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**THE PREVALENCE OF OCCUPATIONAL STRESS AND ITS RISK  
FACTORS AMONG PRIVATE HIGHER LEARNING INSTITUTES (IPTS)  
LECTURERS IN MALAYSIA**

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**MASTER OF SCIENCE  
(OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT)  
UNIVERSITI UTARA MALAYSIA  
APRIL 2021**

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FACTORS AMONG PRIVATE HIGHER LEARNING INSTITUTES (IPTS)  
LECTURERS IN MALAYSIA**

**By**

**T. NANTHAKUMAR TAMILSELVAM**



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(Occupational Safety and Health Management)**



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## ABSTRACT

In Malaysia, the education sector is one of the industries with a huge number of employees. At this recent era, most private higher education institutions (IPTS) in Malaysia face a shortage of expertise, a high turnover rate of academicians, a higher demand for industrial reform and a weak incentive system. Therefore, it leads to potential psychological stress, musculoskeletal discomfort and job satisfaction that contributing occupational stress amongst its academicians per ensuring the operational success. The study aimed to determine the relationship between occupational stress and its contributing factors among IPTS lecturers by utilizing cross sectional study design. A convenient sampling was used to obtain 380 IPTS lecturers throughout Malaysia. A set of questionnaires consist of sociodemographic profile, occupational stress index (OSI), psychological stress, musculoskeletal discomfort and job satisfaction questionnaire (JSQ) was used. The outcome reveals that 87.7% and 97.5% of academicians experienced moderate to high occupational stress and psychological stress respectively, 96.3% with low to moderate level of musculoskeletal discomfort and 99.7% for moderate level of job satisfaction. There was a significant relationship between occupational stress and psychological stress and occupational stress with job satisfaction. In conclusion, it is believed that there are some underlying factors had managed to account medium to high level of occupational stress among the IPTS academicians. However, it is unable to link if the underlying factors plays significant role in occupational stress in which it requires future in-depth analysis.

**Keywords:** *Malaysia, Lecturer, Occupational Stress, Job Satisfaction, Academicians*

# KELAZIMAN TEKANAN PEKERJAAN DAN FAKTOR RISIKONYA DI KALANGAN PENSYARAH INSTITUT PENGAJIAN TINGGI SWASTA DI MALAYSIA

## ABSTRAK

Di Malaysia, sektor pendidikan adalah salah satu industri dengan jumlah pekerja yang ramai. Pada era terakhir ini, kebanyakan institusi pendidikan tinggi swasta (IPTS) di Malaysia menghadapi kekurangan kepakaran, kadar perolehan akademik yang tinggi, permintaan yang lebih tinggi untuk reformasi industri dan sistem insentif yang lemah. Oleh itu, ia membawa kepada tekanan psikologi, ketidakselesaian muskuloskeletal dan kepuasan kerja yang mendorong kepada tekanan pekerjaan di kalangan ahli akademiknya untuk memastikan kejayaan operasi. Kajian ini bertujuan untuk mengetahui hubungan antara tekanan pekerjaan dan faktor yang mempengaruhinya di kalangan pensyarah IPTS dengan menggunakan reka bentuk kajian keratan rentas. Persampelan yang mudah digunakan untuk mendapatkan 380 pensyarah IPTS di seluruh Malaysia. Satu set soal selidik terdiri daripada profil sosiodemografi, indeks tekanan pekerjaan (OSI), tekanan psikologi, ketidakselesaian muskuloskeletal dan soal selidik kepuasan kerja (JSQ) digunakan. Hasil kajian menunjukkan bahawa 87.7% dan 97.5% ahli akademik masing-masing mengalami tekanan pekerjaan dan tekanan psikologi sederhana ke tinggi, 96.3% dengan tahap ketidakselesaian muskuloskeletal rendah hingga sederhana dan 99.7% untuk tahap kepuasan kerja sederhana. Terdapat hubungan yang signifikan antara tekanan pekerjaan dengan tekanan psikologi dan tekanan pekerjaan dengan kepuasan kerja. Sebagai kesimpulan, dipercayai bahawa terdapat beberapa faktor yang mendasari berjaya mengatasi tekanan pekerjaan yang sederhana hingga tinggi di kalangan ahli akademik IPTS. Walau bagaimanapun, ianya tidak dapat menghubungkan sekiranya faktor-faktor yang mendasari memainkan peranan penting dalam tekanan pekerjaan dimana ianya memerlukan analisis yang mendalam masa depan.

**Kata kunci:** *Malaysia, Pensyarah, Tekanan Pekerjaam, Kepuasan Kerja, Ahli Akademik*

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## LIST OF ABBREVIATIONS & SYMBOLS

%	percentages
DOSH	Department of Occupational Safety and Health
SOCISO	Social Security Organization
n	Numbers
IPTS	Institut Pengajian Tinggi Swasta
MOHE	Ministry of Higher Education
H <sub>a</sub>	Alternate Hypothesis
H <sub>0</sub>	Null hypothesis
<	Less than
>	More than
=	Equals to
Sig.	Significance
&	And
-	Negative
MCO	Movement Control Order



## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 INTRODUCTION OF CHAPTER**

This chapter aims to clarify several issues in regards to the study development. This chapter also provides an overview of the research background, problem statement, research questions, research objectives, the scope of the study together with the definition of key terms of the study.

#### **1.2 RESEARCH BACKGROUND**

Education has become a necessity in this modern age, where education aims a better future, a more sustainable life and contributes significantly to the unity of society. Malaysian education system is divided into three phases which is preliminary education (kindergarten, pre-school and Montessori), formal school (primary and secondary) and higher learning (certificates, diploma, bachelor degree and postgraduate) at their university of choice. To make all this happen, educators (teachers, lecturers, tutors, coach and etc.) play the important roles in moulding the future generations. Many adults spend most of their lives in works-related activities which generates income and quality improvements and have significant outcomes for the social, mental and physical health. Even after this fact, condition at work and workplace still involve distinct and even severe health hazards in many countries, such as physical hazards, psychological hazards, organizational hazards and environmental hazards that reduce the work span of an employee (Asmaa et al., 2018).

