Research Article

Prevalence and Factors Associated with Burnout Among Healthcare Professionals in Asian Countries: A Systematic Review

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Abstract:

Background: Burnout among healthcare providers is one of the major obstacles influencing healthcare practice and quality of healthcare. Chronic psychological strain at work can lead to burnout, which manifests itself in feelings of emotional tiredness, increasing depersonalization, and a lessened sense of personal success.

Objectives: The aim of this review is to determine the burden and personal and professional predictors of burnout among healthcare professionals.

Methods: 21 papers out of 328 studies satisfied the requirements for inclusion in this study. All of them were cross-sectional, except for two systematic reviews. Physicians, nurses, residents, and other healthcare personnel frequently experience burnout; prevalence estimates typically fall between 21.3% and 92.2%. The prevalence estimates for the three MBI subscales ranged widely, low Personal Accomplishment (19.7-89.2%), high Emotional Exhaustion (3.82 - 84.8%), and high Depersonalization (0.88 - 96.6%). Significant correlations between burnout and gender, nationality, length of service, working hours, and shift schedules were found.

Results: Results show gender inequality, socioeconomic stress, limited access to education, substance abuse, psychological illness including childhood exposure to violence, sociocultural norms with their acceptance, religious interpretation, and lack of legal protection and support service as primary determinants of IPV in marital relationships.

Conclusion: Burnout is found to be very common among healthcare professionals. It is required to conduct more in-depth epidemiologic research on burnout.

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INTRODUCTION:

When workplace environments and professional settings are poorly organized and managed, workers may experience negative effects that, far from elevating them, drain them of their mental energy and sap their psychological resources. One of the most serious psychological occupational dangers in today's culture is burnout, which has a substantial financial impact on both individuals and organizations. The World Health Organization (WHO) recognized burnout as a syndrome and defines it as "Burnout is caused by chronic workplace stress that fails to be handled successfully and is marked by three aspects: 1) emotional exhaustion-feeling of drained energy or exhaustion ;2) depersonalization-elevated mental separation from one's job or a sense of negativity about the job; and 3) low personal achievement-diminished professional effectiveness."[1] The Maslach Burnout Inventory (MBI) scale, which employs the mentioned parameters of burnout, is the most popular of numerous proven tools for measuring burnout. Burnout only relates to concerns relating to one's employment and should not be used to represent circumstances in other spheres of life.

Recent discussions have centered on burnout, a global health issue that affects doctors, nurses, and other healthcare professionals (HCPs). The prevalence of burnout among healthcare personnel has increased recently, which is consistent with the idea that people in this profession are more prone to develop it.[2] With up to 78% of doctors reporting at least occasional burnout, experts in the U.S recently declared burnout among healthcare providers to be a public health epidemic. The burden of burnout is found to be 44.2%, 45%, and 50%, among nurses, medical students, and residents respectively.[3]

Healthcare workers experience high amounts of stress at work, as do other employees. Stressful jobs, long shifts without a break, and ongoing anxiety can cause weariness as well as bodily and mental discomfort. Additionally, burnout syndrome can lower job happiness and spark early retirement by raising the chance of medical errors and decreasing workplace interest. Among the signs of burnout, frequent absences from work, a propensity to quit a job, low self-esteem, and drug usage are all common. Burnout is directly linked to decreased patient care, an increased incidence of medical mistakes, decreased patient safety, and thus poor healthcare quality. However, burnout may have a negative effect on the quality of life of HCPs as well.[4]

There are limited in-depth evaluations on the assessment of the burden of healthcare professional burnout in Asian countries, in spite of the developing acknowledgement of the need to hold gifted medical services suppliers and make better the quality of service they provide. While various reviews have examined the incidence and root causes of burnout among healthcare professionals in places like North America and Europe [3], less attention has been paid to the problem in non-western countries. Hence, to bridge this knowledge gap, this systematic review aims to determine the prevalence and predictors of burnout among healthcare professionals in Asian countries. These findings could aid managers and policymakers in creating and putting into practice efficient interventions to reduce burnout and enhance efficiency, productivity, excellence, and

engagement at the workplace.

