout symptoms more frequently (37.9% vs. 27.8%) compared to an opportunity-based sample of 3442 people working in the United States (37.9% vs. 27.8%) and were unhappy with their work-life balance (40.2% vs. 23.2%).
4	Basuki et al., (2013)	Indonesia	Graduate students and lecturers of the Faculty of Medicine	Cross-sectional study with purposive sampling using job satisfaction scale	Job satisfaction, work stressors	Seven factors were linked to different levels of job dissatisfaction: providing out-of-hours services was lowest, and lack of support from superiors was highest - after-hours services.
5	Awan & Sitwat (2014)	Pakistan	Mental Health Professional	Spirituality in the Workplace (Ashmos & Duchon, 2000). Rosenberg Self Esteem Scale (Rosenberg, 1965) and Ryff Mental Health Scale	Workplace Spirituality, self-esteem, psychological well-being	There is an important link between workplace spirituality, self-esteem and mental health in mental health practitioners. Self-esteem and workplace spirituality can influence mental health.
6	Mata et al (2015).	United States of America	Resident doctors	Literature review	Depression, Depressive Symptoms	The number of people who had depression or depressive symptoms was 28.8%. 15.8% of the patients had depression at the start of residency training.
7	Murray et al (2016)	-	General practitioners	Literature review	Mental ill-health, mental health promotion programmes, psychological well-being	Only 4 studies (with a total of 997 clinicians) out of 5392 titles were eligible for inclusion. The research found statistically significant improvements in self-reported mental health. There were two types of therapy using cognitive behavioral techniques: one focused on mindfulness, while the other provided GHQ score feedback and self-help materials.
8	Madhuchandra, M. K., Srimathi, N. L. (2016)	India	Doctors and nurses	Medium Form of Mental Health Scale (PWBS) Ryff	Mental health, Psychological well-being	The study found that there was no significant difference in overall psychological well-being between doctors and nurses in Bangalore City. Nurses have more autonomy and environmental mastery than doctors.
9	West CP, Dyrbye LN, Shanafelt TD (2018)	United States of America	Doctors	Literature review	Physician burnout, emotional exhaustion, depersonalization, diminished sense of personal accomplishment	Physician burnout is a frequent work-related condition worldwide. It is characterized by emotional exhaustion, depersonalization, and a low sense of personal accomplishment. Burnout symptoms negatively impact patients, healthcare workers, expenses, and physician health in studies of both trainee and practicing physicians, with rates exceeding 50%.

10	Forbes et al., (2019)	Australia	Junior doctors	Qualitative	Health and Psychological well-being, bullying, harassment,	Young doctors in Australia often feel high psychological distress, although the exact reasons are unclear. This study found that some types of work stress can negatively impact the mental health of junior doctors.
11	Hayes et al. (2019).	Ireland	Doctors	Completed workplace well-being questionnaires (Effort-Reward Imbalance (ERI) Scale, over-commitment, Maslach Burnout Inventory)	Work-life balance, workplace stress, Burnout, Workplace well-being	82% of people report stress from work, where the effort is far greater than the benefits and is further exacerbated by excessive commitment. There were 29.7% of respondents experiencing work fatigue. These are related to male gender, young age, little work experience, low motivation to work, low performance, high ERI ratio, and excessive commitment.
12	Habsari, A. D., & Ilyas, J. (2019)	Indonesia	Doctors	Literature review	Job satisfaction, Work stress, Turnover	The process of searching and filtering the literature found nine (9) studies. According to the selected study, overtime, job satisfaction, and work stress are some of the things that can affect doctor turnover in hospitals.
13	(Husin et al., 2021) Naslund et al., (2021)	Norway	Health-care Workers	Mental health scales, Work-Family Conflict scale	Mental Health, Work-Family Conflict	The pressures, burdens, and psychological demands of the health-care profession across health systems and disciplines necessitate fresh efforts to alleviate these obstacles for individuals working on the front lines during public health emergencies like the COVID-19 pandemic.
14	Seno et al., (2022)	Indonesia	Health workers	Quality of work-life scale, Job stress scale, Mental health scales	Quality of work-life, Job stress, Mental health, Psychological well-being	Quality of life at work and work stress positively impact perceived productivity, and mental health plays a mediating role among health-care workers working in private hospitals in Jakarta during the COVID-19 pandemic. Therefore, private hospitals in Jakarta can focus more on these research variables for future improvement.
15	Purnomosidi & Rizkila, (2022)	Indonesia	Health workers	Interviews and observations	Health workers, Psychological Well-Being	Health workers have not reached complete mental health. Many of them continue to feel anxious while working.
16	Suemarko, et al (2022)	Indonesia	Health workers	Maslach Burnout Inventory (MBI)	Health workers, burnout	The majority of responders were female (75.6%), married (73.5%), and employed as general practitioners (49.0%). Approximately 82% of healthcare professionals reported moderate symptoms of burnout. 22.1% of respondents expressed significant emotional weariness, 11.2% indicated high depersonalization, and 29.4% reported low personal achievement. Job type and acquaintance with COVID-19 were connected to high levels of emotional exhaustion and depersonalization.

