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Fostering Nurses' Support in the Workplace: Addressing Job Burnout Among Malaysian Medical Doctors Working in Public Hospitals

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Abstract: Job burnout in employees is caused by individual factors, including demographic characteristics and nurses' support. This study analyzed the relationship between nurses' support and job burnout among medical doctors in Malaysian public hospitals. This research was a correlational study with a cross-sectional design. The research sample was 471 employees, using the non-probability sampling method with the purposive and quota sampling techniques. Data collection used the Abbreviated Maslach Burnout Inventory (aMBI) and nurses' support items. The data in this study were analyzed using the Statistical Package Social Science (SPSS) and Partial Least Squares Structural Equation Modelling (PLS-SEM) software. Findings suggest that 77 medical doctors who participated in the study were from Hospital Pulau Pinang, from the Emergency Department, mostly female, ranging from 24-56 years old, single, and have an MBBS education level. The study assessed the measurement model's loading, average variance extracted (AVE), and composite reliability (CR) where the loadings were above 0.60. AVEs were greater than 0.50 and CRs were greater than 0.708. Additionally, the bootstrap BCI LL (-0.079) and UL (-0.002) for nurses' support and job burnout were not straddled a 0 in between. Job burnout had a negative association with nurses' support. In particular, nurses' support towards medical doctors lowers their risk of job burnout, which has a substantial impact on medical doctors' overall well-being. The findings indicated that medical doctors who had complete support from their nurses performed their jobs more efficiently, displayed good task performance, and experienced less job burnout.

Keywords: *Nurses' support, job burnout, Malaysian public hospitals, medical doctors, embedded two-stage approach, PLS-SEM*

1. Introduction and Background

Job burnout is a significant issue affecting medical professionals at all stages of their careers. It is characterized by emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment (Maslach et al 2001). Burnout can lead to detrimental effects on both the individual medical doctors and health care professionals. Burnout among Malaysian medical doctors is a pressing public health issue and the COVID-19 pandemic has brought this addressed issue into immediate awareness the pandemic has worsened it (Abdulmohdi, 2024; Chow, Francis, Ng, Naim, & Beh, 2021; Khan, Ntatamala, Baatjies, & Adams, 2024; Melnikow et al., 2024; Woon & Tiong, 2020). With 79,440 medical doctors and 78, 118 nurses in public hospitals in a variety of specialties and settings affected by the ongoing stresses of the increased workload and emotional burden, monitoring and protecting the well-being of all medical doctors working in public hospitals is of utmost importance (Guastello, 2024; Ministry of Health, 2022). Job burnout consists of emotional exhaustion, depersonalization, or reduced feelings of accomplishment. Burnout can happen in any employment setting but is especially relevant in healthcare professionals because it leads to an increase in compassion fatigue, workplace turnover (Sheng, Tian, Sun, Hou, & Liu, 2023), lower quality of care, decreased patient satisfaction and increased rates of medical errors. According to Omar and Nasurdin (2019), social support includes subordinate relationships in medical settings, such as nurses establishing special relationships to ensure the smooth of delivering services to patients.

Nurses provide important support to medical doctors such as ensuring necessary information has been provided by medical doctors correctly and completely, ensuring blood samples are taken from the corrected patient by the medical doctors, ensuring consent is taken and initialed by the medical doctors, patient or patient's relatives and witnessed by the nurses in charge, ensuring that there are written instruction from the medical doctors before serving medicine to the patient, ensuring the medical doctor in charge signed on the

