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Prevalence of burnout among urologist and its risk factors in Indonesia

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Abstract

Objective To evaluate burnout syndrome among Indonesian urologists by describing its prevalence and risk factors.

Materials and methods This is a cross-sectional study conducted from February to April 2020. A validated Indonesian version of the Maslach Burnout Inventory that consists of 22 questions addressing emotional exhaustion, depersonalization, and personal achievement was utilized. The questionnaire was constructed using Google Forms (Google, Inc.) and was distributed via e-mail and WhatsApp Messenger (Facebook, Inc.). Burnout was defined as either high score on emotional exhaustion, or high score on depersonalization, or low score on personal achievement. Several variables were analyzed as risk factors to burnout using multivariate analysis. All statistical analyses were carried out using Statistical Software for Social Science (SPSS) version 23.

Results From 486 eligible members of IUA, 184 (37%) respondents completed the questionnaire. Burnout syndrome was detected in 43 respondents (23.4%). From the results, most of the respondents have low EE (54.9%), low DP (77.7%), and moderate PA (45.7%). Bivariate analysis showed that age of less than 44 years old and being single were associated with increased risk of burnout with OR 2.2 (1.0–5.1, 95% CI, *p-value* 0.04) while being married decreases risk of burnout with OR 0.2 (0.1–0.8, 95% CI, *p-value* < 0.01). Lower work load in COVID-19–19 era was related to protective results with OR 0.4 (0.2–0.9, 95% CI, *p-value* 0.03). Multivariate analysis showed that being married decreases risk of burnout with OR 0.3 (0.1–0.9, 95% CI, *p-value* 0.04). Multivariate analysis showed that being married was the only significantly protective factor from burnout.

Conclusion Burnout syndrome among majority of urologists in Indonesia has a moderate degree of burnout, with being married the only significant factor influencing burnout in this study.

Keywords Burnout syndrome, Emotional exhaustion, Depersonalization, Personal achievement, Maslach Burnout Inventory, Urologist

1 Background

1.1 Introduction

Burnout was found to influence personality. Maslach and Jackson in 1981 defined burnout as a psychological syndrome that is best described by using three non-mutually exclusive dimensions: emotional exhaustion (EE), depersonalization (DP), and a low sense of personal achievement (PA) 1. EE is described as a feeling of being emotionally overextended and exhausted by one's work; DP is described as a lack of feeling and impersonal response toward recipients of one's service; PA is described as feelings of competence and achievement in one's work 1. Burnout was defined as either high score on emotional exhaustion, high score on depersonalization, or low score on personal achievement. In terms of exhaustion, human beings suffer not only physically but also emotionally. Moreover, such exhaustion is mostly undetected, but rendered oneself

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vulnerable, thus forcing them to produce suboptimal performance in work or even work-related accidents. Emotional exhaustion is more difficult to detect than its physical counterpart but is not any less detrimental to one's performance, even inducing work-related accidents.

Burnout syndrome is caused by multiple factors, such as too many bureaucratic tasks, too many working hours, and also rapidly increasing computerization of practice. Burnout is correlated with deterioration of concentration, reaction time, memory and cognitive processes, which ultimately influences the severity of work accidents 2, 3. This syndrome could lead to catastrophic events as it could affect one's performance 3. In the medical field, burnout among health workers is correlated with medical errors and increased patient complaints 4, 5. Due to weariness and lack of concentration, operators, for example, could potentially perform a procedure incorrectly, causing harm to the patient's surrounding organs. These mistakes could even potentially cause death, in severe cases.

Documented burnout among urologists was as high as 63.6% 6. Several reports demonstrate that burnout was identified as early as residency training and continues to be a significant factor of job dissatisfaction, interpersonal conflicts, and substance abuse, even for urologists who are well into their senior years of practice. Although several international reports confirm the existence of burnout, only a few probes its etiology and even fewer propose solutions.

Urologists in Indonesia navigate a challenging healthcare environment, with urban specialists facing high patient loads and the need to stay abreast of advanced medical technologies. In contrast, those in rural areas grapple with resource limitations and fewer training opportunities. As per Indonesia Government regulation number 30/MENKES/PER/2020 7, hospitals are categorized into types A to D based on facilities and human resources. Type A hospitals serve as the primary referral centers with comprehensive services, including sub-specialties. Types B and C hospitals, which are potential stress factors, offer varied specialist services: Type B has at least 16 specialists and 2 sub-specialists, while Type C provides at least 8 specialists. Type D hospitals, however, don't offer specialist services.