MATERIALS AND METHODS:

A systematic literature review was conducted including studies published between January 2013 and June 2023. PubMed/Medline and Google Scholar were used to conduct a literature search for relevant articles. The combination of the following MeSH terms and Boolean operators were used: ‘burnout’, ‘healthcare provider’ or ‘health care professionals’, ‘nurses’, ‘physicians’ ‘doctors’, ‘nurses’, 'Asian nations', 'Afghanistan', ‘Azerbaijan', 'Bahrain', 'Bangladesh', ‘Myanmar', 'China', 'India', 'Indonesia', 'Iran', 'Iraq', 'Israel', 'Japan;, 'Jordan', 'Kazakhstan, 'Korea', 'Kuwait', 'Lebanon', 'Malaysia', 'Maldives', 'Nepal', 'Oman', 'Pakistan', 'Qatar', 'Saudi Arabia', 'Singapore', 'Sri Lanka', 'Syria', 'Tajikistan', 'Thailand’, United Arab Emirates', 'Uzbekistan, 'Vietnam', and 'Yemen'.

The inclusion criteria were full-text articles published between January 2013 and June 2023, published in English language, determining the prevalence of burnout using the MBI scale and reporting factors associated with burnout, the study population was healthcare professionals (they included physicians, surgeons, nurses, midwives and others working in hospitals providing healthcare to patients) and the studies conducted in Asian countries.

The studies were excluded if they were in a non-English language, conducted on non-healthcare professionals and medical students, studies related to burnout during the COVID-19 pandemic, studies on workplace stress, anxiety, or depression that do not specifically address burnout, and studies other than cross-sectional studies and systematic reviews articles were excluded in the review.

In the initial stage of study selection, the authors individually screened the papers on the basis of their titles and abstracts, after removing the duplicates. The two authors M.S and N.B evaluated all titles and abstracts retrieved by the searches, and then three authors (M.A, M.A and A.C) read the full texts of the studies independently, which made it past the "identifycation and abstract" screening. The other authors (S.A, M.S and I.H) compiled the data from the included papers using the PRISMA standards (checklist) 2020.

A summary table was created with data extracted from each paper that met the inclusion criteria. The data inclu-ded author name with year of publication, country where study was conducted, sample size, study design, professional group, the prevalence (along with mean score and standard deviation) of overall burnout and its three parameters, that is, 1. High emotional exhaustion (EE) (%), 2. prevalence of high depersonalization (DP) (%), 3. prevalence of low personal accomplishment (PA) (%) and the reported risk factors. Few studies reported burn out scores as mean and standard deviation. Microsoft Excel Software was used for data extraction and data synthesis.

RESULTS:

328 records were found (258 from google scholar and 70 from PubMed) in the initial search, as shown in PRISMA Flow Diagram (Fig 1). Then 75 duplicated articles were removed after initial research. Out of 155 articles, full text 88 articles were selected after removing unrelated abstracts. 21 papers that met the eligibility requirements were included in the final

stage after these articles had been evaluated for eligibility criteria.