result's slip and attached it to the patient's record before dispatching to the record office and treating injury patient according to the medical doctor's order. There is a dearth of research on job burnout associated with healthcare workers (HCW) especially medical doctors working in Malaysian public hospitals (Chow et al., 2021; Fauzi et al., 2020; Ismail, Lee, Tanjung, Jelani, & Latiff, 2021; Lau, Hadi, Marzuki, Ismail, & Che Ismail, 2024; Leong, 2023). Generally, literature is abundant on employee well-being such as job satisfaction (Chew, Ramli, Omar, & Ismail, 2013; Dousin, Collins, & Kler, 2019; Ramlan, Rugayah, & Zarul Zafuan, 2014; Roslan, Noor Hazilah, Nor Filzatun, & Azahadi, 2014), health behaviors (Alexandra-Karamanova et al., 2016), and absenteeism (Danna & Griffin, 1999) in the context of health care professional. Thus, there is a need to do a more in-depth study on nurses' support of medical doctors' job burnout as the amount of research done focusing on this matter is scarce, and the generalizability of this study is limited.

2. Literature Review

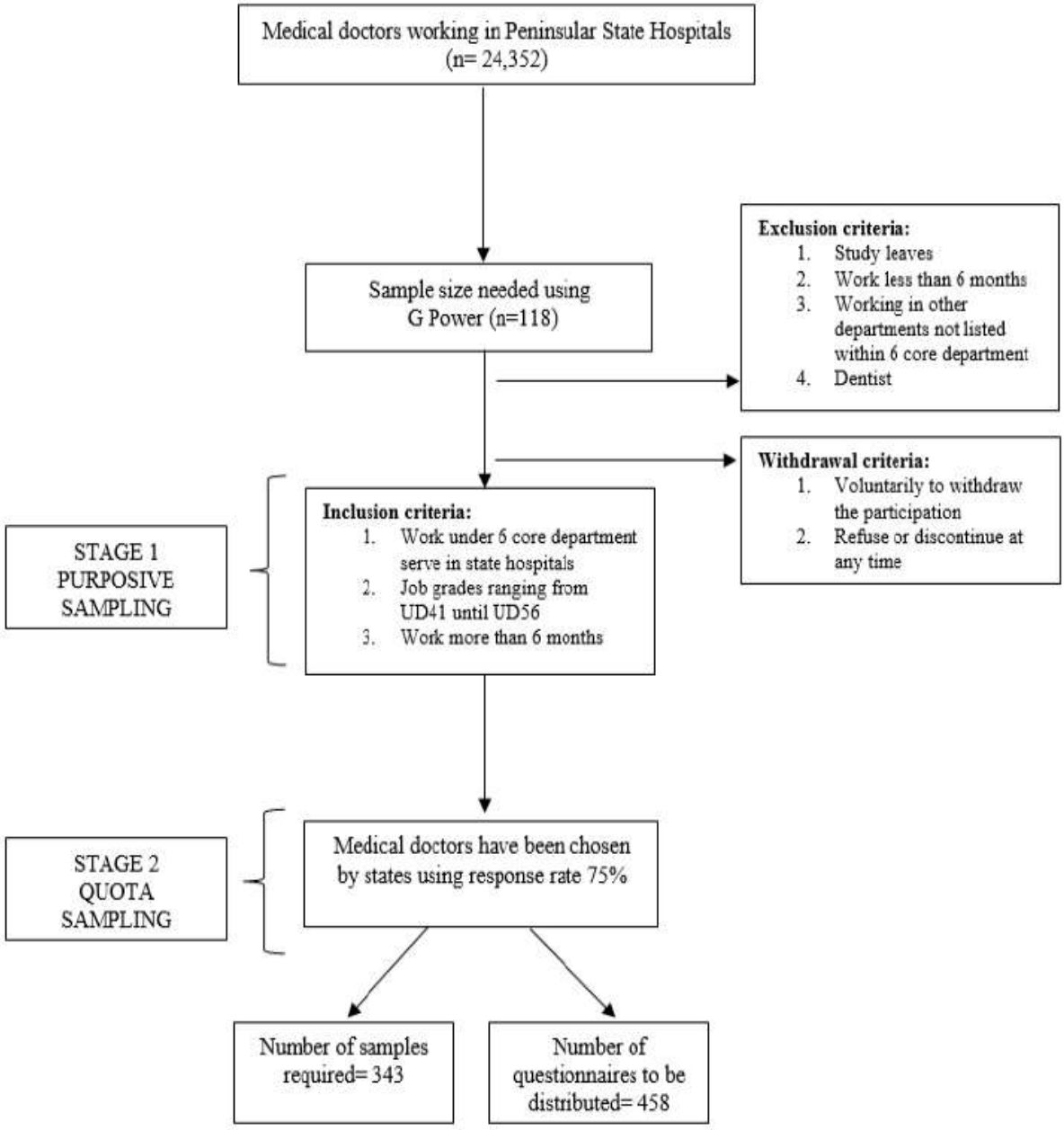
Nurses' support: Support from subordinates, such as, nurses, has a significant impact on doctors' well-being, especially in terms of reducing the risk of job burnout (Geuens, Verheyen, Vlerick, Van Bogaert, & Franck, 2020; Li, Ruan, & Yuan, 2015; Ruisoto et al., 2021). Previous research has sparked controversy about whether or not medical doctors are satisfied with their subordinate support levels (Tourangeau, Hall, Doran, & Petch, 2006; Yang, Liu, Liu, Zhang, & Duan, 2017). Tourangeau et al. (2006) Stated that nurses are subordinates to medical doctors. Thus, it was discovered that the relationship between nurses' support and job burnout influences medical doctors' well-being. The findings implied that medical doctors needed nurses' support to function effectively, especially when patients sought care in hospitals (Geuens et al., 2020; Tepper, Moss, & Duffy, 2011).

