



**UNIVERSITI PUTRA MALAYSIA**

***ASSOCIATION BETWEEN OCCUPATIONAL STRESS AND JOB  
SATISFACTION AMONG NURSES IN UNIVERSITY PUTRA  
MALAYSIA***

**GROUP 8**

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## **ABSTRACT**

**Background:** In general, nursing is regarded as a challenging occupation. In addition to increased demand and development, the nursing profession has also elevated stress among nurses. Job satisfaction is a global issue due to the possible effect on patient care quality and safety in addition to being a contributing factor associated with nurses leaving their current employment and profession. Therefore, this research aims to study the association between occupational stress and job satisfaction among nurses in Universiti Putra Malaysia (UPM).

**Materials and Methods:** A cross-sectional study was conducted among nurses from random departments from UPM. Universal sampling method was used during participant's recruitment from 17th August 2020 until 24th August 2020. The questionnaire used consist of JRTI and JSS were adopted from previous study, consists of three sections and 58 questions in total, and were used to collect the data from 124 respondents. The socio demographic factors were analyzed by descriptive statistics using mean, percentage and frequency. The distribution of job stress level and job satisfaction level were analyzed by descriptive statistics using mean, percentage and frequency. The distribution of individual facets in JRTI and JSS questionnaires were analyzed by descriptive statistics using mean, median, minimum, maximum and standard deviation. Spearman's correlation test was used to analyze the association between the dependent (levels of job satisfaction among nurses of UPM) and independent (occupational stress) variables.

**Result:** The socio demographic aspect of the respondents consisted of the following: majority of respondents were female (74, 82.2%), diploma graduate (82, 91.1%), married (67, 74.4%) and with grade U29 (73, 81.1). Most of the respondents' age are between 20 to 30 (43, 47.8%) and 31 to 40 (36, 40.0%) and majority of them have worked for less than 10 years (54, 60.0). Majority of them are from the medical specialist department (14, 15.6%). A total 48 nurses (53.3%) were stressed with their job and 42 nurses (46.7%) were not stressed with their job. A total 44 nurses (48.9%) were satisfied with their job and 46 nurses (51.1%) were not satisfied with their job. Spearman's correlation test was performed and there is significant weak positive association between stress level and satisfaction level ( $r_s = 0.318, P = 0.002$ ).

**Conclusion:** The present study indicated most of the nurses were stress and not satisfied with their job. Nurses were most stress in organisational design and most dissatisfied with contingent reward. Analyzing occupational stress and job satisfaction among nurses was not one-time action, this needed continuous monitoring and evaluation. Based on the study, the hospital administration can look into their organisational design and keep a constant check and balance on it to avoid nurses being stressed. Nurses can also be given rewards more often, such as increments, bonus, and sponsored tour to boost their job satisfaction, so that they work more efficiently.

**Keywords:** Prevalence, occupational stress, job satisfaction, association, nurses, UPM

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background

A stressful working environment is one of the issues that affect workers (Khamisa, Oldenburg, Peltzer, & Ilic, 2015). Occupational stress occurs when factors relating to work interfere with the worker, which results in individual changes in the worker's physiological and/or psychological (Richardson and Rothstein, 2008). In the last few decades the workplace has received much publicity. This is seen as a primary determinant of different health outcomes (Hofmann et al., 2017).

In the United States, health personnel report exceptionally high amounts of stress when compared with different professions (Jacobsen et al., 2014). Compared to other jobs, nurses show more pressure on work due to higher demands and less skill utilization (Jacobsen et al., 2014). Among all of the data shown, this is the main reason why we are picking this title to study the prevalence of stress among nurses in Malaysia and UPM specifically.

McVicar conducted a comprehensive review of workplace stress in nurses and finding workload, leadership style, interpersonal conflict, emotional support costs, and lack of compensation and change work as the key causes of work stress (McVicar, 2003). Additionally, patient care providers also report elevated levels of work-family conflict, a significant cause of perceived stress (Kim et al., 2012).

A stressful working climate in health care institutions can impact the health of workers (Shamian, Kerr, Laschinger, & Thomson, 2016) and the quality of treatment provided to patients

(Kieft, de Brouwer, Francke, & Delnoij, 2014). The emotional attachment of health care providers with patients exposes them to work-related stress. After all, the administrative and job-related emotional demands can trigger tension relating to work (Mughal, Gondal, Awan, Ahmad, & Chaudhry, 2010)

There are numerous ways to define job satisfaction. Hoppock (1935) proposed the oldest definition of job satisfaction, which is as follows; ‘an integration of psychological, physiological and environmental factors which cause a person to say: I am satisfied with my job’. Wilson (2006), on the other hand, defines work satisfaction as to what extent needs are currently being met at work. This also has been described by Nelson and Swift (2013) as a pleasurable or optimistic emotional condition resulting from evaluating one's work or job experiences.

Thoughts of job dissatisfaction and work pressures are common issues for nurses and job frustration is a significant cause of unemployment for nurses (Hayes et al., 2012). The intention of nurses to leave is also a major controversy in China (Kalisch, Lee, & Rochman, 2010). Whereas for Japan, nurses were satisfied with their work and their interaction with colleagues, patients/families and supervisors were most satisfied (Yamashita, Takase, Wakabayshi, Kuroda, & Owatari, 2009).

This study will study the prevalence of stress among nurses and calculate the satisfaction rate of nurses. The result from this will be compared from previous study. This study also will calculate the associations between occupational stress and job satisfaction.

## 1.2 Problem Statement

In general, nursing is regarded as a challenging occupation. In addition to increased demand and development, nursing profession has also elevated stress among nurses. Stress arises when demands are made on us overweigh our resources (Shinde, M., & Anjum, S., 2014). Recent findings on stress in nursing found many potential stressors among nurses which include poor understanding among nurses and physicians and other health-care providers professionals, appropriate interaction between nurses and patients or their relatives, cases of emergencies, work overload, understaffing and lack of help or constructive reviews from senior nursing staff, contrasting positions and home-work interface imbalance. Multinational analysis by WHO on Nurses Migration and Mobility found that lack of work condition was the primary disappointing factor for nurses. Job stress can leave significant impact on physical and mental health, work satisfaction, as well as one's attitude towards the job done, such as being present at work every day with full of passion. According to Barnett, Namasivayam and Narudin (2010) and Muniandi (2010), the growth of the workforce of nurses in Malaysia is so fast that it will threaten the long-term stability of the workforce of nurses and might deteriorate patient care quality. On top of that, recent coronavirus pandemic had imposed numerous stressors on healthcare professionals and nurses are one of the main victims. In this event, nurses on the front line demonstrate the commitment and compassion that nurses do everywhere, but the bitter truth is they put their lives at risk in the course of their duties (Catton et al., 2020).

As of now, the association between occupational stress and job dissatisfaction among nurses at UPM lack publications to be understood completely. There is an article emphasizing on experience from Malaysia during Covid-19 Movement Control Order. The study outlines our experience and the effect of movement control order on Hospital Serdang's services and

practices. However, adequate number of studies to understand the correlation between occupational stress that nurses at UPM undergo and their satisfaction with work are still deficient. Nevertheless, as of current situation of coronavirus pandemic, where nurses are required to give the best patient care to help Medical Officers and Specialists to flatten the curve, nurses themselves are suffering heavy workload, frequent shifts, insufficient sleep, fatigue, inadequate quality time spent with family and friends, or even self-blaming for not treating patients with care that the number of deaths from coronavirus infected patients shoots up every day. These stressors undeniably have a huge effect on nurses' overall inner and outer well-being, so these issues must be taken into account before nurses go on their last legs.

Therefore, this research aims to investigate the association between occupational stress and job satisfaction among nurses in UPM along with their sociodemographic factors as there are inadequate studies and data that measures the overall satisfaction of nurses in UPM with their work performance and working environment.

### **1.3 Significance of study**

This study will provide information on association between occupational stress and job satisfaction among nurses in Universiti Putra Malaysia (UPM). As we all know, this profession needs to deal with the community. Nurses offer care and alert other healthcare professionals to help if required. In this study, we are investigating the job satisfaction among nurses. Besides that, we also highlight the factors that can lead to stress among nurses. As a result, job related stress has a loss of compassion for patients and an increased incidence of practice errors and thus is unfavourably linked to quality of care. (Teng,Hsio,Chou,2010). This is very important because

it can help us to figure out how to improve the quality of life of nurses. Thus, we could plan a stress management intervention among nurses and other healthcare workers. It can be individual-focused or organization-focused. By targeting nurses, we hope that we can help to improve productivity and lesson mistakes done by them.

#### **1.4 Research Questions**

1. What are the socio-demographic factors of nurses?
2. What is the prevalence of occupational stress among nurses in UPM?
3. How much are nurses satisfied with their job?
4. What is the association between occupational stress and job satisfaction?

#### **1.5 Objectives**

##### **1.5.1 General Objective**

To study the association between occupational stress and job satisfaction among nurses in UPM.