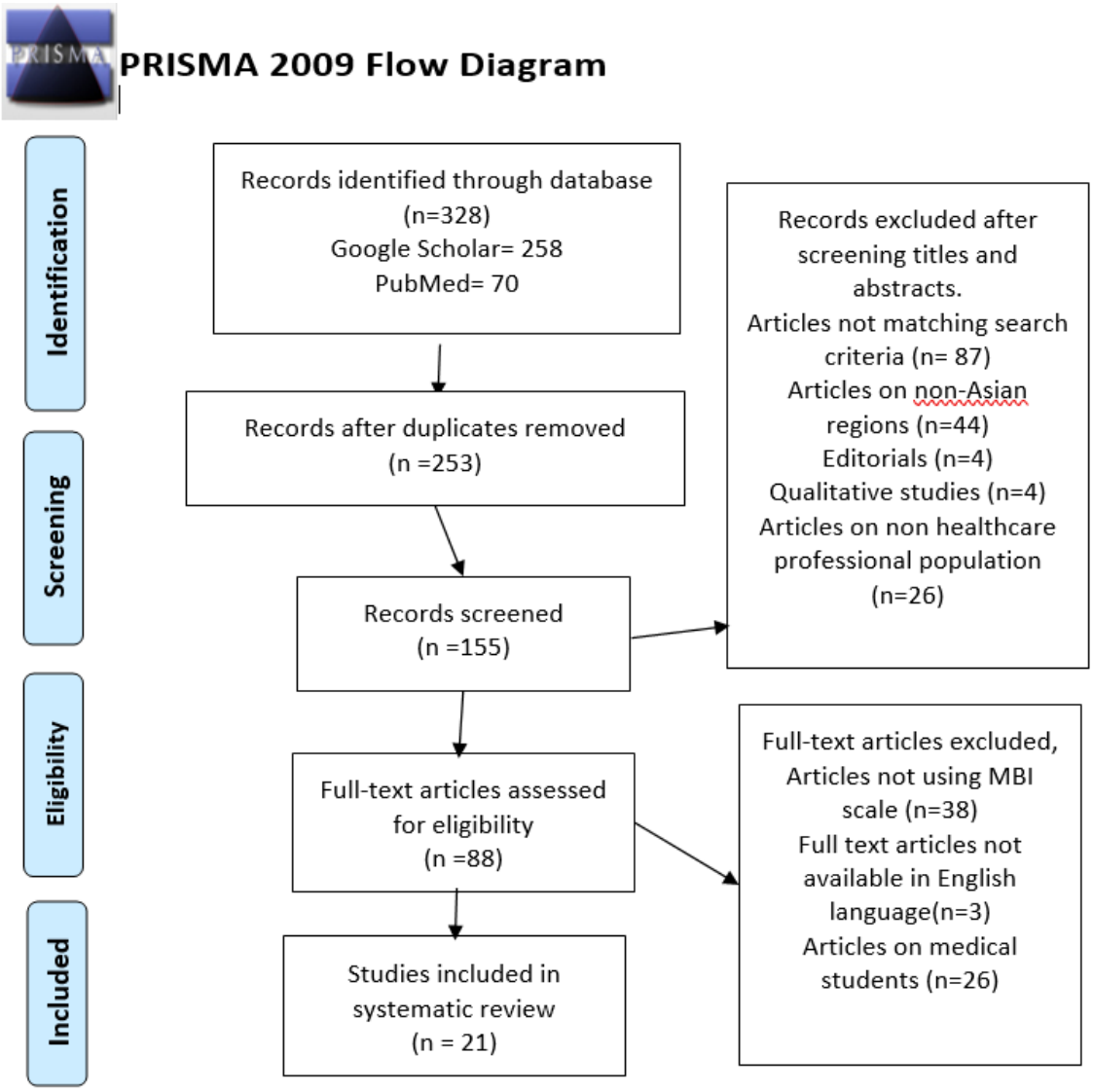

Fig.1 PRISMA flow chart showing the selection of studies (PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-analysis).

Table. 1 Summary of included studies

Sr. No	Author, year of publication, Reference	Country	Sample size	Gender	Study design	Professional Group	Associated factors	Prevalence high EE% mean score ± SD	prevalence high DP% mean score ± SD	Prevalence low PA% mean score ± SD	Overall burnout % mean score ± SD
1.	Mohammed et al. 2013 [5]	Egypt	84	Males (54.8%), females (45.2%)	Cross-sectional	Residents	Long working hours	81.0	64.3	52.4	
2.	Shams and El-Masry, 2013 [6]	Egypt	98	Males (73.5%), females (26.5%)	Cross-sectional	Anaesthesiologists: Residents (30.6%), teaching faculty incl-uding lecturers, assis-tant professors, and professors (69.4%)	Workplace condition Job stress, lack of colleagues and super-visor's support	62.2	56.1	58.2	
3.	Aldrees et al. 2013 [7]	Saudi Arabia	348	Males (72.0%) females (28.0%)	Cross-sectional	Consultants (54.0%), residents (46.0%)	Years of practice	54	35	33	
4.	Al-Sareai et al., 2013 [8]	Saudi Arabia	370	Males (81.9%) and females (18.1%)	Cross-sectional	residents (98.1%), specialists (1.4%), consultants (0.5%)	Age, nationality, and number of working days	29.5	15.7	19.7	
5.	Ding, 2014 [9]	China	1243	not reported	Cross-sectional	Primary healthcare providers	Years of employment, effort-reward ratio	Mean (10.1 ± 6.5)	Mean (5.7 ± 5.2)	Mean (24.1 ± 9.3)	
6.	Cao, 2015 [10]	China	485	females 100 %	Cross-sectional	nurses 100 %	Inverse association: general self-concept, leadership, staff relationship	Mean (27.0 ± 10.6)	Mean (8.4 ± 7.0)	Mean (25.7 ± 9.3)	
7.	Pandey, 2015 [11]	India	177	Females 100 %	Cross-sectional	accredited social health activists 100%	Inverse association: job satisfaction	not reported	not reported		