Education sector is one of the industries with a large number of employees in Malaysia. Malaysia's higher education system is divided into two categories which is government funded public universities (IPTA) and private universities or colleges (IPTS), which are self-managed institutions (Azizah et al., 2016). Lecturer is a profession that teaches adults in higher learning institutions. This profession extremely well respected in the world. Although the job scope offers a fruitful job satisfaction towards the lecturers but it also carries a hidden yet overwhelmed stress to both mentally and physically, signifying occupational stress (Azizah et al., 2016; Sofie & Stella, 2015). Several studies indicated that, teaching profession has many work-related health risks where they spend most of their lives in such hazardous working environment that affect their health. Recent findings indicate 60-90% of all diseases encountered by individuals are existed from stress-related cases that confronted them with complications that influence their work motivation, productivity and make them absent from their duties (Asmaa et al., 2018; Azizah et al., 2016). Therefore, it is important to understand job satisfaction and its impact to the lecturers.

According to Toker (2011), job satisfaction was proven to have a greater impact on absenteeism, turnover, work performance and psychological distress. Along with this, employee's incentives also influence their job satisfaction. The turnover rates of the experienced academicians whether it is senior or junior lecturers are fairly high in the field of IPTS. Based on Malaysia Employers Federation (MED) statistic in 2012, the high turnover for academicians from IPTS on June to July 2011 was 30% which is shockingly high for a such education sector as many believes is a less stressful environment (Manogharan et al., 2018).

A study by Kabito and Wami (2020) contradictory revealed that occupational stress is the reaction or response by the working people when they are facing with job demands and expectations. It is believed that it is unmatched to the stress mainly caused by knowledge and expertise. Many research findings have today also shown teaching of one of the professions with high level of stress measured globally. It demonstrated about 40% and 75% of educators are suffering from extreme stress in European and Canadian countries respectively. In a small country such as Africa, a significant level of stress been identified with the number of populations.

Based on Sofie and Stella (2015) findings, it is concluded that occupational stress among lecturers has attracted an interest among researchers to identify, in particular, causes, vulnerabilities, effects and stress management. Tasks that lecturers are expected to do, example dealing with student issues, scheduling, and other related works, is perceived to be of low value, but adds to lecturer workload and eventually lead to stress.

### **1.3 PROBLEM STATEMENT**

Lecturer is the essential human resource for all institutions of higher learning no matter on private or public sector mainly to deliver the teaching and learning session together with research duties. The education sector is a labour-intensive industry, which the duty of a lecturer to provide emotional support and personal coaching to the students (Amazt & Idris, 2011; Hamjah et al., 2015). At this recent era, most private higher education institutions (IPTS) in Malaysia are facing a shortage of expertise, a high

turnover rate of academicians, a higher demand for industrial reform and a weak incentive system. Looking at this, the affected individual is mainly the lecturers. Table 1.1 below displays the numbers of lecturers by institution and year from 2012 to 2018 extracted from Ministry of Higher Education statistics.

It is documented that in 2013 and 2016, there have been 24,476 and 31,112 lecturers in IPTS, which was escalated exponentially to 36,185 in 2014 and 48,643 in 2017 respectively. This tremendous increase can be linked back to the fast growth of private higher education institution. In 2018, the number of lecturers dropped tremendously from 48,643 to 22,980 compared to other higher education institutions, the number is very noticeable for private higher education institutions. This reveals that the turnover of lecturers in private higher education institutions is very high compared to other higher education institutions.

The lecturers are the key element for sustainable development in higher education and the valuable individual to push the ranking of the institutions higher. Even the lecturers are important roles in higher education institution, but the turnover continues to plaque tends to result in continuous loss of teaching staff. It is demonstrated in China on massive turnover of academicians, with some research figuring out that the turnover rate of private higher education institutions was up to 96.6 % (GuiXia & Rashid, 2019). Teaching is a profession which is slowly becoming a profession with stress. Stress has been one of the greatest health issues that academicians have to contend with. Ability of the academicians to cope can also be an

important resource for academicians to deal with the responsibilities of their profession (Asmaa et al., 2018).

**Table 1.1**

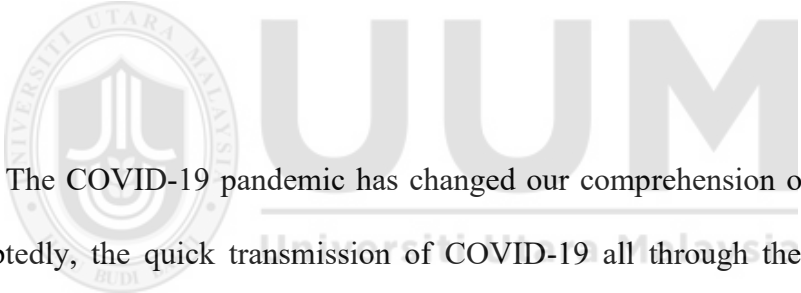
*Number of academic staffs in Malaysia*

	<b>Higher Education Institutes</b>			
	<b>IPTA</b>	<b>IPTS</b>	<b>Polytechnics</b>	<b>Community College</b>
2013	32,516	<b>24,476</b>	7,256	2,816
2014	31,917	<b>36,185</b>	7,160	2,727
2015	31,877	<b>34,750</b>	7,391	2,696
2016	31,172	<b>31,112</b>	7,445	2,713
2017	31,740	<b>48,643</b>	7,376	2,724
2018	31,528	<b>22,980</b>	7,281	2,764

(Source: Ministry of Higher Education)

Employee satisfaction is an important characteristic that employers expect from their workers. There is a relationship between job satisfaction with efficiency, organizational effectiveness and other issues, including the employee's resignation. However, employees are resistant to the absenteeism and massive resignation rate (Toker, 2011).

In 2015, it is reported that the average turnover rate for the education sector in 2011 was 29.2%. It was ranked third among all sectors in non-manufacturing industries. This number has been cited in Malaysian Employer Federation. Dissatisfaction among lecturers is the reason for the higher rate of turnover among lecturers (Rathakrishnan et al., 2016). In Malaysia, lecturers encounter occupational stress due to low satisfaction over factors such as interpersonal relationship, recognition, commitment, work load, working environment, work nature, promotion, job security, position, employment and personal life. Nevertheless, employee satisfaction, career growth potential, changes in university's policy and administration, unsatisfactory compensation and supervision may also be the variables factor contribute to occupational stress among lecturers (Amazt & Idris, 2011).