##### **1.5.2 Specific Objectives**

1. To determine the socio-demographic characteristic (e.g.: gender, age, marital status, duration of service, educational level, position at job, department) of the nurses in UPM.
2. To determine the prevalence of occupational stress among nurses in UPM.

3. To determine the job satisfaction among nurses.
4. To determine the association between occupational stress and job satisfaction among nurses in UPM.

## **1.6 Hypothesis**

### **1.6.1 Alternative Hypothesis**

- I. There is a significant association between occupational stress and job satisfaction among nurses in UPM.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Definition of Stress

In general, stress is a body reaction to an obstacle or demand from our body. Stress is described as a personal response and phenomenon occurring within a body as a reaction to a stressor's stimulus (Huber, 1996). Stress is part of our everyday human experience, but it is associated with a wide variety of essentially different problems, such as surgical trauma, burning, emotional excitement, mental or physical exertion, tiredness, pain, fear, need for concentration, humiliation or frustration, loss of blood, intoxication with drugs or toxins, or even with the kind of unexpected success (Selye & Hans, 1976). Understanding the definition of stress, particularly stress in organizations, is important because it can have both positive and negative effects and also learn how to cope with work stress (Beh, 2012).

Stress is said to be good when it could bring advantage for someone. Instead, stress that prevents people from doing what they want is viewed as negative. (Woodham, 1995). Stress, for everyone, is unique. What makes you feel stress might not even bother our best friend and vice versa. Stress is one of those terms which everybody knows, but none can describe it (Woodham, 1995).

So, what I understand is stress is a condition which can lead to negative or positive consequences as said by Beh, 2012.

## 2.2 Occupational Stress among Nurses

Research conducted by Bhatia N, K concluded that 87.4 percent had been the prevalence of occupational stress among nurses. The most challenging factor was the time constraint, the high level of skill requirement, the handling of multiple life problems concurrently with jobs such as caring for own children / parents, own life situation and personal commitments (Bhatia, 2010). Occupational stress is commonly interpreted as feeling tense, burdened and concerned with the work demands (Scholze et al., 2017). They are also vulnerable to psychological stress and mental health problems, which make them vulnerable to burnout (Watanabe et al., 2015).

Nursing stress can be described as the emotional and physical reactions that result from the relationships between the nurse and her / his work environment in which demand for the job exceeds capacities and resources (Farrington, 1995). Results of the study showed that the most common form of work-related stress for Saudi nurses was due to job pressure followed by poor relationships with managers. The Findings have shown a highly significant relationship between mental and work stress issues, and a significant relationship between work stress, physical problems, and marital status. The association between physical conditions and mental disorders was highly statistically significant (Hosis, Mersalv & Keshk, 2013).

The career in nursing was classified among the most difficult professions. Work-related tension among nurses influences the work of both individuals and organisations and their wellbeing (Gofrani, et al., 2020). This is shown when Kaburi et al. (2019) conducted a study and found 35 (21.0%) of the 167 nurses encountered moderate to severe levels of workplace stress.

Stress at work has had adverse effects not only on the health of nurses but also on their ability to handle job requirements (Sharma et al., 2014). Working stress in nurses affects their

health and raises the rate of absenteeism, turnover, accident reports, infection prevalence and errors in patient care (Shirey, 2006). For certain cases someone wants to become a nurse because they want to care for people but as they face the realities of the work, they soon discover it is not what they imagined it would be (Sky Hudgins, 2008), considering nature of nursing tasks have to involve with death and dying people (Marshall, 1980).

### **2.3 Sources of Occupational Stress among Nurses**

The sources of stress serve as an umbrella term for many categories that fall under them. For the purposes of this study, sources of stress are divided into two main categories. The first category involves organisations or workers specifically and the second category deals with personal and professional lives of individuals.

Studies have shown that quantitative work overloads trigger occupational stress where individuals are required to bite off more than they can chew in a limited period of time (Cassar & Tattersall, 1998). Next, position of an individual at work can also serve as a lead factor to occupational stress. Research has focused on the role of ambiguity and role-conflict as work stressors (Greenberg, 2002). When an employee is unsure of what he or she should do at work or what is expected by the employer, it portrays role of ambiguity. On the other hand, role of conflict is awakened by organization's expectations which changes from time to time, and conflicting with an individual's other roles. Motowidlo et al. (1986) carried out studies which revealed inadequate support from superior officers, misunderstandings with physicians and coworkers, consistent critics are the main factors which creates role of conflict among nurses. Frese (1985) carried out a study on job stressors among German male blue-collar employees who had worked

in the Federal Republic of Germany's metal industry for at least 6 months. According to the results, instability of job, administration stress, environmental stress, accident threat, job speed and job insecurity were among the most common workplace stressors (Frese, 1985). Moreover, people who work in shifts are victimized for both physical and mental distress. Studies have illustrated that stress is directly proportional to number and duration of night shifts (Daus et al., 2001). There are relatively strong reports of negative effects of a person on the physical, social and psychological of a job. For instance, people who often work night shift, experience fatigue during the day, and sleep difficulties at night as their circadian rhythm changes. The adaptation process to new cycles and routines is considered the major difficulty of shift work (Saal & Knight, 1988). In addition, same tasks given over and over again could also induce occupational stress (Drafke & Kossen, 2002). Cox (1980) showed that people who are on repetitive tasks expressed that their tasks were too monotonous, dull, underused, bound to the task, and disconnected from their co-workers. Furthermore, nurses who deal with death and dying at the workplace on a daily basis, will surely enhance their level of job stress. Nurses feel guilty at making mistakes. Indeed, in their work, those errors become stressors (de Carvalho et al., 2005). In particular, they fear that making mistakes will affect the prognosis of the patient, cause patient death or inflict permanent patient harm. Lack of knowledge can cause errors (Escot et al., 2001).

Next, moving onto the second category provides us with numerous studies which show associations of personal and professional lives of nurses with their job stress. Home-work conflict occurs when stressors in the role of work interfere with the ability of a person to fulfill family responsibilities (Dubrin, 1980). Homework interface is particularly relevant among female employees, in our case nurses who carry the responsibility of caring for the children, caring for the elderly family members, cooking, cleaning, grocery shopping, and we can name

them. When home and work balance is disrupted, particularly, female employees are left with the guilt feeling of not looking after their family and lack of life partner and kids' support to balance it. The situation had worsened when men in families were reluctant to participate more even during their partner's absence (Davidson and Fielden, 1999). Thus, consideration of the interfaces that exist between an individual's work, home and social life that contribute to stress is vital. Which include marriage, pregnancy, sickness, divorce (Baron & Greenberg, 1990), everyday life-household hassles, time-pressure, inner concerns, environmental hassles, financial obligations (Baron & Greenberg, 1990). Conceptualisation of organizational interaction includes three dimensions which are affective, persistent and normative (Hutton et al., 2014). The affective commitment is the emotional attachment towards the workplace. The dedication to continuity is related to the perceived costs of leaving the company, both financial and social. The normative engagement stems from a moral responsibility to an organisation. Positive results are correlated with reinforcement of affective and regulatory commitments (Hutton et al., 2014).

#### **2.4 Effects of Occupational Stress among Nurses**

By understanding the possible factors which could cause occupational stress, it is really important to know and analyse what these stressors could change in an individual. The effects of occupational stress mainly focuses on three aspects which are physical health, psychological and behaviour of an individual, specifically nurses in our case. There is substantial evidence that prolonged exposure to stressful conditions, or accumulation of stressors over time, is closely correlated with the onset of disease, emotional stress, and harmful behaviour (Burns, 1992). The possibility that stress can make people sick and causes the occurrence and development of

coronary artery disease, psychiatric illness, certain autoimmune diseases, smoking, dietary disorders, heavy alcohol use and misuse of drugs, unhappiness in life, injury and dangerous conduct at work, migraine, stomach ulcers, hay fever, asthma and skin eruptions, marital and family issues (Dalton, 1998). Physiologically, occupational stress among nurses can lead to hypertension, palpitations, excessive sweating and respiratory difficulties. The psychological stress effects consist of frustration, anxiety, depression, reduced self-esteem, weaker mental performance, incapacity to focus and make decisions, nervousness, irritability, resentment of oversight and work dissatisfaction (Chen & Spector, 1991). Poor efficiency, absenteeism, high morbidity levels, higher turnover rates, higher alcohol and other substance abuse, emotionally driven conduct and ineffective communication are few impacts of behavioural stress (Hellrigel et al., 1986).

## **2.5 Sociodemographic Factors**

### **2.5.1 Gender**

There was no significant association between workplace stress, job satisfaction and sex (Gulavani & Shinde, 2014). This is supported when Elsherbeny & El-Masry (2018) found there is no significant association between job satisfaction and gender ( $P=0.084$ ). Additionally, a study from Reid, Hurst, & Anderson (2013) also reported there is no significant association between gender and job satisfaction. On top of that, female nurses are more content and happy to work with their co-workers compared male workers (Munnangi et al., 2018). Female nurses are more satisfied compared to male nurses (Munnangi et al., 2018). Female nurses scored high in terms of job satisfaction compared to male nurses (Ayalew, F. et al., 2019).

