

# The Psychosocial Determinants Relationship with Burnout among Nurses in Pahang, Malaysia

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**Abstract**

*The purpose of this study was to investigate the relationship between psychosocial determinant such as demographic factors, nursing stress, and perceived social support with burnout status among nurses in Pahang. This is a quantitative study using a convenience sampling of nurses (N=404) from all sectors of hospitals and clinics in Pahang, Malaysia. Participated nurses administered demographic information questionnaire and three other different instruments which are Maslach Burnout Inventory (MBI), Nursing Stress Scale (NSS), and Multidimensional Scale of Perceived Social Support (MSPSS). Result of the study showed that burnout is significantly related to age ( $r = -0.25, n = 404, p < .01, two-tailed$ ), year of experience ( $r = -0.25, n = 404, p < .01, two-tailed$ ), nursing stress ( $r = 0.63, n = 404, p < .01, two-tailed$ ) and perceived social support ( $r = -0.39, n = 404, p < .01, two-tailed$ ). This study is important as newly added Malaysian local-based information on the topic of burnout, nursing stress, and perceived social support. The result of the study can also be used to create awareness related to burn-out among nurses and the importance of social support. The implication can be effective from the perceptive of mental health care services for nurses in a medical setting.*

**Keywords:** Nurses; burnout; nursing stress; perceived social support

## 1. Introduction

Nursing is a one of a challenging career which involved taking care of patient, and at the same time, confronting different personalities or even complaint from patients' families. Especially in this year where the whole world is in war with Covid-19 pandemic, nurses are among the front liner in preventing the cases from spreading. They need to sacrifice their time, energy, and risking their health while some of them are away from their family, to fulfil their duty as nurses. Among their source of strength is the support they received from their family through messages and prayers (Berita Harian, 2020). Nurses are important as they were describe as the right hand of a doctor by former Vice Prime Minister, Datuk Seri Dr Wan Azizah Wan Ismail in the celebration of National Nurses Day 2019 (Kosmo, 2019). However, a large number of patients to attend, the unstable condition of patients, and the shortage of nurses lead to workload and time imbalance for nurses induced stress and minimized their time of interacting with patients and supporting them emotionally (Zamanzadeh, 2014).

AIA Vitality (2018) through their survey on the healthiest workplace in Malaysia found that employees lost an estimated 73.1 working days for

each worker's absences at work in relation to a medical issue and unproductive work presence, which was higher than 67.2 days in 2017, causing the loss of 2.27 million RM, a year for each organization. Health and Safety Executive (2017) also stated that 595 000 workers in Great Britain suffered work-related stress, and 15.4 million working days were lost due to this issue. Motowidlo, Packard, and Manning (1986) found that subjective stress, depression, and anxiety showed a significant effect on nurses' quality of patient care and tolerance toward patients as well as warmth towards other nurses.

Job demands such as workload, time pressure, workplace environment and working on shift schedule are among the factors inducing burnout in the job demands-resources model of burnout proposed by Demerouti et al. (2001). Burnout syndrome emerged when excessive exhaustion of emotional, mental, and physical are put upon a person for a long time. Burnout had been recognized by World Health Organization (WHO) as a clinical syndrome in 2019. Previous studies on burnout in nursing sector provide insight on the cause of burnout over the years. It was found that nurses' burnout were higher in the presence of occupational stressor and emotion regulation strategies

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(Sun et al., 2018). The ability of an organization to provide flexibility in times of change within team members of nurses decreased the level of burnout scores (Huynh et al., 2018). Also, higher usage of emotion-focused coping strategies were found related to lower burnout scores, as well as low role conflict, role ambiguity and role overload (Shinan-Altman, Werner & Cohen, 2016). In the same study, burnout was also reported to be affected by self-blame regarding the care of patients when symptoms emerged. Nurses experiencing burnout show decrease in the score of effective professional commitment including level of emotional attachment to their profession as nurse (Chang et al., 2017).