The COVID-19 pandemic has changed our comprehension of the world and undoubtedly, the quick transmission of COVID-19 all through the world has had consequences on the health, economic, social, mental and obviously on education sectors. The pandemic has caused the high level of stress since the beginning of this pandemic. Few studies have brought up that during the lockdown period, educators have experienced high amount of stress in conducting the online classes. This stress occurs due to the combination of stress and the disturbances that expanded from the workload during online teaching (Naiara et al., 2021; Smith et al., 2020). As added by Florian et. al. (2020), this pandemic created a hurdle in the way of technical barrier for the academicians to run the online teaching and learning methods for their students. This technical barrier caused them to develop psychological stress due to the job, unsatisfied on their role. Prolonged seating in a place to solve the technical barrier and

complete the given task by the daily deadline also developed the physical strain where all this accumulated and caused occupational stress among the individuals in the teaching profession.

Occupational stress is a stress connected to the individual's job and is a serious problem worldwide, resulting in significant losses for both employees and organizations. Stress occurs globally which leads to serious and upsetting conditions. Occupational stress is characterized in terms of the relationship between an individual and their condition of working environment, where every job has a certain amount of stress that can only differ in level. Because of the growing difficulty of jobs and economic strain on individuals, occupational stress among teaching profession become common and increasing in the prevalence. The outcome of this stress can be observed through physical, mentally and attitude changes (Sing & Katoch, 2017). As stated in the studies conducted by Ryan et. al. (2020), many studies been conducted and mentioned that there are wise steps to be taken to reduce or overcome the occupational stress among the academicians but mostly of it never identify on the causing factors that need to be eliminate or reduced and the studies left hanging without any conclusion or implications.

According to few studies previously, it summarised that physical stress, mental health (psychological stress), workload, social support, job demands and job satisfaction are the factors relatively causes work related stress or the other word occupational stress (Buscemi et al., 2017; Kabito & Wami, 2020; Kataoka et al., 2014). Together with this, it is also reported that musculoskeletal discomfort is one of



principal cause of loss of employment and has escalated to substantial costs for the public health system. Musculoskeletal discomfort has significant impact on the academicians which indirectly been the factor for occupational stress and it show the highest prevalence among the other occupational classes ranging from 23.7 % to about 95.1 % (Darwish & Al-Zuhair, 2013; Hamjah et al., 2018).

As a result, lecturers that have been affected with occupational stress can have negative consequences impacting their students. The pervasiveness of occupational stress among academician is expanding in both developing and non-developing nations. The role of academicians it is not just to instruct, yet in addition include in doing administration task, consultation, research with the relevant field and publication to update the key performance index (KPI) (Ismail & Arma, 2016). As stressed lecturers, they can have unavoidable, serious or extreme negative reactions, thereby impacting the standard of education given to the students (Azizah et al., 2016; Rathakrishnan et al., 2016; Tai et al., 2019). This same prevalence of stress among local lecturers was also reported at 23.1%, which was higher than among non-academic sectors (Tai et al., 2019). This study is to determine the prevalence of occupational stress among the IPTS lecturers and the significant contribution factors.

#### **1.4 RESEARCH QUESTIONS**

- i. Is there any prevalence of musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress among IPTS lecturers?
- ii. Are there any differences between the prevalence of musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress with the sociodemographic among IPTS lecturers?
- iii. Is there any relationship between musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress with the sociodemographic among IPTS lecturers?
- iv. Is there any relationship between musculoskeletal discomfort, psychological stress and job satisfaction with occupational stress among IPTS lecturers?

#### **1.5 RESEARCH OBJECTIVES**

- i. To measure the prevalence of musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress among respondents.
- ii. To compare the prevalence of musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress with the sociodemographic of the respondents.
- iii. To analyse the correlation between musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress with the sociodemographic of the respondents.
- iv. To evaluate the correlation between the musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress among the respondents

## **1.6 SCOPE OF THE STUDY**

This research concentrated on the IPTS lecturers in Malaysia. The lecturers chosen randomly from the colleges, university colleges and universities throughout Malaysia to survey the effects of musculoskeletal discomfort, psychological stress and job satisfaction towards the occupational stress.

## **1.7 DEFINITION OF KEY TERMS**

### **1.7.1 Occupational stress**

Occupational stress is a physical, mental or emotional reaction to the situations that involving physical or psychological stress. In the context of World Health Organization (WHO), occupational stress is a reaction of workers who might just only have to comply with the requirements of employment and constraint that do not suit their skills and expertise which challenge their ability to cope with them. Stress is defined in a variety of physical, emotional and mental ways. This situation is typically referred to as burn-out due to a variety of complicated problems (Suzie et al., 2015).

### **1.7.2 Musculoskeletal discomfort**

Musculoskeletal discomfort includes variety of inflammatory and degenerative disorders. Symptoms of musculoskeletal discomfort include of swelling, tingling, aching, stiffness or burning and mostly affected the area of low back, spine, shoulder, forearm and hand. This condition is mainly due to the effects on the joints, ligament, muscles, tendons, peripheral nerves and the supporting blood vessels (Sirajudeen et al., 2018).

### **1.7.3 Psychological stress**

Psychological stress is a condition of mental pressure and tension. Low level of stress could be acceptable, beneficial and even healthy. Nonetheless, high level of stress may escalate to biological, psychological and social problems and can cause serious harm to others (Shahsavarani et al., 2015).

### **1.7.4 Job satisfaction**

Job satisfaction is the indicator in which working individuals are comfortable or disappointed with their job, or the interpretation by the job or with various related perspectives of it. It's also the thinking of the employee about his or her job and a comfortable psychological state emerging from the context of professional experience in the organization with hierarchy. Therefore, job satisfaction happens when there is a strong connection between psychological, physiological and environmental factors (Mateescu & Chraif, 2015).

## **1.8 ORGANIZATION OF THE RESEARCH**

Chapter 1 explain a brief introduction on the background of study and then problem statement. Together with this, it outlines the research questions, research objectives, scope of study and the definition of key terms.

Chapter 2 contains the details review on the past studies on work-related stress, working environment, job satisfaction and interpersonal relationship. In addition, this chapter also discuss on the related theories.

Chapter 3 explains the research methodology on how this study conducted. This includes research framework, hypothesis development, research design, operational definition, and variables measurement. Together with this, chapter 3 also discuss on sampling design, questionnaire items, data collection process and choices of data analysis.