The relationship between medical doctors and nurses is significant in a hospital. They work together as a team and are likely to be satisfied with their jobs if both parties give commitments, are interdependent with each other, and are professional to avoid conflict during patient treatment. (Mills, Wand, & Fraser, 2018; Xu et al., 2019). Effective teamwork depends on a supervisor-subordinate relationship; thus, nurses' support is significant in the study (Nantsupawat et al., 2016; Rafferty, Ball, & Aiken, 2001). For instance, a study in an Australian hospital showed that collaboration between medical doctors and nurses created the best accomplishment during medication activities, patient medication safety, and effective care (Liu, Gerdtz, & Manias, 2016). The tensions between medical doctors and nurses generated a stressful working environment, leading to medical doctors' job burnout. Results found that medical doctors who received full support from their nurses were more effective in doing work, displaying effective task performance, and lowering job burnout. The findings also supported that when the employees experienced job burnout and depleting work performance, they lessened the mark when they received nurses' support. As a result, nurses are a key factor influencing job burnout among medical doctors. Therefore, the following hypothesis is proposed:
H1: There is a negative relationship between nurses' support and job burnout

3. Research Methodology

In Figure 1, the purposive sampling method was adopted in the first stage includes by selecting subjects who are in the best place to provide information. For instance, only six core departments had been selected in 12 state hospitals, as these were common in all state hospitals. Besides that, only registered medical doctors who have worked for more than six months were eligible to be part of the sample with job grades, such as UD41, UD43/44. UD47/48, UD51/52, UD53/54, and UD55/56. In the second stage, quota sampling was used to pre-specify the control characteristics and assess their distribution within the target population. Since these control characteristics were chosen based on judgment, a portion of the selection process was left at the researcher's discretion. The number of samples needed for each state is quoted based on the response rate of 75%. Therefore, there would be no waste of resources. With a minimum sample size requirement of 343 medical doctors, the total number of questionnaires to be distributed was 458. The number of questionnaires to be distributed to each state would be calculated based on the percentage quoted for each state hospital.