In other profession outside nursing, healthcare professional in infant intensive care showed higher emotional exhaustion than other intensive care professional. Higher emotional exhaustion was found in male nurses, older nurses and nurses who did not exercise regularly (Alvares et al., 2020). As addition, high level of abusive supervision, role ambiguity and economic hardship increased level of job burnout among company staff (Wu et al., 2019). Among the various factor of burnout, it was also found that continuous work stress if not treated properly, may cause burnout (Uziel et al., 2019). Thus, stress was included among the possible factors of burnout in this study. In this study, stress were highlighted to be caused by the factors within nursing profession including subscale such as workload, relationship with co-workers, and nurses' uncertainty concerning treatment on patients. Additionally, social supports received by nurses are also included as possible determinant of burnout in this study. This is due to the relationship of workload, work related stress and support in a Demand Control Support (DSC) model by Robert Karasek in 1979 which highlighted the importance of balance among all the elements (Mulder, 2017).

Furthermore, job stress was found to be related to job performance in the study among aviation employees in Jordan. Similarly to aviation profession, nurses also required to work on shift work scheduled which involved night shift work, a time when bodies were supposed to be rested. Lower sleep quality decreased job performance among aviation employees (Alrabbe & Alwagfi, 2020). It was also found that age and family type were among the indicator of stress in working women (Ojha et al., 2020). In accordance of culture appropriation and modern point of view, women are supposed to be looking after their family in later age which causes stress in female workers.

Social support was gain from various relationships in one's life including family, friends, significant others, and co-workers. In one study, burnout was found to be influenced by the support from co-workers and supervisors (Li et al., 2015). High perception of social support decreased depersonalization and increases a sense of personal accomplishment in burnout (Nie et al., 2015). In

addition, emotional exhaustion in burnout shows a negative relationship to social support and job satisfaction (Hamaideh, 2011). Beside stress and social support, age were also found to be related to burnout subscales individually which increased age were found to be related to reduced personal accomplishment as emotion-focused coping strategies were used more in older nurses (Mefoh, Ude, & Chukwuorji, 2019). Increase in age was also found to be related to higher depersonalization among nurses (Iecovich & Avivi, 2015). Interestingly, it was found that nurses older than 35 years old were less likely to developed emotional exhaustion and depersonalization (Alvares et al., 2020).

By identifying those people experiencing burnout and in need of help, future treatment can be improved and help can be given at early stages. The nursing profession is growing, healthcare settings such as hospitals, should focus on developing and enhancing a healthy working environment in which nurses, especially, feels secured and supported through their co-workers and management, which therefore increasing the overall quality of patient care (Nurhayati, 2015). Thus, the objective of this study is to examine burnout and its relationship with nursing stress and perceived social support among nurses who work in government hospitals and clinics in Malaysia, as well as the contribution of other associating demographic factors such as age and year of experience.

## 2. Method

### 2.1 Participants

This study was a cross-sectional study that used a survey method to assess burnout and nursing stress among nurses. The data collection was conducted registered nurses working in government hospitals and clinics in Malaysia (N=404). The sample size obtained is based on a standard sample size formula which include a confidence level of 95% (Z-score = 1.96), margin of error of 5%, and 20% contingency for any missing data or dropouts. Participants were recruited through convenience sampling from all sectors of hospital and clinics available and permitted by MOH.

The inclusion criteria of nurses include nurses who are currently working with government hospitals or clinics in Malaysia, registered with the Malaysian Ministry of Health (MOH), and have working experience of one year or more. Whereas, the exclusion criteria are nursing student, absence nurses due to holiday or study, and retired nurses.

Prior the data collection, the study is required to register with the National Medical Research Register (NMRR) (NMRR-19-2073-49246) and to obtain ethical approval by the Medical Research and Ethics Committee (MREC) (Ministry of Health Malaysia, NMRR-19-2073-49246). Upon approval, data collection was conducted based on the approved research procedure by distributing the questionnaires

among nurses through their Matron for each ward in hospitals and clinics.