Chapter 4 describes the results of the analyses. It then outlines the normality test, response rate, frequency analysis, demographic of the respondents, reliability analysis for actual study, descriptive analysis and inferential analysis. In addition to this, the researchers also discuss about the hypothesis testing which include the comparison, correlation result analysis and multiple regression analysis. This chapter also discusses about the hypothesis summary and the summary of the chapter at the end.

Chapter 5 discuss the finding of the study, recommendations and conclusions. It outlines the discussion on the research objectives and followed by significant of the findings. The researcher also discusses about the recommendations for future research and conclusion.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION OF CHAPTER**

This chapter mainly explain on the past literatures which are related to the variables of this study which are occupational stress, musculoskeletal discomfort, psychological stress, and job satisfaction in the first part. Additional to this, at the second part, the literature review of relationship between occupational stress with psychological stress, musculoskeletal discomfort and job satisfaction will be elaborated.

#### **2.2 OCCUPATIONAL STRESS**

Occupational stress is a condition where certain work-related condition that effect the workers in order to change their thinking and physical conditions, which will force and deviate from normal state of mind and body (Asmaa et al., 2018; Othman et al., 2014). According to Azizah et. al. (2016), occupational stress is a condition when the employees feel that the job requirements do not sync with their capabilities, available resources and the employees need.

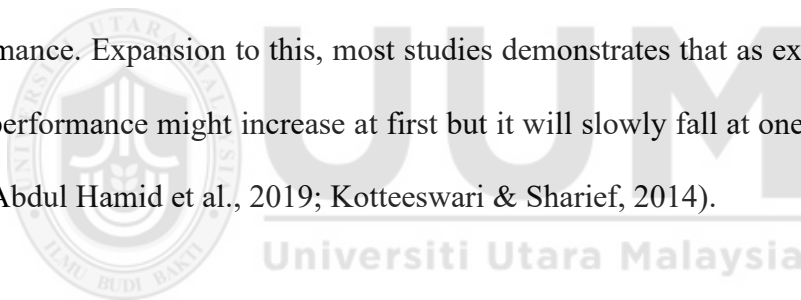
Occupational stress is due to job demand, organizational culture, financial conflict between works and family commitments, delay in the process of career development, together with the existing organizational environment (Azizah et al., 2016; Othman et al., 2014), work load with demands of administrative, and the high expectations to achieve their goal (Gorsy et al., 2015; Sofie & Stella, 2015).

According to Asmaa et. al. (2018) and Othman et. al. (2014), the person who facing the occupational stress can be observed with the late attendance, more absenteeism and decreases in performance and production. Previous studies reported that academic people are one of the most affected by rising stress in their respective workplace environment and suffers from high turnover rate.

In a statement by Mohamed (2018), there are numerous researchers who concur that we live in a condition with numerous boosts and various causes, which thrill the person's life. Such condition begins from school and developed throughout the daily lives wherever we are no matter at home or workplace. This can prompt an individual living in a condition of nervousness, strain, and feeling. This influences the person's task and responsibilities, as well as the person's relationship towards the surroundings, together which might affect the individual on the health perspective.

The presence of occupational stress among lecturer or academic people will produce more effect not only for the individuals but also for the surroundings. Asmaa et. al. (2018) reported that occupational stress can lead to loss of service, a lack of commitment between the superior due to the job satisfaction, a lack in productivity, the development of individual problems which can lead to illness or serious to death. Another statement as mentioned by Othman et. al. (2014), occupational stress also can cause health issues due to severe work demands, where employees eventually lose control, leading to job dissatisfaction and mental stress, which can also cause severe health conditions such as cardiovascular disease.

Occupational stress is contrarily related to work performance. As such, higher the stress level, bring down the work performance. Before it was accepted that moderate level of stress would energize representatives and improves their work performances. Yet, this conviction it is not held to be genuine at this point. The suspicion substantial currently is that work performance will be upset even by generally low level of stress. There are some substantial purposes behind this proclamation which are in any event, when a representative confronting moderately low stress additionally will occupy a worker, people that encountering stress will in general zero in on the terrible sentiments and feelings instead of on the main work and thus their performances endure. Close to this, prolonged or repeated exposure even to moderate level of stress may directly affect wellbeing and this may disrupt the work performance. Expansion to this, most studies demonstrates that as excitement builds, work performance might increase at first but it will slowly fall at one stage sooner or later (Abdul Hamid et al., 2019; Kotteeswari & Sharief, 2014).

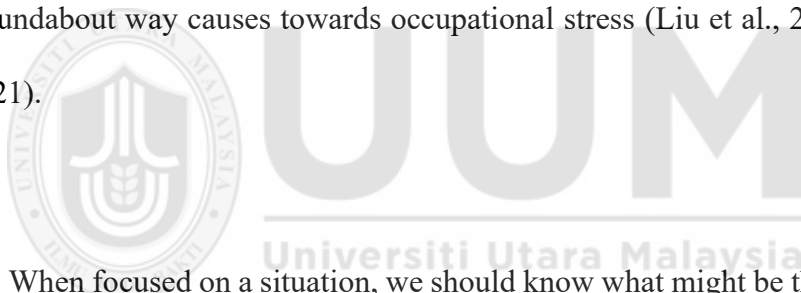


Coronavirus (COVID-19) is a novel viral disease that started in China towards the end of year 2019 and it was declared as the general health globally in January 2020. This outbreak quickly spread around the globe and turned into a severe pandemic (AlAteeq et al., 2020; World Health Organization, 2020). This crisis is rearing pressure all through the population and the broad sickness outbreak is related with troublesome mental health issues and adverse mental issues. To be sure, it can be said that stress has become one of the significant worries since beginning of this pandemic. A detailed investigation announced that this pandemic has influenced the prosperity of academicians concerning on their duties and responsibilities. As this, stress is as of now a worry among academicians even there was before the pandemic begins.



Regardless of being known as a respectable duties, but teaching has a long history of times of discontent and crisis (Alves et al., 2020; Nanjundaswamy et al., 2020).

Past investigations have indicated a moderate to a high extent of stress among academicians in low income to middle income nations. Notwithstanding, like never before, ongoing studies detailed an increased level of stress contrasted with levels before the pandemic occur (Liu et al., 2021). Addition to this, the pandemic is additionally defying the educational sector globally with a change in perspective in educating and learning and academicians are confronted with a wide exhibit of amazingly testing conditions in adapting to these changes which straightforwardly and in a roundabout way causes towards occupational stress (Liu et al., 2021; Michael et al., 2021).