Figure 1: The Sampling Techniques Flow Chart



Nurses' support was measured using four items adapted from Hayton, Carnabuci, and Eisenberger's (2012) scale. Consistent with Shanock and Eisenberger's (2006) study, this study measured nurses' support with the same items used to assess nurses' support, as modified by replacing the words *subordinate* with the words *nurse.* A seven-point Likert scale was used from 1= strongly disagree to 7= strongly agree. The reliability of Cronbach's Alpha for nurses' support was reported at 0.84. The item such as "My nurse strongly considers my goals and values", "My nurse takes pride in my accomplishments at work", "My nurse cares about my well-being", and "My nurse values my contribution to their well-being". Job burnout was measured using nine items adapted from an abbreviated version of the Maslach Burnout Inventory (aMBI) by McManus, Winder, and Gordon (2002) following the original Maslach Burnout Inventory Human Service Survey using 22 items developed by (Maslach, Schaufeli, & Leiter, 2001). A seven-point Likert scale was used, from 1 = never to 7 = every day. The reliability of Cronbach's alpha for job burnout was reported at 0.87. An item such as "I feel

fatigued when I wake up in the morning and have to face another day on the job", "I feel emotionally drained from my work", and "Working with people all day is a strain for me", "I have become more callous towards people since I took this job", "I do not know how to deal very effectively with the problems of my patients", "I do not feel exhilarated after working closely with my patients", "I feel like I am not positively influencing other people's lives through my work", "I feel I treat some patients as if they were impersonal objects", and "I do not care what happens to some patients". "I feel emotionally drained from my work", "Working with people all day is a strain for me", "I have become more callous towards people since I took this job", "I do not know how to deal very effectively with the problems of my patients", "I do not feel exhilarated after working closely with my patients", "I feel like I am not positively influencing other people's lives through my work", "I feel I treat some patients as if they were impersonal objects", and "I do not care what happens to some patients". Cronbach's alpha for job burnout was reported at 0.87.

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4. Results

Initially, the study obtained approvals from JEPeM, Universiti Sains Malaysia (USM) (JEPeM Code: USM/JEPeM/19050334) and National Medical Research Register (NMRR) ((NMRR-19-1500-48412(IIR)). The study's final sample came from eight out of twelve state hospitals within Peninsular Malaysia while four withdrew participation due to their busy schedules and did not respond to the invitation. In total, 488 participants responded out of all the participating hospitals as shown in Figure 2. The responses yielded a response rate of 48.95 percent out of the 997 sets of questionnaires distributed. However, only 471 questionnaires were found usable for analysis.

Figure 2: List of Participating Hospitals

No.	State Hospital	Questionnaire Distributed	Questionnaire Received
1	Hospital Kuala Lumpur	130	49
2	Hospital Melaka	70	64
3	Hospital Tuanku Jaafar, Negeri Sembilan	150	64
4	Hospital Sultanah Bahiyah, Kedah	141	74
5	Hospital Pulau Pinang	131	77
6	Hospital Tuanku Fauziah, Perlis	70	51
7	Hospital Tengku Ampuan Afzan, Pahang	120	39
8	Hospital Raja Perempuan Zainab II, Kelantan	185	70
	Total	997	488

Profile of Demographic profile: Table 1 displays a summary of the characteristics of the participants involved in the study. It could be reported that the participants were mostly females, amounting to 297 female medical doctors representing 63.9 percent. The remaining, 174 medical doctors were males, representing 36.9 percent. The majority of the participants were Malays (58.6%). Apart from that, 27.2 percent were Chinese, 13 percent

were Indians, and 1.3 percent were others. The medical doctors were also asked about their education level. Most of them were MBBS or equivalent 87.3 percent, while 10.4 percent have a Master's or equivalent, 1.3 percent have a Ph.D. or equivalent, and the remaining 1.1 percent are others. Regarding their marital status, most medical doctors were single, representing 58 percent, while 41.2 percent were married, and the remaining 0.8 percent were others. In terms of job grade, 265 medical doctors were UD41 representing 56.3 percent, followed by 79 medical doctors were UD47/UD48 representing 16.8 percent, followed by 67 medical doctors were UD43/44 representing 14.2 percent, and 12.8 percent from UD51/UD52, UD53/54 and UD55/UD56 amounting 60 medical doctors as total. Table 1 reported that the participants were mainly from the Emergency Department, amounting to 154 medical doctors, representing 32.7 percent of the total participants. Besides that, the participants are from eight state hospitals who agreed to participate in the study. Most participants are from Hospital Pulau Pinang, representing 76 participants.