Some of the questionnaires used in this study were administered individually face-to-face and online. This is due to the low participation of nurses through online platform. Face-to-face method was used as its increase the number of questionnaire answered and returned. Once informed consent granted from the participant, they were asked to fill in their age, work schedule, department and years of experience. Other than the demographic information question, participants were requested to complete Maslach Burnout Inventory (MBI; Maslach 1996), Nursing Stress Scale (NSS; Rosnawati 2010) and Multidimensional Scale of Perceived Social Support (MSPSS; Ng et al. 2010).

Data collected were analysed using SPSS Statistics version 25. Pearson correlation was used to examine the relationship between psychosocial determinants with burnout.

## 2.2 Instruments

All questionnaires used in this study were validated Maslach Burnout Inventory (MBI) in this study was translated by Amal Hayati (2006) through her study on 75 secondary school teachers in Hulu Langat. The Cronbach's Alpha reliability for items in emotional exhaustion subscale is 0.858, 0.637 for depersonalization, and 0.770 for personal accomplishment. Maslach Burnout Inventory (MBI) consists of 22 total items and is divided up into three themes with nine items relating to Emotional Exhaustion, five to Depersonalization, and eight to Personal Accomplishment.

High degree of burnout is reflected in high scores on the Emotional Exhaustion and Depersonalization subscales and in low scores on the Personal Accomplishment subscale which is rated inversely. An average degree of burnout is reflected in average scores on the three subscales, and a low degree of burnout is reflected in low scores on the Emotional Exhaustion and Depersonalization subscales and a high score on the Personal Accomplishment subscales (Maslach et al, 1996).

The Nursing Stress Scale (NSS) which was previously used in the English version, was translated and back-translated into Bahasa Melayu by Rosnawati (2010). The reliability of the NSS was assessed after its re-administration to 30 nurses with a 2-week interval. The Spearman coefficient was calculated to assess its stability. The internal consistency was measured through 4 measures: Cronbach's  $\alpha$ , Spearman-Brown, Guttman split-half and standardized item  $\alpha$  coefficients. The total response rate was 70%. Test-retest reliability showed remarkable stability (Spearman's  $\rho$  exceeded .70). All 4 measures of internal consistency among items indicated a satisfactory level (coefficients in the range of .68 to .87). The permission to use this questionnaire are permitted by the author. Nursing Stress Scale (NSS)

consists of 34 items that describe situations that have been identified as causing stress for nurses in the performance of their duties. Each item required respondents to rate on a four-point Likert-type scale ranging from 0 = "never" to 3 = "very frequently". The subscales include: (1) Workload, (2) Death and dying, (3) Inadequate preparation, (4) Lack of staff support, (5) Uncertainty concerning treatment, (6) Conflict with physicians, and (7) Conflict with other nurses.

Validation of the Malay version of the Multidimensional Scale of Perceived Social Support (MSPSS-M) was done by Ng et al. (2010), among 237 medical students in Faculty of Medicine, University Malaya. The instrument displayed good internal consistency (Cronbach's  $\alpha=0.89$ ), parallel form reliability (0.94) and test-retest reliability (0.77) (Spearman's  $\rho$ ,  $p<0.01$ ). Extraction method of the 12 items MSPSS using principle axis factoring with direct oblimin rotation converged into three factors of perceived social support (Family, Friends and Significant Others) with reliability coefficients of 0.88, 0.82 and 0.94, respectively. The Malay version of the MSPSS demonstrated good psychometric properties in measuring social support among a group of medical students from Faculty of Medicine, University Malaya. The permission to use this questionnaire is permitted by Ng et al. (2010).

The Multidimensional Scale of Perceived Social Support (MSPSS) is self-report research tools built to assess perceptions of social support from three sources are Family, Friends, and a Significant Other. This scale consists of 12 items, with four items for each subscale. Each item required respondents to rate on a seven-point Likert-like scale ranging from 1="Very Strongly Disagree" to 7="Very Strongly Agree".