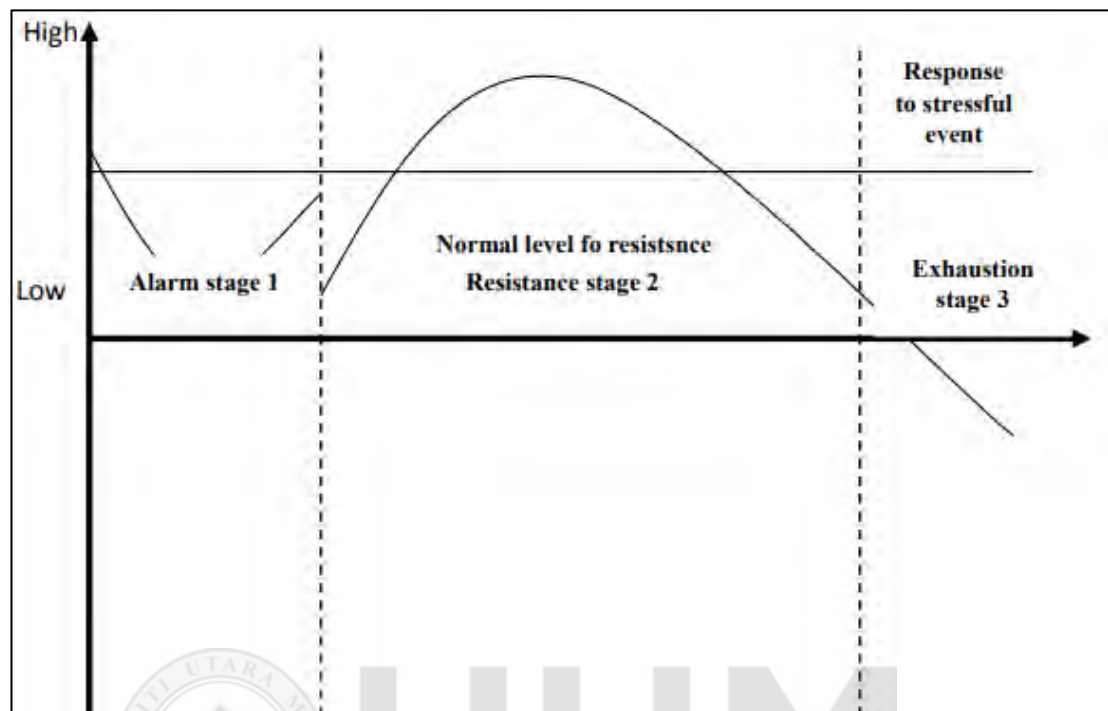
When focused on a situation, we should know what might be the causes of this occupational stress among lecturers. As summarised from previous studies by various researches, it says that it is due to outcome that been experiences in teaching the students who are lack of motivation and not supportive in any matter, the troubles that faced in order to maintain the discipline of the students, the over added of workload and limitation time of deadline, unproductive changes implementation, the relationship between the other academicians in the same working place, the conflict that present between the colleagues and the situation that might cause the lecturers being evaluated by other lecturers or working colleagues, overall dissatisfaction on the management (inefficient, ineffective, poor working environment and conditions) together with the benefits and pays that not meet the workload and work production (Mohamed, 2018).

The effect of occupational stress experienced by academicians was exceptionally huge in light of the fact that it might influence the educators as well as their students. Studies performed by a few colleges in Malaysia indicated that scholastic staff confronted more pressure from the administration and top management because of serious competition from other higher learning institutes. The higher learning institutes are presently contending with one another to improve rank in accomplishing an incredible higher learning institutes in the country, and in a roundabout way constraining the scholastic staff to accelerate their performance to arrive at this extreme objective (Abdul Hamid et al., 2019; Ismail & Arma, 2016).

Occupational stress can be classified into the three stages. The first stage is alarm reaction, followed by stage of resistance, and the final is stage of exhaustion. Each of this stage as illustrated in Figure 2.1 has its own characteristics to show how severe or the condition of occupational stress that the individual experienced on. The first it the stage of alarm reaction. It occurs when an outside pressure shocks the individual, demanding the matter that should be finished. It might help him/her to consider this second the protection through close to home insight. In the event that the response is adequate, the body will turn around to its resting circumstance subsequent to having effectively managed the wellspring of pressure (Mohamed, 2018).

**Figure 2.1**

*Stages of Occupational Stress*



(Source: Mohamed, 2018)

The second stage was the resistance stage starts with expanding pressure and a significant degree of nervousness and strain. In any case, the obstruction typically brings about many negative wonders like settling on critical choices and the event of conflicts or destructive clashes. Furthermore, the opposition can direct likewise to the occurrences of numerous positions and factors that rise out of the control of the individual and the association in a possible chance to prompt the breakdown of obstruction and the trigger of a gathering of negative issues and indications. By looking on the stage of exhaustion, when the pressure or stress keeps on following up on the body, transformation capacity is at last lost and a condition of over-burdening is reached. In different words, it very well may be said, the individuals will fall in this stage when they themselves is presented to wellsprings of pressing factor persistently

and for a short period of time, as he/she gets pressure because of rehashed obstruction and endeavor to adjust (Mohamed, 2018).

### **2.3 MUSCULOSKELETAL DISCOMFORT**

Musculoskeletal discomfort is the most common work-related issue which is known as cumulative disorders due to repeated exposure to high or low intensity loads over a lengthy period of time (Narsia & Oliver, 2020). According to Sugumaran et. al. (2019), musculoskeletal discomfort is in the top five among highest contributor to years lived disability and on the rank twenty-one in overall disability. Musculoskeletal discomfort seems to be on the rise among employees worldwide, with a tremendous amount cost and effect on quality of life (Anuar et al., 2016; Hamjahet al., 2015; Karwan et al., 2015). Hossain et. al. (2018) said that musculoskeletal discomfort is common occupational disease that particularly affects the neck, lower back, and the both upper and lower extremities. Musculoskeletal discomfort is an injury or disorder that affects mainly on the nine part of anatomical position of human body from superior to inferior (Figure 2.2).