It is essential to identify the problem such as prevalence and its risk factors among Indonesian urologists before constructing a mitigation strategy to prevent any adverse event in performing urology services. Using the Maslach Burnout Inventory (MBI) questionnaire, this study aimed to map burnout prevalence and its risk factors among Indonesian urologists.

2 Materials and methods

2.1 Study design

It was a cross-sectional study using electronic-based survey.

2.2 Setting and participants

Survey was conducted using an electronic-based questionnaire, Google Forms (Google, Inc.), and was distributed from February 2020 to April 2020 (3rd March as the cutoff for the occurrence of COVID-19) via e-mail and WhatsApp Messenger (Facebook, Inc). The sample of this study was selected using purposive sampling technique with the following criteria: all registered urologists that work from private hospitals, type A hospitals to C type Hospital based on Indonesian Urology Association (IUA) database and have worked for at least six months. Collect the sample with the criteria aforementioned until the specified time limit (April 2020). Exclusion criteria are a urologist who does not reply or does not respond after we contact the urologist. The minimum sample size for this research is 173 respondents as calculated for the sample size of cross-sectional studies. The reporting of the study follows the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement. See flowchart in Fig. 1.

2.3 Questionnaire construction

A questionnaire was constructed to identify burnout and possible risk factors in urologists and divided into four parts: (1) socio-demographic, (2) Indonesian version of the MBI translated and validated by Widhianingtanti 8, (3) possible burnout stress factors, and (4) other questions. Possible burnout stress factor part was developed using Likert scale which consists of 5 points, with each point representing a subjective measure of related stress factors, based on study conducted by O'Kelly 2. Based on Indonesia Government regulation number 30/MENKES/PER/2020 7, hospitals in Indonesia could be categorized as type A, B, C, and D depending on availability of its facilities and human resources. Type A hospital is considered as the highest referral hospital with complete facilities and human resources, including sub-specialist services and type D hospital. Only types A, B, and C were considered as possible stress factors since type D hospitals don't offer specialist services. Type B hospital is a hospital that provides medical facilities and capabilities of at least 4 basic specialists, 4 medical support specialists, 8 other specialists, and 2 basic sub-specialists. Type C hospital is more limited in their medical services, which provide at least 4 basic medical specialists and 4 medical support specialists. Type D hospital is a limited hospital with at least 2 basic medical specialists. The other part