8.	**Waheed K et al, 2017 [4]**	**Lahore, Pakistan**	**102**	**not reported**	**Cross-sectional**	**gynecological residents**	**EE and DP are higher among residents working in government institutions, those working for 50-60 hours/ week than those working for 80 hrs. /week, and those dissatisfied with their specialty. DP was higher among those who had more than 2 years experience of in postgraduate training**	**71.60**	**52.9**	**49**	
9.	Sheikh et al, 2019 [12]	Pakistan	71	male 32.4% female 67.5%	Cross-sectional	Internal medicine doctors	marital status (single), working hours per week (>6 hrs.), average on-call days(more than 2 days) per week, and expertise level (intern).	47.8	24	25.2	33.8
10.	Kesarwani et al, 2020 [13]	India	3845	not reported	systematic review	Healthcare providers (residents, nurses, paramedical staff, physiotherapists)	younger age, female, unmarried, and challenging work environment	24	27	23	
11.	Gan Y, 2019 [14]	China	1015	not reported	Cross-sectional	general practitioners	unmarried, lower job dissatisfaction, and exposure to workplace violence	24.83	6.21	33.9	
12.	K.S.Linet al, 2018 [15]	Myanmar	159	not reported	Cross-sectional	house officers	social support from colleagues and social support from supervisors-preventive factor	not reported	not reported	not reported	57.2
13.	A.A.Malik etal, 2013 [16]	Lahore, Pakistan	133	male 74% female 26%	Cross-sectional	surgical residents	Job dissatisfaction-risk factors. Having children and having some knowledge of burnout syndrome- protective factors	50.4	49.6	53.4	57.2
14.	S. Rezaei et al., 2018 [17]	Iran	4180	not reported	systematic review	Nurses	the imbalance between salary and workload	not reported	not reported	not reported	36
15.	Maghbouli N, 2019 [18]	Iran	204	males 37.7% females 62.3%	Cross-sectional	Residents	not reported	84.8	96.6	89.2	92.2

16.	**Amiri M et al, 2016 [19]**	**Iran**	**548**	**not reported**	**Cross-sectional**	**primary healthcare providers**	**job resources and interest in the job**	**15.5 ± 13.6**	**3.7 ± 5.4**	**35.5 ± 13.5**	**17.3 high levels 54.1 ± 27.2 mean score**
17.	Hamdan M, 2017 [20]	Israel	444	males 76.8%, females 23.2 %	Cross-sectional	physicians and nurses	younger workers (aged ≤30 years old), exposure to physical violence	64	38.1	36.4	
18.	ElSheikh M, 2021 [21]	Egypt	143	not reported	Cross-sectional	healthcare workers	age (less than 30 years) gen-der (female) marital status (unmarried) and less duration of employment (less than 5 years)	65	37.1	31.5	
19.	D. Vinnikov, 2021 [22]	Kazakhstan	256	males 38%, fem-ales 62%	Cross-sectional	67% of doctors (oncologists) and 33% of nurses	marital status (single) less exercise, poor mental health,	47	63	59	
20.	Zakaria N, 2022 [23]	Malaysia	2428	not reported	Cross-sectional	Nurses	Younger, single, and chi-ldless nurses, those who performed > 6-night shi-fts per month	23.9	4.5	41.6	24.4
21.	Faruq M et al, 2020 [24]	Bangladesh	507 out of which 340 respon ded	not reported	Cross-sectional	physicians and nurses	Inequity in terms of work-life balance, income, hours of sleep, years of expe-rience, amount of work time spent in the intensive care unit, daily patient load in the ICU, and the monthly number of night calls.	3.82	0.88	23.52	21.3

In 21 studies, the number of participants varied from 71 to 4180. A total of 16673 healthcare professionals were included in the review. Studies assessed burden of burnout in Asia among physicians ($N = 1086$), nurses ($N = 7093$), residents (N=1074), house officers (N= 159), Anesthesiologists (N= 98), accredited social health activists (N= 177), combined populations of healthcare workers ($N = 6583$). 3 studies examined burnout among healthcare professionals in Pakistan, 3 in China, 3 in Iran, 3 in Egypt, 2 in Saudi Arabia, 2 in India, and the remaining 5 studies each done in Myanmar, Malaysia, Bangladesh, Israel and Kazakhstan. All are cross-sectional studies except two which are systematic reviews conducted in India and Iran respectively. All studies used the MBI scale for the assessment of burnout. Of 21 studies, 18 studies examined all three components of burnout and 07 studies examined overall burnout. All included studies reported associated risk factors of burnout.