The injury or disorder of the joints, tendons, muscles, back bone, cartilage or nerves if the symptoms of one having musculoskeletal discomfort (Anuar et al., 2016; Buscemi et al., 2017; Darwish et al., 2015). The musculoskeletal discomfort among the working people creates after some time and are caused either by the actual work due to working conditions or environment (Darwish et al., 2015).

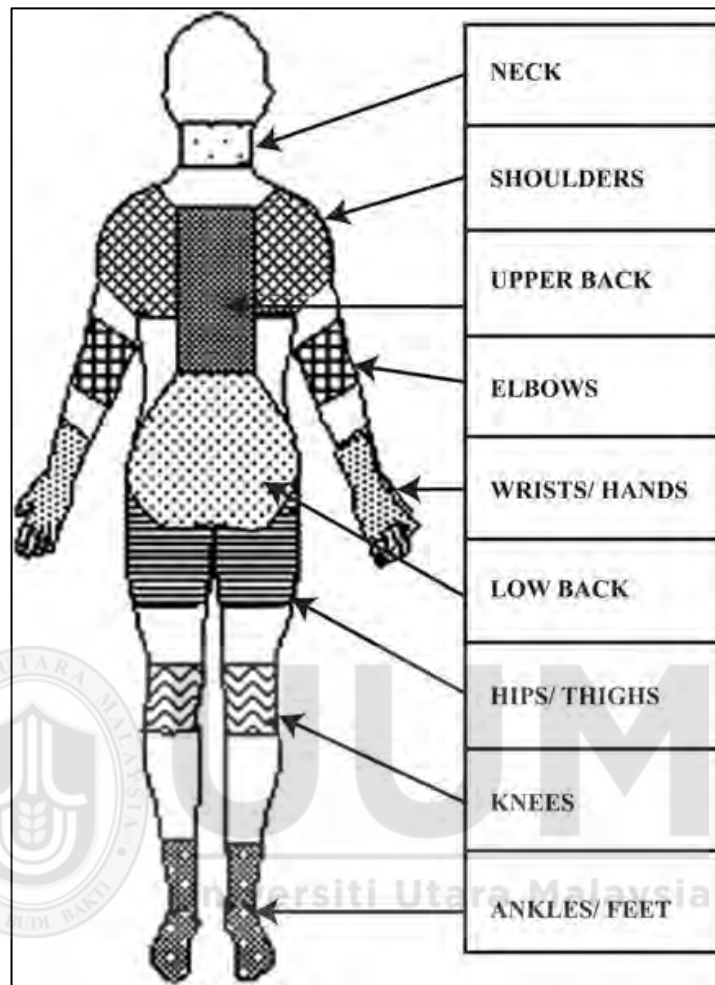
There are many factor or subject that causes the presence of musculoskeletal discomfort among employees. The main causes of musculoskeletal discomfort are due to lifting the heavy loads, prolonged seating with or without proper posture, climbing up and down the staircase, writing on board by pressuring any part of body and also due to computer usage for long period (Mohd Anuar et al., 2016).

Musculoskeletal discomfort can be categorised based on the location where the pain occurred or triggered. The categories are upper limb discomfort and lower limb discomfort. The upper limb discomfort focuses on the pain or any injury that comes from the fingers raised to shoulder or to the neck part. The lower limb discomfort is the once effected from the hip to the toes of the individual. Among all of this, the most prominent of musculoskeletal discomfort is back pain. The severity of this discomfort can be vary based on the interrelated factors such as gender, age and also the native of work (Vaghela & Parekh, 2017).

There are many groups of workers are affected with the musculoskeletal discomfort which related to occupational factors. Among this groups of workers, academicians lead the others. This causes the lecturers' productivity goes down by increases in number of absenteeism and cause the output to be delivered to students been delayed and sometime less of quality. This situation might also lead lecturers to suffer with other problems that related to mental and physical health (Darwish et al., 2015; Erick & Smith, 2011; Vaghela & Parekh, 2017).

**Figure 2.2**

*Anatomical parts of the body*



(Source: Hossain et al., 2018)

Besides on the physical activities, other factors also can contribute towards the musculoskeletal discomfort. According to Mohd Anuar et. al. (2016), age, gender, absence of social encouragement and high psychological pressure for work also become the factors for musculoskeletal discomfort. Addition to this, Da Silva et. al. (2018) and Sugumaran et. al. (2019) said that musculoskeletal discomfort is due to the work-related environmental factor, behavioural factor, physical factor, internal human factor, and perceived muscle tension.

The occurrence of musculoskeletal discomfort can cause many effects for the individuals and others. Several psychological, social and physical health complications existed for working individuals with lower back pain due to musculoskeletal discomfort (Mohd Anuar et al., 2016). In another statement, the existence of disorder and impairment to perform duties can impose high costs on paid sick leave, trigger frequent absence from work and increases the cost employers on health care management (Buscemi et al., 2017; Da Silva et al., 2018).

Narsia and Oliver (2020) highlight that ergonomic technique was invented to avoid musculoskeletal discomfort. In another report, stated that musculoskeletal discomfort among lecturers is one of the occupational health issues. This shows that prevalence of musculoskeletal discomfort among lecturer was about 80% (Hamjah, Ismail, Sham, Rasit, Tobias, et al., 2015; Karwan et al., 2015). Mohan et. al. (2015) reported, the prevalence of musculoskeletal discomfort among teaching professionals is higher compared to other professions and the most common symptoms are shoulder pain and neck pain.

## **2.4 JOB SATISFACTION**

According to Ahmad (2020), job is a special task meanwhile satisfaction is human's desires and their fulfilment. So that, job satisfaction is a state where the working people are satisfied or not satisfied with their work and the other situations that contribute to it and together on how employees feel about their job. This is often a comfortable psychological state arising from the practice of professional expertise (Andreea et al., 2015, Irwan et al., 2018 & Naser et al., 2017).

There are various factors that can be related to the job satisfaction of a working individual. Andreea et. al. (2015) said, there is an emotional state and a happy coincidence between the physical, mental and also the environment, along with an effective stage which has emerged in the relating to the work existence. In the other perspective, the job satisfaction can be measured by the job pressures that arises in the workplaces. Such situations are due to the productive relationship between workers and employers, implications for the productivity, growth of the organizations, the organization itself, and the relevant aspects for the development of the human resource (Ahmad et al., 2020, Irwan et al., 2018 & Muhammad et al., 2018).