### **2.5.2 Age**

There was no significant association between workplace stress, work satisfaction and age (Gulavani & Shinde, 2014). This is supported when Elsherbeny & El-Masry (2018) found there is no significant association between job satisfaction and age ( $P=0.103$ ). Krutideepa Mohanty conducted a study and found significant association between job stress and age ( $P<0.05$ ). Nurses who are in their 60's have the lowest satisfaction with their colleagues (Munnangi et al., 2018). Moreover, age is significantly associated with job satisfaction among nurses in Turkey (Altuntas S, & Baykal U., 2010).

### **2.5.3 Education Level**

There is a statistically significant difference in job satisfaction which enhances the quality of life of nurses (Lu Ruyin et al., 2015). This is supported by the fact that nurses with higher educational qualification have better quality of life which was stated in the study mentioned previously. In addition, Altuntas S, & Baykal U. (2010) found that nurses with varying educational level have different attitude towards their job performance which ultimately affects their levels of job satisfaction.

### **2.5.4 Duration of Service**

There was no significant association between workplace stress, work satisfaction and years of nursing (Gulavani & Shinde, 2014). Krutideepa Mohanty conducted a study and found

significant association between job stress and duration of working ( $P < 0.05$ ). This is supported when Elsherbeny & El-Masry (2018) found there is a significant association between job satisfaction and duration of service ( $P = 0.019$ ). Nurses with working experience between 5 to 10 years have lower levels of job satisfaction compared to those who have more or less years of working experience (Ayalew, F. et al., 2019).

### **2.5.5 Marital Status**

There was no significant association between job satisfaction and marital status ( $P = 0.721$ ) (Elsherbeny & El-Masry, 2018). However study from Reid, Hurst, & Anderson (2013) reported there is significant association between marital status and job satisfaction ( $P < 0.05$ ). Moreover, the significant association of marital status with job satisfaction among nurses is further supported by Lu Ruyin, Shao Ya, & Liao Shaoling. (2015). In addition, Altuntas S, & Baykal U. (2010) found that nurses with varying educational level have different attitude towards their job performance which ultimately affects their levels of job satisfaction.

### **2.5.6 Department**

The Australian College of Emergency Physicians has growing concerns about the relationship between the dropout rate for trainees and the overcrowding emergency department. Nurses and doctors working in Emergency department are considered to face additional stressors from those working in other fields (Yang etc.2002). The environmental factors in the Emergency department include: workload; short staffing; uncontrollable

environment; violence; trauma; and situations of difficulty (Heyworth, 2004). Nurses were at greater risk of facing patient violence than doctors (Crabbe et al., 2004). Staff nurses and those working in post-acute care wards, show significant differences in job satisfaction. They experience more stress and lesser job satisfaction (Matsumoto, Y., & Yoshioka, S., 2019).

### **2.5.7 Position (Hierarchy) at Job**

Pitersen C in South Africa found that around 61% nurses were dissatisfied with their lesser position at job and were even dissatisfied when the promotion was being delayed even after working for years (Gulvani & Shinde, 2014). On the other hand, nurses were averagely satisfied with their jobs in Maharashtra, India with fair amount of advancement is being allowed in their jobs which is around 87% (Gulvani & Shinde, 2014). A total of 42% of respondents felt that they were not given the appropriate position at job that they deserve when they are talented (Hutton. D. et.al., 2012).

## **2.6 Job Satisfaction among Nurses**

Hospital health care workers face high levels of work stress and poor job satisfaction (Alpert, 2008). Hospital nurses are at high risk of work burnout, decreased job satisfaction and high rates of work stress worldwide, leading to adverse health outcomes (Aiken, Clarke, Sloane, Lake, & Cheney, 2009). Job satisfaction is a global issue due to the possible effect on patient care quality and safety in addition to being a contributing factor associated with nurses leaving their current employment and profession (Roelen et al., 2013). Thoughts of job dissatisfaction as

well as work pressure are common problems for nurses and job frustration is a major cause of joblessness for nurses (Hayes et al., 2012). More evidence of job satisfaction among nurses continues to emerge with recent reviews focusing on one aspect or one geographical area, such as the relationship between job satisfaction and task delegation, psychological empowerment, workplace empowerment and general job satisfaction of nurses in Iran (Ghiyasvandian & Gebra, 2014). In China, nurses' intent to quit from their nursing profession is a big controversy (Kalisch, Lee, & Rochman, 2010). Whereas for Japan, nurses were most satisfied with their jobs and communication with their friends, patients / families and supervisors (Yamashita, Takase, Wakabayshi, Kuroda, & Owatari, 2009). A study from Australia found that the levels of job satisfaction among nurses were high (81%) (Reid, Hurst, & Anderson, 2013). A study conducted in Egypt showed 61.8% of the nurses expressed low job satisfaction, while moderate satisfaction was 28.3% and only 9.8% of nurses were highly satisfied (Elsherbeny & El-Masry, 2018).

### **2.6.1 Pay with Job Satisfaction**

The amount of salary is positively correlated with the overall satisfaction of the job ( $\rho^2=0.15$ ,  $p<0.05$ ) and the satisfaction of the salary ( $\rho^2=0.24$ ,  $p<0.05$ ) (Judge et al., 2010). Pay has influenced job satisfaction with beta coefficient 0.239 (Malik, Danish, & Munir, 2012).

According to Parvin and Kabir (2011), pay influences job satisfaction with most of the respondents dissatisfied with the mean score 3.02. One of the variables in human resources management (HRM) which is pay practices positively associated with job satisfaction (Mudor, 2011).

### **2.6.2 Promotion with Job Satisfaction**

A study from Malik, Danish, and Munir (2012), promotion influence with the satisfaction of job with beta coefficient of 0.166. According to Parvinto Parvin and Kabir (2011), promotion influences job satisfaction with most of the respondents dissatisfied with the mean score 3.02. Respondents were dissatisfied with the promotion aspect with a mean score of 2.91 (Mosadeghrad & Ferdosi, 2013).

### **2.6.3 Supervision with Job Satisfaction**

Relationship between workers and supervisors with job satisfaction is “somewhat unhappy” or dissatisfied with the mean score of 2.81 (Parvin & Kabir, 2011). One of the variables in human resources management (HRM) which is supervision is positively associated with job satisfaction (Mudor, 2011). Respondents were satisfied with their supervision with the mean score of 4.69 (Mosadeghrad & Ferdosi, 2013). In a study conducted among Malaysian nurses, respondents were moderately satisfied with their supervisory committee (Masroor & Jamilha, 2010).

### **2.6.4 Fringe Benefits with Job Satisfaction**

The findings of individual assessments in the National Longitudinal Survey of Youth (NLSY) wave cross-section do not offer compelling proof that the fringe benefits serve as determinants of work satisfaction (Artz, 2010). Mosadeghrad *et al.* (2008) observed a positive relationship among hospital staff between the fringe benefits and organizational engagement. In addition, there is a study conducted by Valaei and Rezaei (2016) also supporting Mosadeghrad *et*

*al.* (2008) finding that fringe benefits are found to influence all aspects of organizational commitment.

### **2.6.5 Contingent Rewards with Job Satisfaction**

There is no positive relationship found between contingent rewards and job satisfaction among (Valaei & Rezaei, 2016). Snipes *et al.* (2005) discovered there is no relation between contingent rewards and the quality of service provided. Respondents were dissatisfied with their contingent rewards with the mean score of 2.44 (Mosadeghrad & Ferdosi, 2013).

### **2.6.6 Operating Conditions with Job Satisfaction**

Most respondents were satisfied with their working conditions with the mean score 3.10 (Parvin & Kabir, 2011). However, a study from Mosadeghrad and Ferdosi (2013), respondents were dissatisfied with their contingent rewards with the mean score of 2.76. Satisfaction on operating conditions that are associated with patient care explaining 12% variance (Khamisa, Oldenburg, Peltzer, & Ilic, 2015). According to a Malaysian study, the respondents claim that they have low level of satisfaction towards operating conditions ( Masroor & Jamilha, 2010).

### **2.6.7 Co Workers with Job Satisfaction**

According to Parvin and Kabir (2011), co-workers influence job satisfaction with most of the respondents dissatisfied with the mean score 3.30. However, respondents were satisfied with their co-workers with the mean score of 4.36 (Mosadeghrad & Ferdosi, 2013). This is also supported by Lumley *et al.* (2011) stated that respondents are satisfied with their co-workers. In

a study conducted among Malaysian nurses, the level of job satisfaction with co-workers in hospital is the highest among all other facets (Masroor & Jamilha, 2010).