The scores from all questionnaires were statistically computed using SPSS 25 to analyse.

## 3. Results

### 3.1 Profile of participants

In this research, all the nurses that agree to participate must follow the inclusion criteria of working with all sectors of hospital or clinics in Malaysia, registered with the Malaysian Ministry of Health, with an experience more than a year. The following data in Table 1 summarized the descriptive information of nurses based on age, gender, work schedule, department, and year of experience.

This study is completed by 404 respondents ( $n = 404$ ) that consist of 395 female and 9 male nurses. The questionnaire is answered by 315 nurses working in shift work schedule (78%) and 89 nurses working in non-shift work schedule (22%). Moreover, most of the respondents was middle-age adult ( $M = 33.62$ ,  $SD = 6.33$ ). Their age ranges from 23 to 56 years old. The majority of the questionnaire were answered by 189 respondents ages 31-40 years old (47%), followed by 157 respondents ages 21-30 years old (39%), 53 respondents ages 41-50 years old (13%), and 5 respondents ages 51-60 years old (1%).

There were various departments of nurses involved in this study, however, the highest number of respondents comes from 83 nurses from the medical department (21%), 64 nurses of maternal and child

health (16%), and 46 nurses of the pediatric department (11%) while the rest of 211 respondents were from the other departments such as surgical and psychiatric department (52%).

Table 1. Descriptive informations of nurses

Demographic	Frequency (f)	Percentage (%)
Age		
21-30 years old	157	38.9
31-40 years old	189	46.8
41-50 years old	53	13.1
51-60 years old	5	1.2
Gender		
Male	9	2.2
Female	395	97.8
Work Schedule		
Shift work	315	78.0
Non-shift work	89	22.0
Department		
Medical	83	20.5
Maternal and Child Health	64	15.8
Pediatric	46	11.4
Others	211	52.3
Year of Experience		
0-10	233	57.7
11-20	146	36.1
21-30	25	6.2

### 3.2 The relationship between burnout, age, year of experience, nursing stress, and perceived social support

Pearson's correlation analysis was used to measure the linear association between burnout, age, year of experience, nursing stress, and perceived social support for  $n = 404$  nurses.

Table 2 showed the summary of Pearson correlation between burnout, age, year of experience, nursing stress, and perceived social support. Results revealed that the correlation analysis of burnout has a significant negative correlation to age ( $r = -0.25$ ,  $n =$

$404$ ,  $p < .01$ , two-tailed), year of experience ( $r = -0.25$ ,  $n = 404$ ,  $p < .01$ , two-tailed) and perceived social support ( $r = -0.39$ ,  $n = 404$ ,  $p < .01$ , two-tailed). The result implicated that burnout is higher among younger nurses, nurses with a lower year of experiences, and nurses with low perceived of social support. Furthermore, results indicated that burnout has a significant positive relationship to nursing stress ( $r = 0.63$ ,  $n = 404$ ,  $p < .01$ , two-tailed). These results mean that high nursing stress is related to high burnout among nurses and good social support can reduce burnout among nurses.

Table 2. Level of burnout, nursing stress and perceived social support according to frequency and percentage

Level of Measures	Mean (M)	Standard Deviation (SD)
Burnout		
Low	330	81.7
Moderate	59	14.6
High	15	3.7
Nursing Stress		
Low	239	59.2
Moderate	165	40.8
High	0	0.0
Perceived Social Support		
Low	0	0
Moderate	272	67.3
High	132	32.7