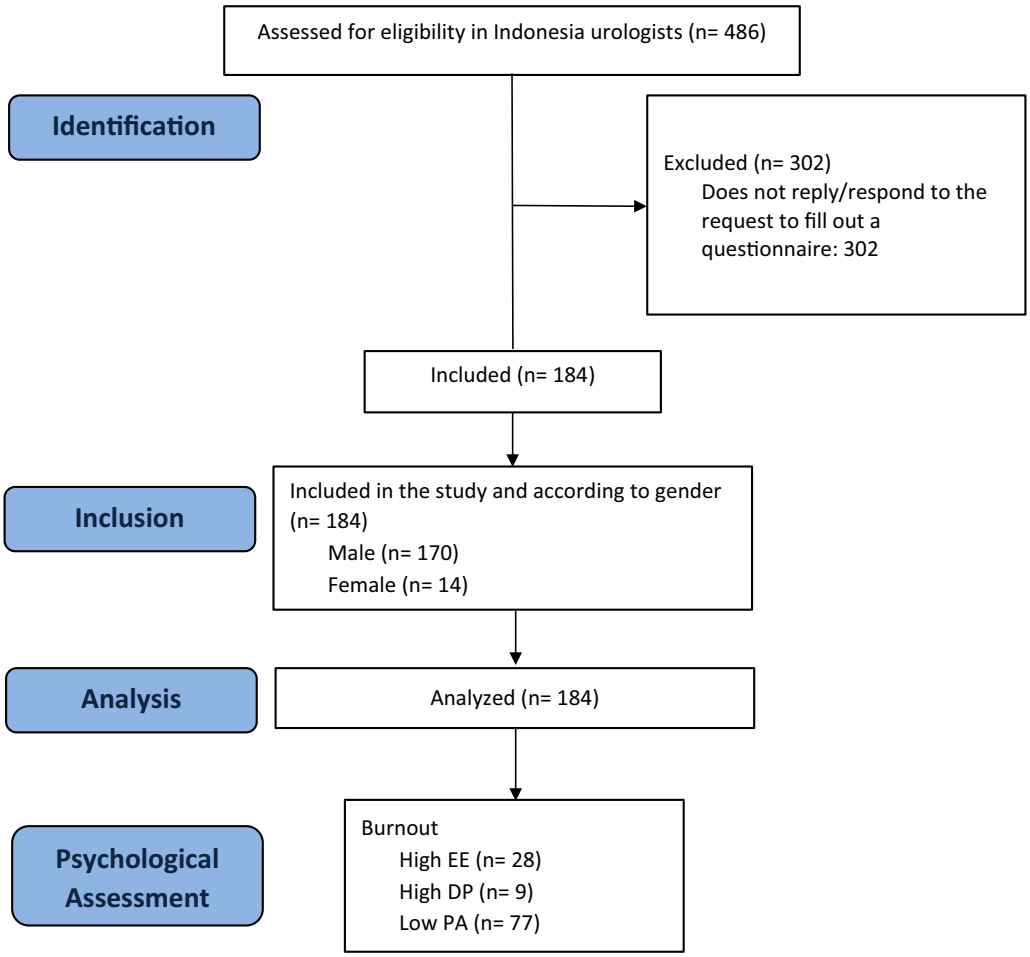

Fig. 1 STROBE flowchart

of the questionnaire was built to explore respondent's drinking and smoking habits and whether participants seek for consultation or used drugs to overcome burnout syndrome. All questions within the questionnaire were developed using Bahasa Indonesia. (English version of the questionnaire is shown in Additional file 1: Appendix 1.)

2.4 Respondent consent and ethical clearance

Implied consent was used in this study's questionnaire. All respondents had the full rights to decide regarding their participation in this study. Therefore, a positive response to the questionnaire was considered as active consent. This study has been approved by the Ethical Committee/Institutional Review Board of The Faculty of Medicine, Universitas Indonesia–Cipto Mangunkusumo Hospital (Number of Letter KET-246/UN2.F1/ETIK/PPM.00.02/2023).

2.5 Data and statistical analysis

Data were presented in a descriptive and analytic manner. Categorical data were presented as an absolute value and its percentage, except for 'possible stress factor' questions, and numerical data were presented as mean and its standard deviation or median and its range depending on normality of data distribution. Since the Coronavirus disease 2019 (COVID-19) pandemic happened in the middle of data collection, this study was also presented as a time variable. Data collected before March 3, 2020, were assigned as "Before COVID-19 pandemic" and after this date as "During COVID-19 pandemic." This variable was also analyzed for its association to burnout syndrome.

MBI consists of 22 questions and divided into three major parts, including emotional exhaustion (EE), depersonalization (DP), and personal achievement (PA). Each question scored on seven-point scales running from 0 to 6, and the result can be classified as low (EE = 0–16, DP = 0–6, PA ≥ 39), moderate (EE = 17–26, DP = 7–12, PA = 32–38), or high (EE ≥ 27, DP ≥ 13, PA = 0–31).

Subjects who showed high scores in emotional exhaustion or depersonalization or low scores in personal achievement were counted as burnout 9. All data from possible stress factor questions were treated as numerical variables and all presented as mean, even though they had abnormal data distribution.

Socio-demographic data and possible stress factors data were analyzed using bivariate analysis. The age variable was categorized into two groups: < 44 and ≥ 44 years old 2. Nonparametric analysis was used for numerical data with abnormal data distribution. A cutoff *p-value* < 0.20 in bivariate analysis was further analyzed using logistic regression and *p-value* < 0.05 considered as statistically significant. Outcomes included in this study are *p-value* and odds ratio (OR) to know which stress factors or socio-demographic characteristics could influence burnout. All analyses will be done using Statistical Software for Social Science (SPSS) version 23.