### **2.6.8 Nature of Work with Job Satisfaction**

Respondents were satisfied with their nature of work with the mean score of 4.39 (Mosadeghrad & Ferdosi, 2013). This is also supported by Lumley *et al.* (2011) stated that respondents are satisfied with their nature of work. Satisfaction on nature of work that is associated with staff issues and patient care explaining 3% variance (Khamisa, Oldenburg, Peltzer, & Ilic, 2015).

### **2.6.9 Communication with Job Satisfaction**

Respondents were dissatisfied with their communication with the mean score of 2.53 (Mosadeghrad & Ferdosi, 2013). However, respondents were satisfied in their communication in a study conducted by Lumley *et al.* (2011). Satisfaction on communication explained 9% variance (Khamisa, Oldenburg, Peltzer, & Ilic, 2015).

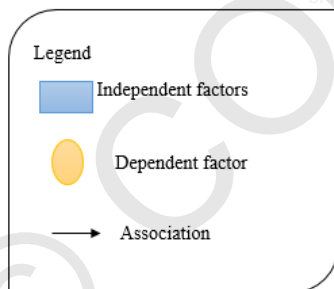
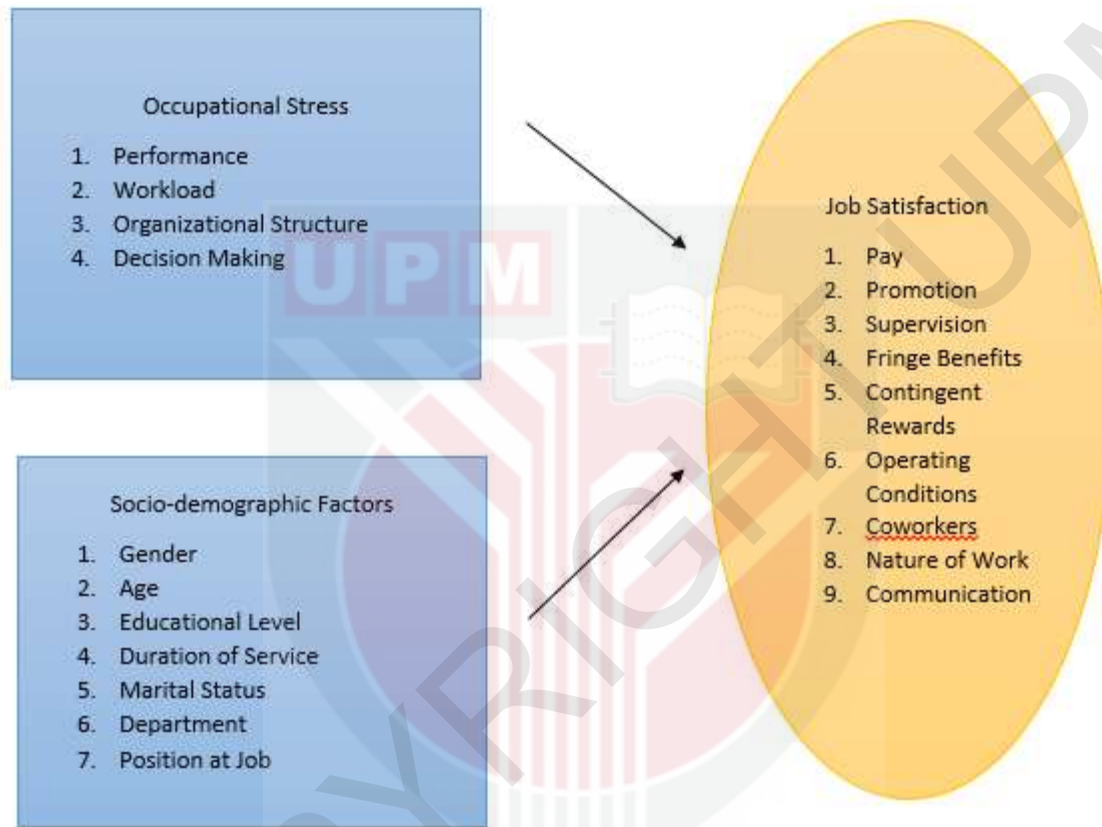
## **2.7 Correlation between Occupational Stress and Job Satisfaction among Nurses**

(Khalatbari, Ghorbanshiroudi, & Firouzbakhsh, 2013) concluded in a research that a significant association exists between job satisfaction and work stress. There is evidence that health care workers are correlated with work-related stress with impaired empathy, low job satisfaction, and mental distress (e.g., depressive symptoms) (Alexandrova-Karamanova *et al.*, 2016). There is also evidence that work stress leads to higher rates of burnout among nurses and is correlated with lower job satisfaction (Graham, Davies, Woodend, Simpson, & Mantha, 2011).

Other research among South African nurses found that personal stress increases work satisfaction significantly (Zulfiqar, Khan, & Afaq, 2013) and is closely related to health and well-being (O'Donovan, Doody, & Lyons, 2013). Hosseinabadi et al., (2018) proved there are dimensions of demand, control, relations and changes in job stress that have significant relationships with job satisfaction ( $R\text{-squared}=0.42$ ). There was also a study that confirmed the relationship between stress and work satisfaction ( $r=0.34$ ;  $p=0.001$ ) using Pearson correlation test (Kwiecień-Jaguś, Mędrzycka-Dąbrowska, Chamienia, & Kiełaitė, 2018). The similar study confirmed that the more stress, the less satisfaction at work. In Malaysia specifically, a study from Ismail, Yao, and Yunus in 2009, reported there were association between physiological stress and job satisfaction ( $r=0.83$ ), and between psychological stress and job satisfaction ( $r=0.83$ ).

However, there are several studies that proved there is no correlation between job stress and job satisfaction among nurses. Gulavani & Shinde (2014) reported there was no correlation between occupational stress and job satisfaction was found ( $r=0.006$ ). A study in 2013 assessed the causes of stress and job satisfaction among nurses in Ghana where there was a weak negative correlation between stress and job satisfaction ( $r = -0,0255$ ) (Rita, Atindanbila, Portia, & Abepuoring, 2013). This kind of result is also proven in Malaysia, the coefficients for the correlation between the physiological stress and psychological stress (independent variable) and work performance (dependent variable) were less than 0.90, suggesting that there is no correlation between the two variables (Azman et al., 2015).

## 2.8 Conceptual Framework of Association between Occupational Stress and Job Satisfaction among Nurses in UPM



## CHAPTER 3

### METHODOLOGY

#### 3.1 Study Location

The study was conducted in Fakulti Perubatan dan Sains Kesihatan (FPSK), Hospital Pengajar Universiti Putra Malaysia (HPUPM) & Pusat Kesihatan Universiti (PKU). HPUPM serves as a teaching hospital for the Faculty of Medicine and Health Sciences. It is dedicated to train future health professionals, conduct medical research, and provide advanced diagnostic and treatment services. PKU Universiti Putra Malaysia was established in 1974, aimed to provide healthcare services for the students.

#### 3.2 Study Design

The type of study design was cross-sectional study.

#### 3.3 Study Duration

The study was conducted from 1st June 2020 until 9th October 2020 and data collection period is between 17th August 2020 until 24th August 2020.

### **3.4 Sampling**

#### **3.4.1 Study Population**

The study populations are nurses who are working in UPM.

#### **3.4.2 Sampling Population**

Nurses who are from all departments in UPM.

##### **3.4.2.1 Inclusion Criteria**

Nurses in UPM who have worked at least 1 year.

##### **3.4.2.2 Exclusion Criteria**

Nurses who were not accessible during data collection period. It may be because the transition period and working period are less than 1 year and nurses are on leave, study leave or post basic.

#### **3.4.3 Sampling Frame**

Namelist of nurses in UPM in 2020.

### 3.4.4 Sampling Unit

A sampling unit is a nurse from UPM.

### 3.4.5 Sample Size Estimation

Total sample size =  $n = Z_{\alpha/2}^2 \cdot p \cdot (1-p) / d^2$

Where:

$z = 1.96$  if 95% confidence interval.

$P = 21\%$  prevalence of occupational stress among nurses. (Kaburi et al., 2019)

$d = 0.05$  (Precision)

This formula was taken from Kevin M. Sullivan, Emory University based on code from John C. Pezzullo.

Hence:  $n = Z_{\alpha/2}^2 \cdot p \cdot (1-p) / d^2$

$$= (1.96)(1.96)0.21 / (0.05)(0.05)$$

$$= 255 \text{ nurses}$$

Since the total possible sample in HPUPM (186 nurses) and PKU(16 nurses) is 202 nurses, small populations n can be adjusted so that  $n(\text{adj}) = (Nn)/(N + n)$ . Adjustment for finite population size is described by Thrusfield M, 2005. Veterinary Epidemiology, 2nd Edition, Blackwell Science, Oxford, UK (p183).

$$n(\text{adj}) = (202 \times 255)/(202 + 255)$$

$$= 113 \text{ nurses}$$

Additional 10% of the total number of expected respondents will be added to overcome the non-response rate. Hence:

$$113 \times 10\% = 11$$

$$113 + 11 = 124 \text{ nurses.}$$

### 3.4.6 Sampling Technique

The universal sampling technique is used in this study. All nurses in UPM were listed and the questionnaires were sent to all of them without any selection.