Table 1: Demographic Profile

VARIABLE	FREQUENCY	PERCENTAGE
GENDER		
Males	174	36.9%
Females	297	63.1%
Total	**471**	**100%**
RACE		
Malay	276	58.6%
Chinese	128	27.2%
Indian	61	13%
Others	6	1.3%
Total	**471**	**100%**
EDUCATIONAL LEVEL		
MBBS or equivalent	411	87.3%
Master or equivalent	49	10.4%
PhD or equivalent	6	1.3%
Others	5	1.1%
Total	**471**	**100%**
MARITAL STATUS		
Single	273	58%
Married	194	41.2%
Others	4	0.8%
Total	**471**	**100%**
JOB GRADE		
UD41	265	56.3%
UD43/44	67	14.2%
UD47/48	79	16.8%
UD51/52	23	4.8%
UD53/54	21	4.5%
UD55/56	16	3.4%
Total	**471**	**100%**
Department		
General Medicine	85	18%
Orthopedic	19	4%
O&G	31	6.6%
General Surgery	40	8.5%
Pediatric	142	30.1%
Emergency Medicine	154	32.7%
Total	**471**	**100%**

Descriptive Statistics: In Table 2, the average participants' age was 30.9 years old, with a minimum age of 24 and a maximum age of 56. For tenure of their position, the majority of the participants had an average of 3.4 years, with a minimum of three months and a maximum of 30 years. In addition, for servicing the current

hospital they were attached to, the average was 2.6 years, with a minimum of a month and a maximum of 30 years. For total service as a registered medical doctor, the average was 4.5 years, with a minimum of 6 months and a maximum of 35 years.

Table 2: Participants' Age, Position Tenure, Service at Current Hospital, and Total Service as a Registered Medical Doctor

Variable	Mean	SD	Min	Max
Age (years)	30.9	5.1	24	56
Position Tenure (years)	3.4	3.9	0.25	30
Service at Current Hospital (years)	2.6	3.2	0.09	30
Total Service as a Registered Medical Doctor (years)	4.5	4.9	0.5	35

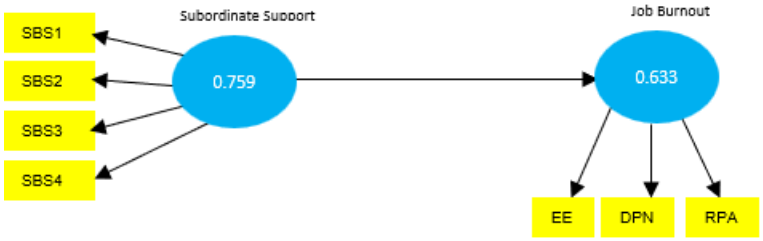
In Table 3, the study assessed the measurement models' loadings, average variance extracted (AVE), and composite reliability (CR). The values for composite reliability (CR) are considered satisfactory and very good whereby the values for nurses' support is 0.926, and job burnout is 0.838. According to Henseler, Hubona, and Ray (2016), to measure the internal consistency, the loading of each item must be examined. Loading values in each item are considered acceptable if the loading values are equal to and greater than 0.7. Thus, loading values for nurses' support and job burnout were greater than 0.70. Besides, if the AVE scores are greater than 0.5, the loading items are still acceptable if the values are equal and greater than 0.6 (Byrne, 2016). As shown in Table 3, AVEs were greater than 0.6, and CRs were greater than 0.7. The loadings were also acceptable, with less than five loadings less than 0.708 (Hair, Risher, Sarstedt, & Ringle, 2019).