Emotional Exhaustion was assessed in 18 articles, the average score was found to be ranging from 10.1 to 27.0. The lowest prevalence of high EE was seen among physicians and nurses in Bangladesh (3.82%) [24] and the highest was among residents in Iran (84.8%). [18]

18 studies reported high levels of depersonalization, similar to emotional exhaustion with a score ranging from 3.0 to 8.6. The lowest prevalence was seen among physicians and nurses in Bangladesh (0.88%) [24] and the highest among residents in Iran (96.6%). [18]

This was evaluated in 21 studies, the average score ranged from 15.0 to 35.5. The lowest prevalence of low PA was seen among primary healthcare doctors in Saudi Arabia (19.7%) [8] and the highest among residents in Iran (89.2 %). [18]

Out of 29 studies, 11 studies reported the prevalence of overall burnout. The prevalence of overall moderate to high burnout levels ranged from 21.3 % among physicians and nurses in Bangladesh to 92.2% among residents in Iran. [24,18]

Younger healthcare providers (residents, physicians, nurses), who are less than 30 years of age are more prone to develop higher levels of burnout. [8,13,20-,21,23]

Females are more prone to develop emotional exhaustion and overall burnout. [8,13,21]

Studies reported that marital status is strongly associated with burnout and is more prevalent among single physicians and nurses. Having children is either a protective factor or a risk factor for high levels of burnout. [12,13,14,21,22,23]

Several studies show that increased workload including working hours, number of working days, and number of nights/calls per week are associated with high burnout prevalence. [4,5,6,8,12,17,23] Similar finding was reported by a study done in Malaysia on 2428 nurses who developed high levels of burnout who performed < 6-night shifts per month. [23] However, one of the studies conducted on gynecologists in Pakistan reported that working 50-60 hours is associated with the high level of burnout than working over 80 hours. [4] Also, EE and DP were higher among residents working in government institutions. [4]

Job satisfaction is a very protective factor for burnout

as those healthcare providers who desire to leave the job are more likely to develop high burnout. Those who do not choose their department or specialty develop high EE and thus higher levels of burnout. [11,14]

Difficult working conditions are strongly associated with high burnout levels. Exposure of healthcare workers to physical violence in the workplace, reported in of the studies conducted in Israel, is a risk factor for high burnout. [14,20]

A study conducted on house officers in Myanmar reported social support from colleagues and supervisors to be the protective factor for burnout.[15] Also, the study from China reported lack of supervisors' support and poor staff relationship ($p< 0.05$) as predictors for burnout among nurses. [10] Similar finding was reported by a study done in Egypt on 29 residents. [6]

Years of practice, low wages, effort award ratio, level of expertise, imbalance between workload and salary, less duration of employment (less than 5 years), less exercise, poor mental health, and getting depressed <1 time/ week were all strongly associated with high burnout. [7,9,17,22]

A study from Bangladesh done on physicians and nurses reported high burnout was predicted by factors such as the percentage of time spent in the intensive care unit (ICU), the number of patients looked after per day, the frequency of night shifts per month and the number of years of experience. [24]

DISCUSSION:

It has been observed in this systematic review that the prevalence of each MBI dimension is highly variable among a range of healthcare providers including physicians, residents, surgeons, and nurses. This systematic review provides estimates of burnout prevalence among HCP of different Asian countries and provides a broader vision of factors that could affect worker quality, efficiency, productivity, retention at the workplace, and most importantly the quality of patient care and safety. The estimates observed among doctors of internal medicine in the US, family physicians in Canada, and those across many high-income European countries were found to be 43.1 to 48.0%, 32.7% to 46.3%, and 20.3% to 47.9% for increased EE, high DP, and lowered PA, respectively. [25]