### 3.5.1 Study Instrument

The study used questionnaire-type based for data collecting. Self-administered questionnaires available in English. The questionnaires completed in Google Form. This questionnaire comprises three parts that are socio-demographic, Job Related Stress Index (JRTI) to access occupational stress and Job Satisfaction Scale (JSS) for job satisfaction.

Section A: Consists of eight questions regarding the socio-demographic aspects of the respondents, such as gender, age, educational level, duration of service, marital status, position at job (hierarchy), place of work and departments.

Section B: Comprises a questionnaire on JRTI. The job related tension index is a scale of 15 items and a total of 4 main domains. The domains are performance, workload, organisational structure and decision making. The questions are scaled using Likert scales ranging from 1=strongly disagree to 5= strongly agree. High scores showed the occupational stress was significantly high.

Section C: Assesses of work satisfaction. This section is using JSS for questionnaires. JSS has 36 items and a total of 9 facets. Salary, promotion, supervision , fringe benefits, contingent rewards, operating procedures, workmates, nature of the work and communication were the nine facets. The scale has five options per question varying from "strongly disagree" to "strongly agree," respectively, with a corresponding numerical rating of 1-5. The JSS analyzes job satisfaction from low (unsatisfied) to high (satisfied) on a continuum.

### 3.5.2 Data Collection Technique

Data was collected through self-administered questionnaire distribution. This was done through an online based questionnaire-Google Form. The google forms were sent to the participants via social media during the data collection period from 17th August 2020 until 24th August 2020. Prior to this, participants were given the consent form to be filled in, in order to show that the respondents understand the study and they are willing to participate in this study.

Cronbach's alpha was used to assess internal consistency reliability. Cronbach's alpha for JRTI and JSS were adopted from previous studies. For JRTI, Cronbach alpha was assessed, and found to be 0.86 (Wooten, Fakunmoju, Kim, & Lefevre, 2009). As for JSS, it seems to have a high internal consistency (Cronbach's coefficient, 0.91) guaranteeing the data is valid and reliable (Hutton et al., 2014).

Since the Cronbach's alpha for JRTI and JSS are based on studies from countries in which English is used as the first language, we recalculated Cronbach alpha to reassure the validity of the study. As for JRTI, the value of our Cronbach alpha was 0.85, whereas for JSS the value was 0.78. We recalculated the Cronbach alpha because there were a few differences exist between countries, such as English was not the first language in our country. However, both recalculated Cronbach alpha have high internal consistency guaranteeing the data is valid and reliable.

### **3.6 Data Analysis**

Statistical Package for the Social Science (SPSS version 25) was used for data analysis. The socio demographic factors were analysed by descriptive statistics using mean, percentage and frequency. The distribution of job stress level and job satisfaction level were analysed by descriptive statistics using mean, percentage and frequency. The distribution of individual facets in JRTI and JSS questionnaires were analysed by descriptive statistics using mean, median, minimum, maximum and standard deviation. Spearman's test was used to analyse the association between the dependent (levels of job satisfaction among nurses of UPM) and independent (occupational stress) variables.

### **3.7 Study Ethics**

- I. The ethical clearance obtained from the Ethics Committee for Study Involving Human Subjects of Universiti Putra Malaysia (JKEUPM) -JKEUPM-2020-244
- II. All the answers given by respondents are highly private and confidential, so they were asked for informed consent prior to responding.
- III. Permission to conduct the online survey among Nurses in UPM gained from the administrations of HPUPM and PKU.

## **3.8 Variables**

### **3.8.1 Dependent Variable**

The dependent variable was the extent of job satisfaction among nurses in UPM, Selangor (Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards, Operating Conditions, Coworkers, Nature of Work, Communication).

### **3.8.2 Independent Variables**

1. Socio-demographic factors
  - I. Gender
  - II. Age
  - III. Educational level
  - IV. Duration of Service
  - V. Marital status
  - VI. Department
  - VII. Position at Job (Hierarchy)
2. Occupational stress
  - I. Performance
  - II. Workload
  - III. Organizational Structure
  - IV. Decision Making

### 3.10 Operational Definition

No	Terms	Definition
1	Gender	It is referred as being born as male or female.
2	Educational level	It is referred as having academic qualification such as Diploma, Bachelors Degree, Masters Degree or Doctorate in Nursing.
3	Duration of service	Respondent's years or months in the nursing profession when the data collection is being executed.
4	Occupational stress	It is interpreted as feeling hard, burdened and concerned with the high workload.
5	Job satisfaction	It is interpreted as the extent of fulfilment and pleasure that the respondents obtain from their job.

### 3.11 Limitations

Although this study greatly helps us to understand the associations between occupational stresses and job satisfaction, it is subjected to several limitations. The nurses mostly have busy schedule and overlooked the online questionnaire posted in their email or even Whatsapp. However, this problem was solved by contacting the respondents personally such as personal messaging the online questionnaire to the respondents. We also got a response from HPUPM late that we have to go to HPUPM to meet the matron to ask for help to distribute the questionnaire among nurses. Since other non-medical and medical staffs such as doctors, radiographers were not included in this study, the validity of this study was limited to the nurses only. There were a lot of nurses who were not accessible during the data collection period and among the nurses who were accessible, some of them were too busy and could not fill up the questionnaire which reduced our sample size. Besides, there were some nurses who did not complete the questionnaire. Since this study was only confined to UPM, this study had weak external validity when other universities are taken into account. The study design of this study which is cross sectional study cannot determine the causal relationship. The sample size calculated did not have the capability to portray the entire population. Other than that, the personality of each individual coping with job stress was not included in the study. Furthermore, the extent of task overload was not evaluated to investigate the high job demands in the nursing profession which leads to job stress. Lastly, we also faced some challenges in determining the cut off point for job related tension index and job satisfaction scale. We used median as a cut off point after discussing with our supervisor as he said that the value of median used was only relevant for our study.

## CHAPTER 4

### RESULTS

#### Introduction

Firstly, the descriptive analysis of the respondents' sociodemographic variables is discussed. Next, the prevalence of occupational stress and job satisfaction among nurses in UPM is discussed. This will be followed by the association study between occupational stress and job satisfaction. All results are presented systematically corresponding to the specific objectives of the research.

#### 4.1 Response Rate

The calculated sample size for this research was 124 samples. Total of 90 subjects had responded to the questionnaires. The response rate was calculated using the formula as shown below:

Calculation:

$$\text{Response rate} = (90 / 124) \times 100$$

$$= 72.58\%$$

Hence, the response rate for the study was 72.58%.

## 4.2 Normality Assessments

**Table 4.1. Test of normality on total score of Job Satisfaction Scale (N=90)**

	Kolmogorov -Smirnov			Shapiro- Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total JSS	0.113	90	0.007	0.967	90	0.021

Table 4.1. shows the normality test result using Kolmogorov-Smirnov and Shapiro-Wilk for total score of Job Satisfaction Level. The result reported to be not normally distributed with  $p < 0.05$ .

## 4.3 Socio Demographic Analysis

The sociodemographic variables of respondents are shown in Table 4.2. The sociodemographic aspect of the respondents consisted of the following: majority of respondents were female (74, 82.2%), Diploma graduate (82, 91.1%), married (67, 74.4%) and with grade U29 (73, 81.1). Most of the respondents' age are between 20 to 30 (43, 47.8%) and 31 to 40 (36, 40.0%) and majority of them have worked for less than 10 years (54, 60.0). Majority of them are from the medical specialist department (14, 15.6%).

**Table 4.2 The distribution of respondents according to socio-demographic factors of nurses of HPUPM, PKU and FPSK in UPM.**

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Variable	Frequency	Percentage %
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**Gender n=90**

Male	16	17.8
Female	74	82.2

**Age n=90**

20-30	43	47.8
31-40	36	40.0
41-50	9	10.0
51-60	2	2.2

**Educational Level n=90**

Diploma	82	91.1
Bachelor's Degree	8	8.9

**Duration of Service n=90**

<10	54	60.0
10-20	29	32.2
21-30	6	6.7
31-40	1	1.1

**Marital Status n=90**

Married	67	74.4
Unmarried	23	25.6

**Working Places n=90**

HPUPM	74	82.2
PKU	16	17.8

**Department n=90**

Family Medicine	5	5.6
Medical Specialist	14	15.6
Otorhinolaryngology, Head and Neck	2	2.2
Surgery (ENT)	5	5.6
Ophthalmology	2	2.2
Anaesthesiology	7	7.8
Paediatrics	2	2.2
Orthopaedics	4	4.4
Obstetric and Gynaecology	4	4.4
Psychiatry	6	6.7
Pharmacy	1	1.1
Public Health	2	2.2
Nursing	5	5.6
Medical Check Up	7	7.8

Intensive Care Unit	5	5.6
Operation Theatre	9	10.0
Outpatient	1	1.1
Emergency and Treatment Room	8	8.9
Administration	1	1.1

**Position at Job n=90**

U29	73	81.1
U32	7	7.8
U36	4	4.4
U41	4	4.4
U42	1	1.1
U44	1	1.1

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**4.4 Prevalence of stress among nurses in UPM**

**Table 4.3 Overall mean and median for job related tension index**

Mean	41.58
Median	42.00

The mean for job related tension index (JRTI) is 41.58 and the median is 42.00

**Table 4.4 The distribution of occupational stress among nurses in UPM**

	Frequency	Percent
Not stressed	42	46.7
Stressed	48	53.3
Total	90	100.0

A total 48 nurses (53.3%) were stressed with their job and 42 nurses (46.7%) were not stressed with their job. The cut off point to determine either nurses are stressed or not are based on median (42.00). If the nurse has a total score exceeding 42.00, they are considered stressed and if the score below 42.00 considered not stressed.