Table 3: Measurement Model for the Second-Order Constructs Outer Loadings Values, Composite Reliability (CR), and Average Variance Extracted (AVE)

Constructs	Items	Loadings	AVE	CR
Nurses Support	SBS1	0.850	0.759	0.926
	SBS2	0.879		
	SBS3	0.903		
	SBS4	0.852		
Job Burnout	EE	0.853	0.633	0.838
	DPN	0.722		
	RPA	0.807		

Figure 3 shows shown job burnout was conceptualized as a higher-order construct, a hierarchical component comprising three first-order reflective constructs (emotional exhaustion, depersonalization, and reduced personal accomplishments). The second-order constructs were measured following the repeated indicators approach for the first-order constructs and moved to the second-stage approach called as embedded two-stage approach (using the latent variable score) as proposed by Becker, Klein, and Wetzels (2012), Ringle, Sarstedt, and Straub (2012), and Sarstedt, Hair, Cheah, Becky, and Ringle (2019). The embedded two-stage approach was used by creating a new dataset based on the standardized scores of all constructs in the repeated indicators approach and adding a new variable, job burnout, to the model.

Figure 3 Second-Order Construct using the Embedded Two-stage Approach



In Table 4, the structural model is examined. The assessment of the structural model involved assessing the path coefficient to assess the significance and relevance of the structural model relationship by using a 5,000-sample re-sample bootstrapping procedure (Beta, standard errors, *t*-value, *p*-value) as suggested by Ramayah, Jacky, Chuah, Ting, and Memon (2018) and Wong (2013). The path coefficient values for nurses' support and job burnout were -.0.040 with a *t*-value of 1.336. Additionally, the result showed that all the direct effects of 99 percent and 90 percent bootstrap BCI LL and UL were not straddling a 0 in between, indicating that there was a significant result. Thus, the findings ascertained that there was a negative relationship between nurses' support and job burnout. Therefore, H1 was supported.

Table 4: Hypothesis Testing for Direct Path

Hypothesis	Std Beta	Std Error	*t-values*	*p-values*	BCL LL	BCI UL
H1: Nurses' support ->Job Burnout	-0.040	0.030	1.336	0.091*	-0.079	-0.002

*p<0.10

Discussion

The direct effect between nurses' support and job burnout was examined. This study examined the relationship between nurses' support and job burnout. The results of this study support the assertion that there was a significant relationship with job burnout. Thus, H1 is accepted. The results from this study support previous literature considering nurses' support reduced job burnout among medical doctors (Geuens et al., 2020; Ruisoto et al., 2021). The findings by Geuens et al. (2020), Shacklock, Brunetto, and Farr-Wharton (2012), and Tepper et al. (2011) implied that medical doctors needed nurses' support to function effectively, especially when the medical doctors needed nurses to assist them in treating and managing patients. As a result, nurses should be provided with support in terms of knowledge, and service on patient needs, particularly those involving complicated situations. Rapidly growing in the body of knowledge of social support, nurses' support became one factor contributing to medical doctors' well-being, including job burnout (Abdulmohdi, 2024; Xu et al., 2019). Medical doctors experiencing heavy workloads need nurses' support to buffer the pressure in high-stress environments. For example, medical doctors and nurses need to have a clear relationship to reduce miscommunication to avoid failure to achieve expectations, especially when treating patients (Carter, Mohammed, Upshur, & Kontos, 2023; Slater & Herbert, 2023). They must also mix with the nurses since they work as a team (Xu et al., 2019). Both parties will fully commit and be interdependent to avoid conflict when performing their jobs. For instance, medical doctors who work in the Pediatrics, O&G, and Emergency Medicine departments are considered to experience a high prevalence of job burnout compared to other departments; therefore, they need full support from the nurses (Xu et al., 2019). Based on a qualitative study of medical doctors and nurses by Mills et al. (2018, p.10), the most highlighted point in this relationship between medical doctors and nurses' support was that *"it is the responsibility of every member in the department to look after each other, and it is called a dual-interaction process."* Liu et al. (2016) remarked that regular contact between medical doctors and nurses is important for job effectiveness, especially in drug administration tasks, such as medication prescribing, dispensing, delivering, taking, recording, assessment, and counseling.