DISCUSSION

The studies reviewed yielded some critical findings related to the medical workforce. These studies share the same findings: medical personnel in different countries experience longer working hours, high workloads, low job satisfaction, low supervisor support, performing services outside of working hours, and poor working atmosphere (including safety). The circumstance produces exhaustion both physically and psychologically. Psychic tiredness eventually influences the psychological condition of medical workers, who have been known to suffer from occupational stress, burnout, anxiety, depression, and other mental health issues, which will be discussed more below.

Definition of medical personnel

The workforce in charge of a hospital or public health centre is diverse, and its respective duties and functions are diverse. All workers contribute to the quality of care provided to patients. Some workers interact directly with patients, and the level of interaction relationships and the impact of these interactions will also be different (Lam et al., 2010; Murray et al., 2016). In the literature search that has been carried out, there are differences in the types of subjects used even though they use the same term. Research with the subject of doctors consisting of internship doctors and general practitioners (Basuki et al., 2013), the use of the term health care worker and health workers consisting of various professions, such as doctors, dentists, veterinarians, physician assistants, pharmacists, and their assistants, medical personnel, physiotherapists, midwives, psychologists, and so on (Dyrbye & Shanafelt, 2016; Mata et al., 2015; Roberts et al., 2014; Shanafelt et al., 2012b; Zhang et al., 2019). Some studies utilize the vocabulary of medical staff but employ physicians and nurses as subjects (Madhuchandra & Srimathi, 2016), while others use the topic of doctors but mix doctors on duty and doctors in training (Mata et al., 2015; Forbes et al., 2019).

The differences in study subjects will influence each work group's performance obligations and authority. Medical personnel, more specifically health workers, who are included in the category of medical personnel are doctors, doctors, specialist doctors, dentists, and general practitioners (*Undang-Undang UU Nomor 36 Tahun 2014 Tanggal 17 Oktober 2014 | JDIH Kementerian BUMN*, n.d.). Medical personnel have direct interaction with patients, great responsibility, and authority regarding patient safety.

Workload and burnout

The most prevalent causes of burnout among medical staff include frequent night shift calls, long working hours, and high workloads (Basuki et al., 2013). Medical personnel are more likely than other professions in America to feel burnout and dissatisfaction with their work-life balance (Shanafelt et al., 2012). Physician burnout, a work-related syndrome marked by emotional exhaustion, depersonalization, and a poor sense of personal accomplishment, is common in the international medical community. Symptomatic levels of burnout have been associated with negative results for patients, healthcare workers, expenditures, and physician health (Suemarmo et al., 2022).

Many factors contribute to burnout, including low professional satisfaction, medical-legal, health, and financial worries, a misalignment of personal and organizational principles, and demanding practice

arrangements, all of which lead to physician turnover or early retirement. Emotional exhaustion is connected with anxiety and despair among doctors. Previous research on the impact of physician burnout on intention to quit and actual departure did not consider the consequences of anxiety and depression (Hartley, 2014). Direct level of burnout disorder was detailed among wellbeing specialists in Indonesia amid the COVID-19 widespread. This condition is related to work category, conjugal status, and involvement in treating COVID-19 patients (Suemarmo et al., 2022).

Mental health issues

Overburdened medical personnel are prone to burnout, which in turn has the potential to lead to mental health problems. Common disorders are burnout, depression, anxiety, and abnormal stress (Shanafelt et al., 2012). In addition, there is also an emerging prevalence of depression or depressive symptoms, some of which even begin to occur when medical personnel are in the education process, be it residency or internship (Forbes et al., 2019; Mata et al., 2015). This is due to a lack of access to professional psychological support, a lack of medical knowledge on field conditions, and insufficient training in personal protection equipment and disease control methods.