The prevalence of all three parameters of burnout among residents is found to be as high as 84.8 % high EE, 96.6% high DP, 89.2% low PA, and overall burnout is 92.2%. A meta-analysis done on medicine and surgery residents reported a 57.18% prevalence of burnout in Asian countries, 27.72% in many European countries, and 21.64% in North America. High-income countries show a low prevalence of burnout due to good job resources, a supportive workplace environment, and good salary packages concerning work demand. [26]

The percentage of nurses being burned out seems to be high in Asian countries, it was found to be 44.9% among nurses in Indonesia. High levels of burnout are found to be associated with being single, work stress, poor staff relationships, frequent night shifts, and long working hours. The findings were comparable with other non-Asian regions where results of all MBI parameters' burnout were consistent, and in some studies, they were higher than levels of self-reported burnout among nurses working in various departments of hospitals in industrialized and/or westernized nations like

Belgium (75% high EE), England (52% high EE), Poland (71% high EE), Scotland (27% high EE), and the US (36% high DP). [3]

The findings of the review suggest that younger age, being female, being single, residency training, increased workload, frequent night shifts, low wages, job dissatisfaction, and workplace violence all are associated with high burnout level. On the other hand, having children, supportive colleagues and supervisors at the workplace, mentorship, and physical activity are associated with a low risk of burnout. The finding of our study that age and gender are strong predictors of burnout is consistent with the study done in America on 7065 family physicians. Malik U and Qayyum S reported that female family physicians were more prone to develop emotional exhaustion (43 to 45%) than male physicians (34 to 37%) for the age groups less than 40. [27]

In our study the factors most associated with burnout among residents, especially gynecological residents, were found to be long duty hours, working in a government setup, specialty dissatisfaction. These findings are similar to the study that discovered that longer working hours and job unhappiness were associated with higher burnout scores among gynecology residents. [2] Martini et al. also reported in their research that residents' productivity was much lower when they worked more than 80 hours each week. Additionally, they discovered that, across all specialties, gynecological residents were most affected by working hours (75% burnout rate). [28]

Better primary health care needs a workforce that can provide efficient, high-quality health care and is easily accessible in Asian countries. Lessening burnout, giving a sympathetic environment, creating valuable open doors for individual accomplishment and development, lessening stress, and sustaining motivation are all important for health systems to keep their present medical and paramedical staff. [29] Interventions that promote better interpersonal relationships, more positive work settings, supportive supervision (such as mentoring), training benefits, awareness of oneself, and mindfulness training may all play a role in lowering burnout rates. After only one day of training in the United States, 84 mental health professionals reported considerably decreased levels of emotional fatigue and depersonalization, suggesting that the training was effective in preventing burnout. Some ongoing investigations on interventions to reduce burnout and enhance patient outcomes are being conducted in high-income nations; however, these studies are frequently restricted to particular cadres or locations, and more comprehensive investigations on the success of interventions are frequently lacking. [30]

There are a few significant limitations to our paper. Different types of healthcare professionals in Asia were surveyed, and we used data from two popular online databases. Non-English articles and papers published other than in the databases we chose were, however, left out. While we reported the total number of participants in each study, we did not report the total number of respondents. The results of our study may not apply to other situations or contexts because almost all studies are cross-sectional. In spite of these constraints, we were however able to spot

recurring patterns in burnout among different categories of health workers and across different Asian countries.

For a better understanding of burnout and to mitigate its effect on providers' retention and service quality, further studies should focus on the determination of i) the burden of burnout of different healthcare professionals at different levels in the healthcare system; ii) variables in terms of demographics, socioeconomics, institutions, and politics that contribute to or alleviate provider burnout; and iii) interventions and strategies to minimize the burden of burn out. Such studies can help inform health and policy decision-makers about how to increase provider productivity, efficiency, and quality as well as perhaps employee retention.

CONCLUSION:

A skilled, efficient, and motivated workforce is needed in Asian countries to provide high-quality healthcare. Our findings demonstrate that provider burnout affects a wide range of healthcare provider cadres in numerous countries with varying healthcare systems. Despite the numerous pressures affecting its healthcare community, Asia has not focused as much attention on burnout as high-income nations have. Given the detrimental health implications of burnout on both patients and providers, more attention has to be paid to the well-being of healthcare personnel in Asia.

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