**Table 4.5. The distribution of individual facets in occupational stress**

	N	Minimum	Maximum	Mean	Median	Std. Deviation
Stress 1 Performance	90	5.00	21.00	13.91	14.00	3.02
Stress 2 Workload	90	4.00	18.00	11.60	12.00	2.63
Stress 3 Organisational Design	90	3.00	15.00	8.18	8.00	2.38
Stress 4 Decision Making	90	3.00	11.00	7.89	8.00	1.56

There are 4 facets under occupational stress. The facets are performance, workload, organisational design and decision making. Based on individual facets, the nurses are stressed with 1 out of 4 facets. The only facet that nurses are stressed is organisational design. Cut off points for individual facets are based on the median of the respective facets. If the mean of the facets exceeds its respective median considered as stressed, and if it does not exceed, considered as not stressed.

#### 4.5 Prevalence of job satisfaction among nurses in UPM

**Table 4.6. Overall mean and median for job satisfaction scale.**

Mean	112.66
Median	113.00

The mean for job satisfaction scale (JSS) is 112.66 and the median is 113.00.

**Table 4.7 The distribution of job satisfaction among nurses in UPM**

	Frequency	Percent
Satisfied	44	48.9
Dissatisfied	46	51.1
Total	90	100.0

A total 44 nurses (48.9%) were satisfied with their job and 46 nurses (51.1%) were not satisfied with their job. The cut off point to determine either nurses are satisfied or not are based on

median (112.00). If the nurse has a total score exceeding 112.00 considered as satisfied and if the score below 112.00 considered not satisfied.

**Table 4.8 The distribution of individual facets in job satisfaction scale.**

	N	Minimum	Maximum	Median	Mean	Std. Deviation
Facet 1 Pay	90	9.00	18.00	12.00	12.51	1.79
Facet 2 Promotion	90	8.00	19.00	12.00	12.66	1.88
Facet 3 Supervision	90	7.00	16.00	12.00	12.04	1.44
Facet 4 Fringe Benefits	90	6.00	17.00	12.00	12.31	1.88
Facet 5 Contingent Rewards	90	6.00	16.00	12.00	11.86	2.15
Facet 6 Operating Condition	90	6.00	19.00	12.00	12.39	2.46
Facet 7 Coworker	90	10.00	17.00	13.00	13.37	1.61
Facet 8 Nature of Work	90	9.00	18.00	13.00	13.42	1.81
Facet 9 Communication	90	6.00	17.00	12.00	12.10	2.27

Based on individual facets, the nurses satisfied with a total of 8 out of 9 facets. The facets are pay, supervision, fringe benefits, promotion, operating condition, coworker, nature of work and communication. The only facet that nurses are not satisfied is contingent rewards. Cut off points for individual facets are based on the median of the respective facets. If the mean of the facets exceeds its respective median considered as satisfied, and if it does not exceed, considered as not satisfied.

#### 4.6 Association between occupational stress and job satisfaction.

**Table 4.9 Association between occupational stress and job satisfaction**

Correlations				
			Total JRTI	Total JSS
Spearman's rho	Total JRTI	Correlation Coefficient	1.000	0.318**
		Sig. (2-tailed)	.	0.002
		N	90	90
	Total JSS	Correlation Coefficient	0.318**	1.000
		Sig. (2-tailed)	0.002	.
		N	90	90

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

According to Table 4.9, Spearman's correlation test was performed. There is significant weak positive association between stress level and satisfaction level ( $r_s = 0.318$ ,  $P = 0.002$ ).

## CHAPTER 5

### DISCUSSION

#### 5.1 Socio-demographic characteristic

In this study, among 90 respondents 82.2% were female and 47.8% belonged to the age group 20 to 30 years. Similar findings were noted in the study by department of maternity and gynecology nursing ,Alexander university, Egypt where majority samples were younger than 30 years,77% being female with sex and all were (n=148) working as staff nurse.

This study also showed the majority, 74.4% nurses were married, 25.6% were unmarried and 60.0% were having less than 10 year of experience. Study conducted by Krutideepa Mohanty noted similar results where the majority 74% nurses were married. This study also found most of them have worked for less than 10 years (54, 60.0%) and from the medical specialist department (14, 15.6%). Majority of them are with grade U29 (73, 81.1%) and are diploma graduates (82, 91.1%). They are mostly with grade U29 because most of them are diploma graduates. A study conducted in a teaching hospital in Malaysia also found a similar result where the majority of nurses are diploma graduates (74, 79.5%) .

#### 5.2 Prevalence of stress among nurses in UPM

In this study, the majority of nurses reported having job stress with 53.3%. The cause of their stress has been identified to be related to organizational design. Uncertainty concerning treatment, dealing with patients and families, workload, supervisors, death and dying, conflict

with physicians were responsible for frequent occurrence of stress among the majority of the nurses. Whereas inadequate emotional preparation, conflict with the peers, discrimination were causes causing occasional occurrence of stress among nurses. Findings observed in a study conducted in Egypt reported nurses stress are mainly from problems with supervisors which is also a form organisational issue. Besides, a study from China revealed that a major source of occupational stress is due to increased weightage of work and insufficient staffing (Callaghan, Shiu, and Wyatt, 2000). In comparison to the current study, a United Arab Emirates study found that the mean stress level of  $42 \pm 6$  & stress level of nurses was 44.4 % with a low stress level, 55.1 % with a moderate stress level, and 0.5 percent with a high stress level (Fuad, 2012). Study in India reported majority 49 % of nurses recorded daily stress occurrence, 30% recorded occasional stress occurrence, 21% reported severe stress occurrence due to uncertainty of care linked as a cause of stress.

### **5.3 Prevalence of job satisfaction among nurses in UPM**

The present study assessed the level of job satisfaction among nurses in UPM. A total 44 nurses (48.9%) were satisfied with their job and 46 nurses (51.1%) were not satisfied with their job. A study conducted in Egypt showed 61.8% of the nurses expressed low job satisfaction, while moderate satisfaction was 28.3% and only 9.8% of nurses were highly satisfied (Elsherbeny & El-Masry, 2018). On the contrary, when compared with a study conducted in Australia found that the levels of job satisfaction among nurses were high (81%) (Reid, Hurst, & Anderson, 2013). There are variations in the job satisfaction level among these studies due to different socio demographic factors (Saini and Singh, 2005). In addition, the location where this study was

conducted also contributed to the level of job satisfaction among nurses. For example, nurses from HPUPM and PKU, which are located in Serdang, which is an urban area, have more number of patients to look after, subsequently have higher workload, and lesser levels of job satisfaction. Study by Reid, Hurst, & Anderson in Australia reported nurses who work in rural and remote areas have high levels of job satisfaction. Slovenian nurses have medium levels of job satisfaction (Mateja Lorber & Brigita Skela Savič).

Job Satisfaction Scale (JSS) is multifaceted questionnaires. Regarding Hutton et al. in 2014, JSS has 9 facets and falls into a category either related with control of service leaders/indeed organizations or not related with control service leaders/indeed organizations. Facets that are not under direct control of leaders and organizations are pay, fringe benefits and promotion. The rest of the facets, supervision, contingent rewards, operating conditions, co-workers, nature of work and communication are under direct control of leaders and organizations. Based on individual facets, the nurses were satisfied with a total of 8 out of 9 facets. The only facet that nurses are not satisfied is contingent reward. Most of the nurses showed dissatisfaction towards contingent reward maybe due to influence of service leaders and organizations.

#### **5.4 Association between occupational stress and job satisfaction.**

Spearman's correlation test was performed. There is significant weak positive association between stress level and satisfaction level ( $r_s = 0.318$ ,  $P = 0.002$ ). This finding was in accordance with the result from a study among nursing staff in Poland and Lithuania reported the relationship between stress and work satisfaction ( $r = 0.34$ ;  $P = 0.001$ ) using Pearson correlation

test (Kwiecień-Jaguś, Mędrzycka-Dąbrowska, Chamienia, & Kielaite, 2018). In comparison with other study in which the association is negative, for example, a study in 2013 which assessed the causes of stress and job satisfaction among nurses in Ghana where there was a weak negative correlation between stress and job satisfaction ( $r = -0,0255$ ) (Rita, Atindanbila, Portia, & Abepuoring, 2013). Another example from a study conducted by the department of maternity and gynecology nursing, Alexander university, Egypt (as cited in Gulavani & Shinde, 2014), there was a negative correlation reported between stress and job satisfaction ( $r=-0.437$ ,  $P<0.05$ ).