To prevent long-term mental health problems, medical workers require specialist monitoring and treatments, particularly during the COVID-19 pandemic. Mental health needs special attention during calamities like the COVID-19 epidemic. The causes include (a) Increased rates of mental health problems, (b) Weakened mental health infrastructure, and (c) Difficulty coordinating agencies and experts in providing mental health and psychosocial support. Recommendations for reducing stress and psychological distress in medical personnel are normalizing solid emotions and stress, fulfilling basic needs, providing social support, paying attention to clear communication and task distribution, flexible working hours, and utilizing psychosocial and psychological assistance without stigmatization. Health workers have not fully achieved psychological well-being. Many of them still feel depressed in carrying out their work. The conclusion drawn from this study is the need for full support from the community to health workers related to their work. If health workers achieve psychological well-being, they can work happily and calmly to increase the recovery rate (Purnomosidi & Rizkila, 2022; Seno, et.al, 2022).

Psychological constructs used

As far as the researcher's search goes, publications related to mental health generally sample nurses or medical personnel undergoing education by connecting to variables of job satisfaction, burnout, or workload (Shanafelt et al., 2012; Wardani & Anwar, 2019; Habsari A. D., & Ilyas, J., 2019). Research on positive aspects that can strengthen medical personnel has also been carried out using one with mental health, work spirituality, and job satisfaction. Improving mental health in medical personnel focuses more on sources outside themselves, namely institutions, coworkers, and patients (Awan & Sitwat, 2014; Forbes et al., 2019; Hayes et al., 2019; Madhuchandra & Srimathi, 2016; Munir et al., 2012).

Previous studies show that job demands positively affect burnout (Britt et al., 2021; Mojtahedzadeh et al., 2021). This confirms the health impairment process in the JD-R model, which shows that excessive job demands have

a detrimental effect on medical personnel's conditions, such as escalating burnout. In this regard, the increasing number of patients with Covid-19 leads to excessive workloads among medical personnel. Moreover, the imbalance of the medical personnel-patient ratio determined stressful working conditions. Consequently, medical personnel provided extra physical effort and devoted their thoughts and emotions to fulfilling their responsibilities in the middle of increasing COVID-19 cases. If this situation occurs consistently, medical personnel will experience excessive burnout, indicated by hopelessness and loss of interest in work. Job demands also harm work engagement, confirming the findings of previous studies (Giménez-Espert et al., 2020; Zhang et al., 2021). These findings also corroborate the cross-link in the JD-R model, which shows that excessive job demands harm medical personnel's conditions, such as alleviating work engagement. According to the attachment theory (Karbowa, 2021), an individual greatly prefers personal life to risky work. As a result, this circumstance impacts the retention of medical workers, as well as the continuity and quality of healthcare services. Excessive job expectations in a high-risk work environment impair medical personnel's work engagement, resulting in laziness and apathy in their work. As far as the researcher's search goes, articles on health workers or medical personnel are generally in the form of reviews and correlation studies, and some are qualitative.

CONCLUSION

The study concluded that work demands significantly impact the mental health of medical personnel. There is an urgent need to address the psychological health issues of this vulnerable group. Based on the results of the review carried out in this study, no research has been found on the mental health model of medical personnel in Indonesia in general. Research related to the demands or workload of medical personnel has been carried out, and results have been obtained that this profession has a high workload. Further research using mental health as the dependent variable and finding independent variables sourced from internal individuals needs to be done so that it is expected to be more robust and consistent, considering that medical personnel are very likely to work in more than one institution in the process.

DECLARATION

Competing interest

The authors assert that no competing interests exist. All co-authors have examined the paper and agree with its contents; there is no financial interest to report. The authors confirm that the contribution is their original work and is not presently under review by another publisher.

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agency, or publication. The authors are responsible for the article's results, findings, and content.

ABOUT THE AUTHORS

Eka Dian Aprilia graduated with a Bachelor of Psychology and Continuing Postgraduate Education at the Faculty of Psychology, with a major interest in Industrial and Organizational Psychology and a minor in Clinical Psychology of Children. Her research interests are related to organizational and industrial issues such as engagement, religiosity, adversity quotient, workplace spirituality, consumer behaviour, etc.

Muhammad Adam is a Professor of Marketing at Universitas Syiah Kuala Banda Aceh. He graduated from the Economics Faculty, completed his MBA in Management and Business at the University of Central Florida, and then completed his doctoral degree from Padjadjaran University. His research interests are service marketing and management.

Zulkarnain is an Industrial & Organizational Psychology lecturer at the Universitas Sumatera Utara. He completed his last S3 Psychology education at Universiti Kebangsaan Malaysia (UKM).

Marty Mawarpury has been a member of Clinical psychology. In addition to her experience working with mental health and mental disorders, she also has experience working with human resource development. The areas of research that she is undertaking are applied clinical psychology, mental health, management, and health care systems.

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