3 Results

From a total of 486 eligible urologists to participate in this study, 184 respondents (37% response rate) returned the questionnaire. In the sampled group, a majority of the respondents were male, accounting for 92.4% (170 individuals), while females represented a smaller portion at 7.6% (14 individuals). When considering marital status, the majority, 94% (173 individuals), were married, and a smaller proportion, 6% (11 individuals), were single. Respondents' socio-demographic characteristics are presented in Table 1.

Overall burnout syndrome rate among respondents was 23.4%. In the emotional exhaustion (EE) dimension, a majority of the participants, 54.9% (101 individuals), reported low levels. For the depersonalization (DP) dimension, a significant 77.7% experienced low levels. Regarding personal achievement (PA), 41.8% had low scores. Meanwhile, in terms of those with more severe burnout, 15.2% scored high in EE dimension, 4.9% scored high in DP dimension, and 12.5% scored high in PA dimension. The MBI classification distribution for each dimension of MBI and it score are shown in Table 2. Moreover, analysis of socio-demographic variables and possible stress variables which might influence burnout syndrome is shown in Table 3, 4 and 5.

As for the outcomes, we evaluate smoking and alcohol consumption. Bivariate analysis using Chi-square showed respondents with burnout syndrome smoking rate were higher than those without burnout syndrome (OR 3, 95% CI, 1.3–7). A similar result was shown in alcohol consumption; those with burnout syndrome tend to consume alcohol more than those without burnout syndrome (OR 2.7, 95% CI, 1.1–6.7).

Table 1 Respondents' socio-demographic characteristics

Variables	
Age, years old, median (range)	39 (30–77)
Gender, *n* (%)	
Male	170 (92.4%)
Female	14 (7.6%)
Marital status, *n* (%)	
Single	11 (6%)
Married	173 (94%)
Number of workplaces, *n* (%)	
1	16 (18.7%)
> 1	168 (91.3%)
Working experience, years, median (range)	5 (1–45)
Primary workplace, *n* (%)	
Primary teaching hospital	55 (29.9%)
Affiliated teaching hospital	50 (27.2%)
Non-teaching public hospital	36 (19.6%)
Private hospital	43 (23.4%)
Structural position, *n* (%)	
Yes	84 (45.7%)
No	100 (54.3%)
Questionnaire filling time, *n* (%)	
Before COVID-19 pandemic	72 (39.1%)
After COVID-19 pandemic	112 (60.9%)

Table 2 Overall prevalence and level of MBI dimensions among Indonesian urologist

MBI dimension	Low	Moderate	High	Mean Score (SD)
EE	101 (54.9%)	55 (29.9%)	28 (15.2%)	16.3 ± 9.9
DP	143 (77.7%)	32 (17.4%)	9 (4.9%)	4.17 ± 4.1
PA	77 (41.8%)	84 (45.7%)	23 (12.5%)	37.5 ± 6.3

4 Discussion

From the results, most of the respondents have low EE (54.9%), low DP (77.7%), and moderate PA (45.7%). Urologists below 44 years old are considered young urologists who are 2.2 times more likely to develop burnout syndrome. The component of burnout syndrome most associated with age is DP, and EE 10. Higher rates of DP and EE in younger urologists might be caused by routine cognitive workload, performance anxiety, and fear of patient complications since such urologists are relatively inexperienced 11. This is consistent with previous study conducted by Franc-Guimond et al. 6, which explains that junior urologists have more multiple administrative roles in academic institutions than their senior counterparts.

Urologists at their early stages are considered to be 'vulnerable' at that point in their careers 6. A study by

Table 3 Statistical analysis comparing sub-stratified independent variables with burnout among Indonesian urologist