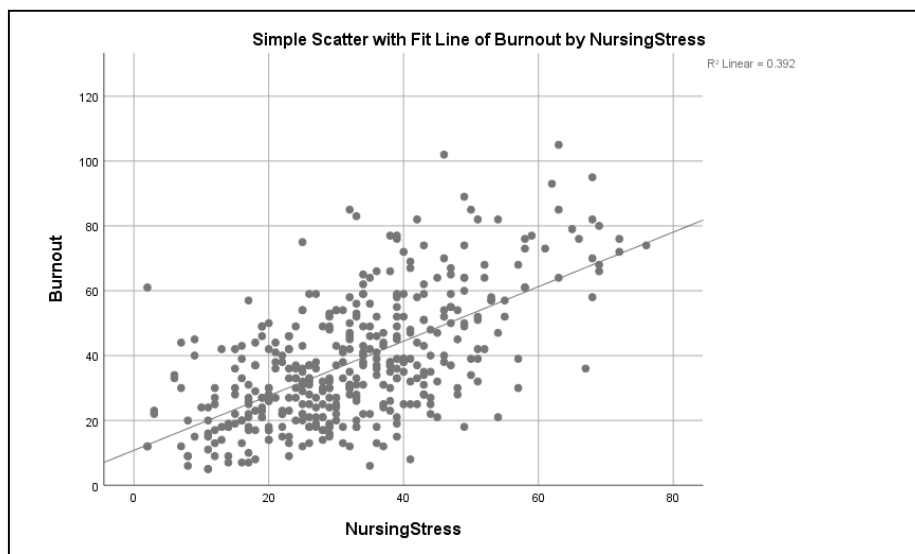


Figure 1. Relationship between burnout and nursing stress

However, the Pearson coefficient values of the relationship between burnout and age ( $r = -0.25$ ), year of experience ( $r = -0.25$ ), and perceived social support ( $r = -0.39$ ) are notably closer to 0, which indicated a weak relationship among the variables.

Meanwhile, nursing stress ( $r = 0.63$ ) showed a strong relationship with burnout. Figure 1 showed the scatter plot graph of the relationship of burnout and nursing stress which showed the strongest relationship among all other variables.

Table 3. Pearson correlation between burnout, age, year of experience, nursing stress and perceived social support

Variables	1	2	3	4	5
1. Burnout	1				
2. Age	-.25**	1			
3. Year of experience	-.25**	.96**	1		
4. Nursing stress	.63**	-.31**	-.27**	1	
5. Perceived social support	-.39**	.06	.07	-.27**	1

\*. Correlation is significant at the 0.05 level (2-tailed).  
 \*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 3 showed the summary of Pearson correlation between burnout, age, year of experience, nursing stress, and perceived social support.

#### 4. Discussion

The result of this study are supported by the finding in a study among mental health professional, as it was found that age and years of experiences were related to stress, exhaustion, and disengagement (Yang, Meredith & Khan, 2017). Years of experiences was also found to be negatively related to depersonalization among dental profession (Uziel et al., 2019). Based on the analysis done in this study, it was found that the increase in age, year of experience, and perceived social support can reduce burnout scores among nurses. Increase in burnout scores was also found to be related to increase in nursing stress scores.

The demographic factors measured in this study are age and year of experienced. Both factors showed a significant negative relationship to burnout indicating senior nurses in age and experience showed

lower burnout scores. An increase in age and year of experience decreased burnout scores. Age diversity in the workplace positively impacted work performance (Odhiambo, Gachoka, & Rambo, 2018). Senior workers are always seeking guidance and leader as they have more expertise in problem-solving and decision making at the workplace. Due to this, senior nurses might develop a higher sense of responsibility in managing their burnout-induced factors in the healthcare setting in order of achieving a smooth working environment. Also, given the longer time they spent in their respective fields, senior nurses might have adapted to the stress-related factors that arise in the work setting, making them more welcoming of the factors. Although age and working experience were found to be increased oppositely of burnout scores, these factors were also found to be affecting differently on the three subscale of burnout (Mefoh, Ude, & Chukwuorji, 2019; Iecovich & Avivi, 2015; Alvares et al., 2020). Therefore, there should be a thorough

observation of burnout despite age and working experience.