5. Managerial Implications and Recommendations

This study provides several practical implications to the Ministry of Health Malaysia (MOH), Malaysian Medical Council (MMC), and other public administrations on the work-related factors influencing job burnout of medical doctors. A report of "Malaysia Patient Safety Goals: Nurses Roles and Responsibilities" by the Nursing Division, Malaysia Ministry of Health (2015) Suggested that regardless of the nurse's grades and position, every nurse plays a critical role in supporting medical doctors in treating patients. The guideline helps to educate the nurse's roles and responsibilities by delivering the work based on the Nursing Action Plan according to the 13 Malaysian Patient Safety Goals. The Malaysia Ministry of Health doubled the effort by implementing the "Malaysian Patient Safety Goals 2.0" to provide a clearer guideline towards an initiative to enhance good support from nurses to medical doctors. (Medical Development Division, 2021). Despite their complexity, nurses are essential to the effective execution and attainment of patient safety goals. As such, they must be skilled in all nursing procedures and maintain an up-to-date understanding of patient safety. This is one method by which nurses can fully support the demanding work of medical doctors. Also, it is noteworthy to

consider that medical doctors need to be more balanced in their lifestyle. Several programs have been offered such as training programs specifically to improve good communication between medical doctors and nurses together to demonstrate social bonding among them at the workplace. (Hussein, Ahmad, & Noh, 2018; Kunjukunju & Ahmad, 2019). Lastly, junior doctors should also be provided with flexible working hours, on-the-job training, and restructuring of the work system to reduce the risk of job burnout. (Kinman & Teoh, 2018; Thillainathan, 2011). Furthermore, medical doctors, who have been diagnosed with high risk of job burnout symptoms should be encouraged by hospital management to seek help from third parties, such as psychiatrists, families, relatives, and friends, to promote the feeling of a sense of belonging that will help to alleviate their well-being. (Fortuna, Brooks, Umucu, Walker, & Chow, 2019; van de Wal, Bucx, Hendriks, Scheffer, & Prins, 2016).

Conclusion

In conclusion, the findings have demonstrated how important it is for nurses to provide support to doctors in the workplace, particularly when it comes to reducing the likelihood of job burnout. This study expands prior research on job burnout which will add to the current body of knowledge in the nursing and medical context as well as the healthcare industry. However, this study has some limitations. First, the study was only conducted in eight public hospitals. It would be useful to replicate this study among medical doctors across other public hospitals in Peninsular Malaysia to compare findings and generalizability. Second, the study used a self-reported questionnaire that medical doctors filled in to assess job burnout. In the future, researchers may consider adding nurses' evaluations to enhance the objectivity in the perspective of nurses' support towards medical doctors' job burnout. Lastly, job burnout is still relatively uncommon as a uni-dimensional phenomenon. (Brenninkmeijer & VanYperen, 2003; Cheung, Tang, & Tang, 2011; Fairlie, 2011). The multidimensional approach is frequently used for job burnout in several cross-sectional studies. However, according to Innstrand, Espnes, and Mykletun (2002), job burnout could be considered a single psychological state that measures one construct rather than in separate dimensions. Besides that, this approach ensures parsimony to the study's framework by focusing on the job burnout construct as a whole rather than looking at separate dimensions of job burnout. (Betoret, 2009; Brenninkmeijer & VanYperen, 2003; Tan, Lew, & Sim, 2019). Thus, future research suggests the multi-dimensional approach will be considered mainly focused on emotional exhaustion which the dimension strongly dominated compared to the other two dimensions. It is suggested uni-dimensional approach versus a multi-dimensional approach may be determined by the researcher's objectives and the complexity of the research design.

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