Variables	Burnout syndrome, *n* (%)	Odds ratio (95%, CI)	*p*
Age, years			
≤ 44	34 (27.9)	2.2 (1.0–5.1)	0.04*
> 44	9 (4.5)	0.4 (0.2–0.9)	
Marital status			
Married	37 (21.4)	0.23 (0.1–0.8)	0.021*
Divorced	3 (75)	0.4 (0.31–5.151)	0.60
Single	3 (42.9)	Ref.	
Number of workplace			
1	2 (12.5)	0.4 (0.9–2)	0.36
≥ 2	41 (24.4)	2.5 (0.5–1.1)	
Structural position	15 (17.9)	0.5 (0.3–1.1)	0.10
Vacations			
Once a week	7 (18.4)	Ref	Ref
Once every 2 weeks	2 (25)	1.5 (0.2–8.9)	0.64
Once a month	6 (24)	1.4 (0.4–4.8)	0.75
Once every 3 months	12 (23.1)	1.3 (0.5–3.8)	0.79
Once every 6 months/ less	16 (26.2)	1.5 (0.6–4.3)	0.46
COVID-19 Era	20 (17.9)	0.4 (0.2–0.9)	0.03*

significance if the p < 0.05

Rodriguez-Socarras et al. 12 found that young urologists and residents have tendencies to exercise too little and consume an unbalanced diet. Also, both groups often suffer from sleep disturbances. Those factors may be associated with a higher risk of burnout syndrome 12. Roumiguie et al. 13 explained that burnout syndrome severity decreased along with increased age and senior status. This finding may also reflect the 'survivor effect,' especially for those who felt unable to manage the position demands 2. Porto et al. 9 explained that older physicians tend to experience less burnout due to developed coping mechanism, which includes becoming more mature and confident, toward the demands of being a physician.

Urologists who are currently married decreased risk of burnout ($p = 0.021$). This might be due to the reason that married physicians are usually older and more psychologically mature, thus being able to cope with stress better 14. Other than that, such physicians have higher interpersonal skills, problem-solving skills, and adaptability as they have been involved with their families 11. However, a study by Guler et al. (2019) found that burnout syndrome test scores were not significantly different between single and married health professionals 15. Franc-Guimond et al. 6 also stated that even the presence of familial support seems to be weighed down by professional factors such as poor professional relationships and malpractice claims. Thus, it can be concluded that the association between marital status perhaps the 'quality' of the marriage is also a factor and burnout syndrome is still inconsistent. Even so, based on research, divorce has an influence on burnout. It was discovered that higher levels of divorce fatigue were strongly predicted by fewer

Table 4 Stress factors related to burnout syndrome based on Likert scale

Stress factors	With burnout syndrome, mean ± SD (95%, CI)	Without burnout syndrome, mean ± SD (95%, CI)	*p*
Operative stress	3.4 ± 1.2 (2.92–3.79)	2.9 ± 0.9 (2.63–3.08)	0.002*
Administrative workload	3.3 ± 1.2 (2.85–3.73)	2.6 ± 1.1 (2.32–2.84)	0.003*
Inadequate support/communication with management	3.1 ± 1.3 (2.57–3.56)	2.1 ± 1.0 (1.83–2.30)	< 0.001*
Salary	3.1 ± 1.1 (2.73–3.53)	2.2 ± 0.8 (1.96–2.36)	< 0.001*
Inadequate support/communication from colleague	2.8 ± 1.2 (2.34–3.21)	1.9 ± 1.0 (1.67–2.12)	< 0.001*
Patient decision-making or care in wards/clinic	2.8 ± 0.8 (2.51–3.17)	2.1 ± 0.8 (1.89–2.28)	< 0.001*
Working in private hospital	2.5 ± 0.8 (2.14–2.76)	1.8 ± 0.9 (1.62–2.02)	< 0.001*
Working in type B hospital	2.7 ± 1.1 (2.26–3.03)	1.8 ± 0.9 (1.64–2.04)	< 0.001*
Teaching	2.3 ± 1.1 (1.89–2.69)	1.9 ± 0.9 (1.67–2.07)	0.022*
Working in type C hospital	2.6 ± 1 (2.18–2.91)	1.7 ± 0.8 (1.53–1.89)	< 0.001*
Medicolegal issues	2.83 ± 1.1 (2.13–3.54)	2.9 ± 1.0 (2.61–3.33)	0.67
Research	2.9 ± 1.5 (2.41–3.31)	2.6 ± 1.2 (2.45–2.83)	0.437
Working in primary teaching hospital	1.8 ± 1.2 (1.08–2.59)	2.2 ± 1.1 (1.79–2.57)	0.416
Working in affiliated teaching hospital	1.7 ± 0.9 (1.10–2.23)	1.8 ± 0.9 (1.51–2.14)	0.071
Working in type A hospital	1.67 ± 1.1 (0.98–2.35)	2.1 ± 0.9 (1.76–2.41)	0.804
Working in non-teaching public hospital	1.3 ± 0.7 (0.92–1.75)	1.7 ± 0.8 (1.38–1.97)	0.191
Structural position	1.2 ± 0.6 (0.8–1.53)	2.3 ± 1.0 (1.91–2.62)	0.145