The positive or negative effects of job satisfaction can be one of the factors in development of organization based on the studies conducted previously. The positive effects of job satisfaction are it produces good working environment, create healthy management and employee's relationship (Ahmad et al., 2020), motivating factor for self-development, stimulate self-enthusiasm, retention, and the positive cycle is often continuing (Pham et al., 2018). Meanwhile, this job satisfaction can also lead to negative impact to workers and organization which are slow down the speed of work, increase in absenteeism and increase in employee's turnover rate (Ahmad et al., 2020).

## **2.5 PSYCHOLOGICAL STRESS**

Stress is common and the evaluation has been measured from a physically, mentally, socially and environmentally. Condition such as stressful moments, long term pressures, daily complications, as well as trauma linked to health actions and triggering possible health outcomes (Beutel et al., 2018).



Psychosocial problems among professionals have raise concern that tend to be in the list of most serious mental health issues with high occurrence (Yong et al., 2020). Stress can influence the social behaviour due to psychological health (Schweda et al., 2019; Suleman et al., 2018). Psychological stress can be caused due to work stress, relationship stress, financial pressures and family problems (Beutel et al., 2018).

The individual that suffering with psychological stress can be determined based on their oddity from normal reactions such as job dissatisfaction, sorrowful, anxiety, low self-esteem, uncomfortable issues along with nervousness and tiredness (Suleman et al., 2018). The presence of psychological stress among working individual can lead to severe effects such as cardiovascular diseases, depression, cancer, anxiety (Beutel et al., 2018), dysphoria, sleeping disorder, impatience and restlessness (Suleman et al., 2018). As reported by Yong et al., (2020), psychological stress due to working environment is higher compare to females.

## **2.6 PREVIOUS LITERATURE REVIEW**

### **2.6.1 Musculoskeletal Discomfort and Occupational Stress**

In study conducted by Lee et al., (2016), it is revealed that there is a significant relationship between musculoskeletal disorders and occupational stress which influences the health-related quality of life. In another study to measure the musculoskeletal disease and occupational stress to prevent occupational disease, the prevalence of musculoskeletal disease is higher compared to occupational stress and is necessary for the development of a customized learning approach for occupational stress and musculoskeletal disease to maintain safety and health (Lee et al., 2017).

Somayeh et al., (2017) in his study to measure on the prevalence of musculoskeletal disorders in various parts of the body and its relationship to occupational stress, it is found that there was a strong correlation between musculoskeletal disorders in certain parts of the body and occupational stress. Both musculoskeletal disorders and occupational stress are widespread and interrelated.

### **2.6.2 Job Satisfaction and Occupational Stress**

In a recent study to measure the impact of job satisfaction and occupational stress on achieving a high workload, it is stated that the massive majority of respondents were dissatisfied with occupational stress. Most of them have never carried out the task before, and they stubbornly refuse to do so in the future. The major reason for denying the task was due to a high rate of workload (Hanan et al., 2017).

Hyanam (2018) stated that employee satisfaction and organizational commitment were found to be above ordinary. There's been a high level of occupational stress due to lack of job satisfaction in terms of job flexibility, workload and unfair compensation.

According to Kwasi et. al. (2020) in a study to corelating occupational stress, job satisfaction and gender differences, it showed that respondents are more likely to demonstrate counter-productive behaviours such as job satisfaction due to work-related stress. The study also indicated that both males and females have similar stress responses, and together they would be satisfied with their work.

As generally, the overload of task or duty is one of the causes of stress and it slightly be the contributor for the negative impact on job satisfaction. There are many researchers identified the strong relationship between job satisfaction and occupational stress in most of the groups of works. Most of the people who not satisfied with their job are mainly affected due to their position that need higher demands to meet in shorter time without proper remuneration (Yaacob & Long, 2015).

### **2.6.3 Psychological Stress and Occupational Stress**

Yong et. al. (2020) study the relationship between personality, mental stress and occupational stress, and the direct or indirect influence of personality on occupational stress and it shows the level of occupational stress among respondents was high. Personality and psychological stress can predict occupational stress. Psychological stress was a protective factor for occupational stress. Personality has both direct and indirect impacts on occupational stress. There is a significant relationship between mental personality and occupational stress.

It was contrast with Suleman et. al. (2018) in examining the relationship between perceived occupational stress and psychological well-being which indicates the strong negative correlation between psychological well-being and perceived occupational stress. Therefore, it is recommended that a systematic approach for the management of stress reduction should be designed so that they can develop a better psychological condition.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 INTRODUCTION OF CHAPTER**

This chapter discuss on the research methodology that been used in this study. This chapter also explain the flow of the study namely research framework, hypothesis, research design, operational definition, measurement of variables, sampling design, data collection procedures and data analysis techniques.

#### **3.2 RESEARCH FRAMEWORK**

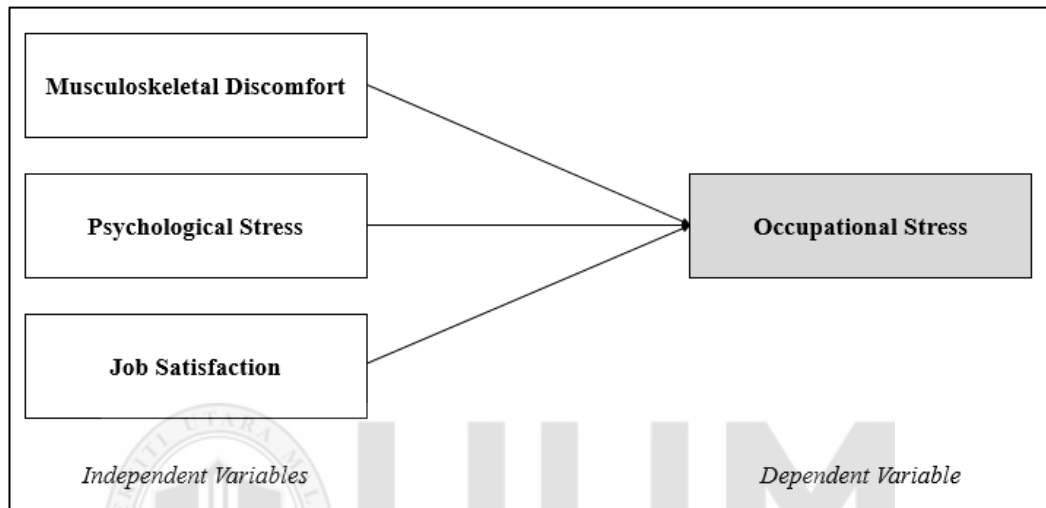
The research framework is used to incorporate the steps to be taken in this study. It is generally used as a guideline for the researchers so that they are more focused on the context of their studies. This research framework has been developed from the literature review and problem statement of this study. For this study, one dependent variable which is occupational stress was measured with the three independent variable listed musculoskeletal discomfort, psychological stress and job satisfaction.