## CHAPTER 6

### CONCLUSION

#### 6.1 Conclusion

In conclusion, a total of 48 nurses (53.3%) were stressed and 46 nurses (51.1%) were not satisfied with their job. For occupational stress, the only facet that nurses are stressed with is organisational design. Whereas for job satisfaction, nurses were not satisfied with contingent rewards. Results from the association study revealed there is a significant weak positive association between occupational stress and job satisfaction ( $r_s = 0.318$ ,  $P = 0.002$ ). This result adds new knowledge toward the relationship between job stress and job satisfaction among nurses in Malaysia and international context. Analysing occupational stress and job satisfaction among nurses was not one-time action, this needed continuous monitoring and evaluation. Further, there is a need of intervention to overcome stress among nurses and enhance their job satisfaction. This is crucial to improve their performance because the nursing profession is closely related toward patient quality care.

#### 6.2 Limitations

Although the process of our study went on smoothly, there were some limitations. We managed to collect the sample size. This is because the nurses mostly had busy schedules and overlooked the online questionnaire posted in their email or even Whatsapp group. Next, we were supposed to get the list of HPUPM nurses contact details after we got the approval to conduct research from the Director of HPUPM, but we got the list late, so that delayed the process of data collection. Since we did not get any response from HPUPM regarding the list of nurses earlier,

we were worried about delays, so we went to meet the matron to ask for help. After discussing with matron, she helped us by passing the questionnaires to her nurses and got them back to give back to us. Therefore, this process also delayed our results and data analysis. Other than that, the validity of this was limited to the nurses only. There were nurses who were not accessible during the data collection period and even if some nurses were accessible, some of them were too busy and could not fill up the questionnaire which reduced our sample size. The study design of this study which is cross sectional study cannot determine the causal relationship. Lastly, the extent of task overload was not evaluated to investigate the high job demands in the nursing profession which leads to job stress.

### **6.3 Recommendations**

Throughout the research, we learned a lot, and with that we have some recommendations to make it better for future researchers. Firstly, it would be helpful if the time period for data collection is extended since it is difficult to get working people to fill in online questionnaires on time. Next, consistent reminders and follow up is needed to get sufficient responses. Based on the study, the hospital administration can look into their organisational design and keep a constant check and balance on it to avoid nurses being stressed. Nurses can also be given rewards more often, such as increments, bonus, and sponsored tour to boost their job satisfaction, so that they work more efficiently. By doing so, the healthcare system as a whole, will be improvised in terms of quality. Besides, future studies can use these findings to carry out experimental studies in order to find causal relationship between job stress and job satisfaction

among nurses. Ways to handle stress and to increase job satisfaction will be identified by doing these future studies which will be beneficial for nurses.



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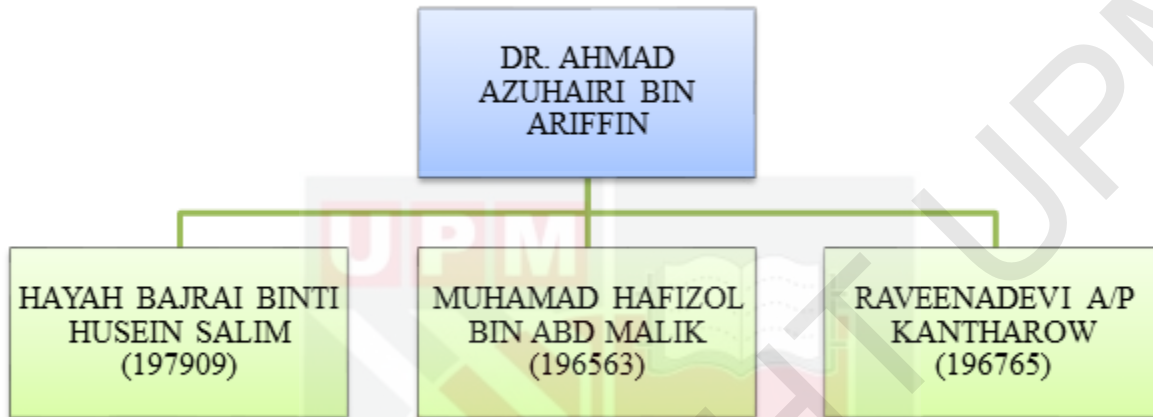


## APPENDICES

Activity	June	July	August	September	October
Proposal preparation	■				
Submission of proposal	■				
Proposal presentation	■				
Preparation of ethical approval to organization	■				
Data collection and analysis			■		
Presentation of analyzed data				■	
Report writing				■	
Poster submission				■	
Final presentation					■
Final report submission					■

**Table 1: Gantt Chart**

**Organization chart**



**Sample Size Estimation Formula**

Objective	Formula	N
1. To determine the socio-demographic characteristic (e.g.: gender, age, educational level, year of service, marital status, position at job, department) of the nurses in UPM		This is a descriptive variable and no need to calculate estimated sample size.

<p>2. To determine the prevalence of occupational stress among nurses in UPM</p>	$n = Z_{\alpha/2}^2 \cdot p \cdot (1-p) / d^2$ <p>p: 21.0%</p> $n(\text{adj}) = (Nn)/(N + n)$ <p>Prevalence source: Kaburi, B. B., Bio, F. Y., Kubio, C., Ameme, D. K., Kenu, E., Sackey, S. O., &amp; Afari, E. A. (2019). Psychological working conditions and predictors of occupational stress among nurses, Salaga Government Hospital, Ghana, 2016. <i>Pan African Medical Journal</i>, 33. doi:10.11604/pamj.2019.33.320.16147</p>	<p>113</p>
<p>3. To determine the job satisfaction among nurses.</p>		<p>This is a descriptive variable and no need to calculate estimated sample size.</p>

4. To determine the correlation between occupational stress and job satisfaction	$N = [(Z\alpha + Z\beta)/C]^2 + 3$ $C = 0.5 * \ln[(1+r)/(1-r)] = 0.3541$ <p>r: 0.34</p> <p>p: 0.001</p> <p>Pearson Correlation Source: Kwiecień-Jaguś, K., Mędrzycka-Dąbrowska, W., Chamienia, A., &amp; Kiełaitė, V. (2018). Stress factors vs. job satisfaction among nursing staff in the Pomeranian Province (Poland) and the Vilnius Region (Lithuania). <i>Annals of Agricultural and Environmental Medicine</i>, 25(4), 616-624. doi:10.26444/aaem/75801</p>	66
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### Budget

No.	Items	Estimated Cost
1.	Hard cover and binding of thesis	RM 200.00
2.	Printing	RM 20.00
Total		RM 220.00



**FORM 2.4: RESPONDENT’S INFORMATION SHEET AND INFORMED CONSENT FORM**

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

**1. STUDY TITLE :**

Association between Occupational Stress and Job Satisfaction among Nurses in UPM

**2. INTRODUCTION:**

Compared to other jobs, nurses show more pressure on work due to higher demands and less skill utilization (Jacobsen et al., 2014). Among all of the data shown, this is the main reason why we are choosing this title to study the prevalence of stress among nurses in Malaysia and UPM specifically. The objective of this study is to determine the association between occupational stress and job satisfaction.

**3. WHAT WILL YOU HAVE TO DO?**

Please fill up all the questions provided in the Google form and submit. The expected duration is approximately 10 minutes to fill up the Google form completely. All the answers given will be kept highly private and confidential.

#### **4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?**

Nurses who are on transition period in which they are working for only less than a year, nurses who are on study leave, and nurses who are under a post basic certification programme to gain specialization, for example, Renal Nursing.

#### **5. WHAT WILL BE THE BENEFITS OF THE STUDY:**

##### **(a) TO YOU AS THE SUBJECT?**

This research will provide information to each participant about their individual results of stress and job satisfaction at workplace.

##### **(b) TO THE INVESTIGATOR?**

To determine the association between occupational stress and job satisfaction among nurses in UPM.

#### **6. WHAT ARE THE POSSIBLE RISKS?**

There will be neither risk nor harm to the respondent as the information given are private and confidential. The results obtained from this research will be helpful for purposes such as to conduct further studies in future on how to relieve occupational stress and enhance job satisfaction among Nurses in UPM.

**7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?**

All the information that is collected will remain confidential. The results will be analyzed and published in a collective form and not pointing to any individual.

**8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?**

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*Please initial here if you have read and understood the contents of this page\_\_\_\_\_*

**9. CONSENT**

I ..... Identity Card No. ....  
address.....