The nursing stress scales used in this study focused mainly on the possible factors nurses might encounter at their respective workplaces. Among the subscales are workload, death and dying, inadequate preparation, lack of staff support, uncertainty concerning treatment, conflict with physicians, and conflict with other nurses (Rosnawati, 2010). As discussed in the job demands-resources model of burnout (JD-R) model proposed by Demerouti et al. (2001), too much job demand such as workload, time pressure, and shiftwork may lead to exhaustion and too little job resources such as reward, feedback, and supervisor support may lead to disengagement. Both exhaustion and disengagement represent burnout syndrome. Similarly with previous findings, nursing stress in this study was found to be positively related to burnout. This indicated that high burnout scores among nurses might also be experiencing high nursing stress. The higher the burnout scores, the higher the nursing stress scores. The result is supported by the study done among dentists in Israel which showed that emotional exhaustion and depersonalization subscale of burnout were significantly related to work stress (Uziel et al., 2019). The similarity of the findings in this study and previous study indicated that once stress is detected among nurses, it is important for it to be treated properly instead of letting it continue to develop into burnout.

Results of the analysis on the relationship between perceived social supports with burnout showed that burnout is negatively related to perceived social support. Nurses highly supported by their family, friend, or significant other showed lower burnout scores. Thus, the higher perceived social support is, the lower the burnout scores. This result is supported by previous research done by Li et al. (2015), which found that the subscale of depersonalisation in burnout were negatively related to supervisory support (Li et al., 2015). However, in the same study, it was also found that depersonalization was positively related to family support, which showed the opposite of the result found in this study. Another study also found that increased social support is one of the ways to reduce burnout scores among nurses with the score of depersonalization negatively correlated with social support (Nie et al., 2015). The result of this study is also supported by study done among physician-trainees which showed that friend-based support were significantly related to lower burnout scores (Rogers, Polonijo & Carpiano, 2016). Good social support received from one's circle can provide a pillar and safe places for a person to discuss their work-related stressors with the other person. This process might reduce the weight of stressors which can lead to burnout. Support from others provided motivation and strength in living life at the workplace. A stable family environment allowed a person to give more energy and attention to their workplace. After all, increases in

perceived social support do decrease workplace stress (Foy et al., 2018). Hence, social supports among co-workers are important in order to decrease the likelihood of developing burnout syndrome. More teamwork strengthening program can be done by organizations to increase nurses' psychological well-being.

For future research, more participants are needed so that the result of the sample represents more accurately the population. The sample can also be from other professions from different states in the country. The data collection should also be focused on specific factors such as shift work and departments to see the differences in the result although they are working in the same workplace. More topics can be included with burnout such as job satisfaction and work performance.

## 5. Limitation

There are a few limitations of this study. Firstly, the data were collected mostly from only one state in Malaysia. Secondly, the data collections were done using convenient sampling which was not focused on specific factors such as shift work and departments.

## 6. Conclusion

This study found that demographic factors such as age and year of experience, nursing stress, and perceived social support are related to burnout. The study on these topics might increase public awareness on the existence of this issue which may contribute to the discussion on the effort to overcome. Through public awareness, patients may have more insight and understanding on nurses' situation over their quality of service. The vice versa understanding relationships will possibly benefit both parties. Moreover, the information gained from this study can be used by the hospitals involved, especially by the administrator and management team, to develop a suitable alternative, new or advanced program in order to minimize the level of burnout if it existed, and increase the well-being of their nurses.

On the body of knowledge, this study will be an addition to the existence of current studies on the topic of nurses, nursing stress, perceived social support, and burnout. The study will be a reference for future research purposes that will be done by future students.

Economically, increasing awareness on their state of burnout and stress may help nurses acknowledge their condition and reach for help if needed. A healthy and with optimum capability of nurses will improve their quality of care towards patients and attract more patients to receive treatment at their hospitals. This will bring positive income to the hospitals themselves.

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