significance if the p < 0.05

Table 5 Multivariate analysis of significant variables

Variables	Burnout syndrome, *n* (%)	Without burnout syndrome, *n* (%)	Total	Odds ratio (95%, CI)	*p*	Multivariate OR (95%, CI)	*p*
Age, years							
≤ 44	34 (27.9)	88 (72.1)	122	2.2 (1.0–5.1)	0.04	1.8 (0.8–4.3)	0.13
> 44	9 (4.5)	53 (85.5)	62				
Marital status							
Married	37 (21.4)	136 (78.6)	173	0.2 (0.1–0.8)	< 0.01*	0.3 (0.1–0.9)	0.04*
Divorced	3(75)	1 (25)	4	0.4 (0.3–5.1)	0.60		
Single	6 (85.7)	1 (14.3)	7	Ref			
Structural							
Yes	15 (17.9)	69 (82.1)	84	0.5 (0.3–1.1)	0.1	0.6 (0.3–1.3)	0.22
No	28 (28)	72 (72)	100				
COVID Era							
Yes	20 (17.9)	92 (82.1)	112	0.4 (0.2–0.9)	0.03*	0.5 (0.2–0.9)	0.052
No	23 (31.9)	49 (68.1)	72				

significance if the p < 0.05

prior divorces, former spouses initiating divorce, not having a new partner, and higher levels of burn out 16. In this study, specifically for divorce respondents, it has an MBI value of emotional exhaustion domain 24 ± 8.28, depersonalization domain 7.5 ± 4.43, personal achievement domain 31.75 ± 7.7.

This study found that the COVID-19 era is associated with a lower risk of burnout syndrome in the participants (OR = 0.4, $p = 0.03$). This may be because of the physical and social distancing policy to tackle the COVID-19 health problem in Indonesia. Patients in this era tend to avoid going to health care facilities due to fear of being infected. Thus, patients in the urology department decrease, minimizing the workload of urologists. However, this pandemic actually increases the risk of burnout syndrome in other departments, such as emergency unit, intensive care, and radiology, which are considered front line medical staff for COVID-19 15. Outside the COVID-19 era, specialties associated with increased risk of burnout syndrome include emergency, family, and internal medicine 17. Other than doctors, nurses are also affected in the same manner, although less than medical personnel 18. Increased risk of burnout syndrome in those departments is due to high workload, fear of being infected, lack of personal protective equipment, and disrupted social support because of isolation or quarantine. 19

The change of working environment and shift of the national health coverage toward COVID-19 diagnosis and treatment also play a role. This altered state of national health coverage from the past results in more time and work relegated to the documentation required by the medical staff and/or patient to successfully claim the insurance. A study by Reith et al. 20 stated that such confusing and burdensome bureaucratic tasks lead to a higher risk of burnout and reduce the critical time that physicians need to provide optimal care for the patients.

The most influential stress factor for burnout syndrome is operative stress ($p = 0.002$), followed by administrative workload ($p = 0.003$), inadequate support/communication with management ($p < 0.001$), and salary ($p < 0.001$). Operative stress is more commonly found in younger surgeons and is independently associated with a perceived lack of autonomy and frustration at work 2. Such lack of independence in junior surgeons is common in Indonesia, since much of the work tends to be delegated to the juniors. Other than surgical workload, it also leads to the more administrative workload of junior surgeons, such as more electronic health record (EHR) work. 11

Inadequate support/communication with hospital management plays a role in increasing burnout risk 2. Unfinished inquiry related to late wage payment due to incoordination between hospital and national health coverage in Indonesia was one of the biggest issues. Practicing physicians are more concerned with providing patients with services that often result in cost overruns. On the contrary, management seeks to minimize cost, but in doing so, the goals of delivering the best medical treatment sometimes forfeited in the process. Therefore, lack of communication with hospital management might increase the likelihood of burnout, causing clinicians to put in more effort in achieving these goals with the little amount of working room provided, in terms of cost and budget. Late wage payment directly impacts salary; therefore, it becomes the fourth major stress factor which is pictured as lack of appreciation. Compared to two

other studies, similar results were showed that salary or financial concern acts as a causative factor. 2, 6