.....hereby voluntarily agree to take  
part in the research stated above \*(clinical /drug trial/video recording/ focus group/interview-  
based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible adverse  
effects and complications (as written in the Respondent’s Information Sheet). I understand that  
I have the right to withdraw from this research at any time without giving any reason  
whatsoever. I also understand that this study is confidential and all information provided with  
regard to my identity will remain private and confidential.

I\* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me be  
used in any form of publication or presentation (if applicable)

Signature .....

(Respondent)

Signature .....

(Witness)

Date :.....

Name :.....

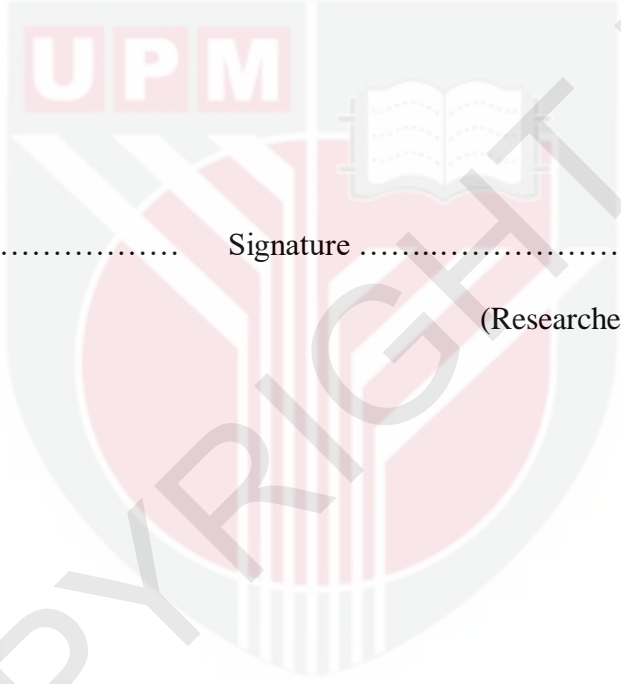
I/C No. :.....

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned research.

Date .....

Signature .....

(Researcher)



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## Questionnaire

This is a questionnaire which correlates occupational stress and job satisfaction among staff nurses in UPM. Please answer the following questions.

### Section A: Socio-demographic information

Please tick (✓) in the relevant box given and choose only ONE answer for each question. There is also one question for which its answer has to be typed. Kindly type in your answer.

1. Gender

- Male
- Female

2. Age

- >20
- 20-30
- 30-40
- 40-50
- 50-60
- <60

3. Education level

- Sijil
- Diploma
- Bachelors Degree
- Masters Degree
- PhD

4. Duration of service (years)

- >10
- 10-20
- 20-30
- 30-40
- >40

5. Marital Status

- Married
- Unmarried

6. Where are you working at?

- Hospital Pengajar UPM (HPUPM)
- Pusat Kesihatan Universiti (PKU)
- Fakulti Perubatan dan Sains Kesihatan (FPSK)
- Others, please specify :

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7. Which department are you from?

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7. Position at Job (Hierarchy)

- U54
  - U52
  - U48
  - U44
  - U41/42
  - U36
  - U32
  - U29
  - Others, please specify : \_\_\_\_\_
- 

**Section B : Job Related Tension Index (JRTI)**

Please tick (√) in the relevant box given and choose only ONE answer for each question.

The scale is from Totally Disagree (1) to Totally Agree (5).

1	2	3	4	5
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1.	Feeling that you have too little authority to carry out the responsibilities assigned to you.					
2.	Being unclear on just what the scope and responsibilities of your job are.					
3.	Not knowing what opportunities for advancement or promotion exist for you.					
4.	Feeling that you have too heavy a workload, one that you can't possibly finish during an ordinary workday.					
5.	Thinking that you'll not be able to satisfy the conflicting demands of various people over you.					
6.	Feeling that you're not fully qualified to handle your job.					
7.	Not knowing what your supervisor thinks of you, how s/he evaluates your performance.					
8.	The fact that you can't get information needed to carry out your job.					
9.	Having to decide things that affect the lives of individuals, people that you know.					

10.	Feeling that you may not be liked and accepted by the people you work with.					
11.	Feeling unable to influence your immediate supervisor's decisions and actions that affect you.					
12.	Not knowing just what the people you work with expect of you.					
13.	Thinking that the amount of work you have to do may interfere with how well it gets done.					
14.	Feeling that you have to do things on the job that are against your better judgment.					
15.	Feeling that your job tends to interfere with your family life.					

Adopted from : Wooten, N. R., Fakunmoju, S. B., Kim, H., & Lefevre, A. L. (2010). Factor Structure of the Job-Related Tension Index Among Social Workers. *Research on Social Work Practice*, 20(1), 74-86.

### Section C : Job Satisfaction Scale (JSS)

Please tick (✓) in the relevant box given and choose only ONE answer for each question.

The scale is from Totally Disagree (1) to Totally Agree (5).

		1	2	3	4	5
1.	I feel I am being paid a fair amount for the work I do.					
2.	There is really too little chance for promotion on my job.					
3.	My supervisor is quite competent in doing his/her job.					
4.	I am not satisfied with the benefits I receive.					
5.	When I do a good job, I receive the recognition for it that I should receive.					
6.	Many of our rules and procedures make doing a good job difficult.					
7.	I like the people I work with.					
8.	I sometimes feel my job is meaningless.					

9.	Communications seem good within this organization.					
10.	Raises are too few and far between.					
11.	Those who do well on the job stand a fair chance of being promoted.					
12.	My supervisor is unfair to me.					
13.	The benefits we receive are as good as most other organizations offer.					
14.	I do not feel that the work I do is appreciated.					
15.	My efforts to do a good job are seldom blocked by red tape.					
16.	I find I have to work harder at my job because of the incompetence of people I work with.					
17.	I like doing the things I do at work.					
18.	The goals of this organization are not clear to me.					
19.	I feel unappreciated by the organization when I think about what they pay me.					
20.	People get ahead as fast here as they do in other places.					

21.	My supervisor shows too little interest in the feelings of subordinates.					
22.	The benefit package we have is equitable.					
23.	There are few rewards for those who work here.					
24.	I have too much to do at work.					
25.	I enjoy my coworkers.					
26.	I often feel that I do not know what is going on with the organization.					
27.	I feel a sense of pride in doing my job.					
28.	I feel satisfied with my chances for salary increases.					
29.	There are benefits we do not have which we should have.					
30.	I like my supervisor.					
31.	I have too much paperwork.					
32.	I don't feel my efforts are rewarded the way they should be.					
33.	I am satisfied with my chances for					

	promotion.					
34.	There is too much bickering and fighting at work.					
35.	My job is enjoyable.					
36.	Work assignments are not fully explained.					

Adopted from : Hutton, D., Beardmore, C., Patel, I., Massey, J., Wong, H., & Probst, H. (2014). Audit of the job satisfaction levels of the UK radiography and physics workforce in UK radiotherapy centres 2012. *The British Journal of Radiology*, 87(1039),20130742. doi:10.1259/bjr.20130742

**ETHICS COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS  
(JKEUPM)  
UNIVERSITI PUTRA MALAYSIA**

<b>Research title</b>	<b>: Association Between Occupational Stress and Job Satisfaction Among Nurses in University Putra Malaysia.</b>
<b>Study Site</b>	<b>: Faculty of Medicine and Health Sciences, Teaching Hospital Universiti Putra Malaysia (HPUPM) and University Health Centre (PKU), Universiti Putra Malaysia.</b>
<b>JKEUPM Ref No.</b>	<b>: JKEUPM-2020-244</b>
<b>Researcher</b>	<b>: Hayah Bajrai Husein Salim, Muhamad Hafizol Abd Malik, Raveenadevi A/P Kantharow.</b>
<b>Supervisor</b>	<b>: Dr. Ahmad Azuhairi Ariffin</b>

Documents received and reviewed with reference to the above study:

1. Ethics Application Form, Version 1 dated 2/7/2020
2. Respondent Information Sheet & Consent (English), Version 2 dated 17/8/2020
3. Proposal (English), Version 1 dated 2/7/2020
4. Questionnaires/ Interviews (English), Version 1 dated 2/7/2020
5. Curriculum Vitae of:
  - a. Dr. Ahmad Azuhairi Ariffin

The University Research Ethics Committee, Universiti Putra Malaysia (JKEUPM) operates in accordance to the ICH-GCP Guidelines.

Decision by JKEUPM:

- Approved
- Permission MUST BE OBTAINED from the respective hospitals/ institutions before conducting the research**
- Disapproved

Please note that the approval is **VALID UNTIL 21 AUGUST 2021**

Researchers should comply with the following:

- I. Complete a Study Final Report upon study completion (Form 3.2).
- II. Ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.
- III. Applicable for Clinical Trial Studies and Clinical interventional Studies only: Progress Report has to be submitted to JKEUPM at every 6 months from the date of approval (Form 3.1). Report