In this study, burnout syndrome leads to increased alcohol consumption (OR = 3) and smoking activity (OR = 2.7). Alcohol may be an effort of the physicians to combat their burnout state 6. This shows that such physicians are reluctant to seek professional help 2. Alcohol consumption is also more commonly found in urology residents who are junior urologists, up to 2–3 times/week 12. Another study by Porto et al. 9 found that surgeons had a higher mean PA score, which shows that alcohol is related to the presence of stress and vulnerability at work. Since this is a cross-sectional study, it is unclear whether alcohol and smoking are indeed the outcomes or the factors preceding burnout syndrome. Alcohol and smoking could be a risk factor for burnout syndrome, as a similar study with a systematic review conducted by Galaiya et al. 21 found that surgeons who misuse alcohol and smoke cigarettes have higher levels of burnout 22. However, some studies found no significant difference in burnout syndrome between smokers and non-smokers [9, 23]. It should be taken into account that the prevalence of alcohol consumption and smoking in Indonesia is less than in other countries; thus, it could explain any differences in results or magnitude.

This study has some limitations. First, this study does not implement a randomized sampling method, as we excluded urologists who does not reply or does not respond after we contact the urologist. Other than that, there might be subjective respondent unwillingness, to be honest, answering questions related to alcohol and smoking, most probably due to fear of judgment. This may create a response bias. Another limitation is that this study has a cross-sectional design, in which the exposures and outcomes are measured at the same point in time. This creates an observation bias, especially for the alcohol and smoking variables, as it cannot be determined which variable preceded the other, thus not allowing causal explanation. Finally, the Maslach Burnout Inventory (MBI) used in this study is translated into the Indonesian language and officially published in JP3I (Jurnal Pengukuran Psikologi dan Pendidikan Indonesia) [24].

5 Conclusion

In summary, a moderate prevalence of burnout syndrome is observed among Indonesian urologists, with younger ones more affected. While marital status appears protective in this study, the COVID-19 pandemic has reduced burnout likelihood, possibly due to decreased patient numbers. Primary stressors include operative stress, administrative tasks, poor management communication, and salary concerns. The syndrome is linked to increased drinking and smoking, but causality is uncertain due to the study's design. As such, both urologists and their respective hospital institutions are promoted to actively reduce the presence of these specific stressors. Nevertheless, further studies, preferably prospective cohort studies, should be conducted to minimize bias by properly defining the exposure and outcome.

Abbreviations

COVID-19	Coronavirus disease of 2019
DP	Depersonalization
EE	Emotional exhaustion
HER	Electronic health record
IUA	Indonesian Urology Association
JP31	Jurnal Pengukuran Psikologi dan Pendidikan Indonesia
MBI	Maslach Burnout Inventory
OR	Odds ratio
PA	Personal achievement
SPSS	Statistical Software for Social Science

Supplementary Information

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Additional file 1 English version of the Maslach Burnout Inventory questionnaire.

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Author contributions

CAM did the conceptualization, methodology of the research, supervised the research and manuscript writing, and validated results of the research. RR performed the data collection, investigation, statistical analysis, and completion of the original draft. FR helped in methodological input, supervised the research, and also reviewed and edited the overall draft. RM performed the data collection, methodological, and statistical analysis of the research. Ensuring issues concerning the accuracy or integrity of the study have been examined and resolved by all contributors who agreed to be held accountable for the study.

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Availability of data and materials

This is not applicable to this research work.

Declarations

Ethics approval and consent to participate

This study has been approved by the Ethical Committee/Institutional Review Board of The Faculty of Medicine, Universitas Indonesia–Cipto Mangunkusumo Hospital (Number of Letter: KET-246/UN2.F1/ETIK/PPM.00.02/2023). A written informed consent was taken from all subjects.

Consent for publication

Written informed consent was obtained from the subjects for publication of this study.

Competing interests

The authors declare that they have no competing interests.

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