The objective of this study was to measure the prevalence of occupational stress, psychological stress, musculoskeletal discomfort and job satisfaction. This also to find the differences in the level of the occurrence according to the sociodemographic factors. Together with this, it is also to look on the relationship between musculoskeletal discomfort, psychological stress, job satisfaction and occupational stress. Besides that, it is also aiming to determine the strength of the independent

variables on the occupational stress. The connection and relationship between the musculoskeletal discomfort, psychological stress and job satisfaction with occupational stress is shown in Figure 3.1.

**Figure 3.1**

*Conceptual Framework Model*



### 3.3 RESEARCH HYPOTHESIS

Hypothesis is a hypothetical description of the relationship between the variables. The hypothesis is a specific, testable prediction of what is supposed to happen in the study. To be accurate, the statement must include the variables, the population and the relationship between the variables. Hypothesis is not always right, although the hypothesis predicts what researchers expect.

#### 3.3.1 Hypothesis I

H<sub>a</sub> : There is a significant relationship between musculoskeletal discomfort and occupational stress among the private higher education institutes lecturer in Malaysia.

H<sub>0</sub> : There is no significant relationship between musculoskeletal discomfort and occupational stress among the private higher education institutes lecturer in Malaysia.

### **3.3.2 Hypothesis II**

H<sub>a</sub> : There is a significant relationship between psychological stress and occupational stress among the private higher education institutes lecturer in Malaysia.

H<sub>0</sub> : There is no significant relationship between psychological stress and occupational stress among the private higher education institutes lecturer in Malaysia.

### **3.3.3 Hypothesis III**

H<sub>a</sub> : There is a significant relationship between job satisfaction and occupational stress among the private higher education institutes lecturer in Malaysia.

H<sub>0</sub> : There is no significant relationship between job satisfaction and occupational stress among the private higher education institutes lecturer in Malaysia.

## **3.4 RESEARCH DESIGN**

Research design created based on research framework that brings together all the components of a study for data collection and analysis in a method to answer research

questions (Inaam 2016). This section explains on the type of study, rationale for selective quantitative method, source of data, population and study sampling.

### **3.4.1 Type of Study**

Correlational research process was used in this study to determine correlation between the dependent variable and independent variables. According Lorraine et. al. (2012), correlational studies can be formulated either to analyse whether and how a group of variables has been related or to test hypotheses for the projected relationship.

Besides that, this research was performed on the basis of cross-sectional study by collecting data at single point of time (primary data). It will be single and stand-alone study. This type of study is useful in presenting a snapshot of existing habits, attitudes and beliefs in the population (Lorraine et al., 2012).

### **3.4.2 Rationale of Selecting Quantitative Method**

A written instrument was used to gather data from the sample to measure the prevalence of occupational stress and its risk factors among IPTS lecturers. To achieve this, the items in the instruments was measured by Likert scale. Spencer (2015) elaborated that Likert scales is a common form of measurement in research context that involved the presentation of a collection of selected items that together evaluated the level of satisfaction for a declarative sentence.

Questionnaire is a set of written survey questions to be answered by a selected group of research participant and it is the best method for data collection to ease for the quantify of variables. For each item, it provided with equally spaced numbers accompanied by approximately equally spaced anchors (1= Strongly Disagree, 2= Disagree, 3=Somehow Agree, 4= Agree, 5= Strongly Agree) or (0= Never, 1= Almost Never, 2= Sometimes, 3= Fairly Often, 4= Very Often) (Lorraine et al., 2012). The Five-Likert scale was provided so that the respondents will have the degree of choices rather not only focused on limited choices.

### **3.4.3 Sources of Data**

Primary data is the data that is obtained on the basis of 'first hand' knowledge and experience which has many benefits, such as the ability of researchers to collect information for a particular reason and the ability to access a broad number of respondents (Lorraine et al., 2012). Data for the study was collected directly from the respondents via questionnaire (online method – Google Form).

### **3.4.4 Unit of Analysis**

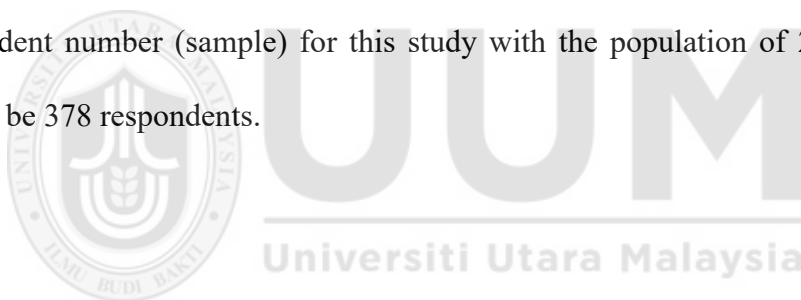
There are three categories in private higher learning institutes namely university, university-college and college throughout Malaysia. With regard of this, unit of analysis for this study are the lecturers from private higher learning institute (IPTS) in Malaysia including East Malaysia which participated in this study as individually.



### 3.4.5 Population and Sampling Frame

Lorraine et. al. (2012) stated that quantitative research usually collects the data from the targeted population which is rarely appropriate and feasible, especially when the population is large or scattered everywhere. Due to this, convenient sampling method designed which the outcome resembled the whole population.

As published by Ministry of Education (2018), total population of IPTS lecturers in Malaysia was 22,980 lecturers. To determine the correct sample size, the population was compared by using Krejcie and Morgan (1970) table of sample size (Figure 3.2). Based on the Krejcie and Morgan (1970) table of sample size, the suitable respondent number (sample) for this study with the population of 22,980 lecturers should be 378 respondents.



**Figure 3.2**

*Krejcie & Morgan (1970) table*

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

*Note: N is Population Size; S is Sample Size* *Source: Krejcie & Morgan, 1970*

### 3.5 OPERATIONAL DEFINITION

#### 3.5.1 Occupational Stress

To measure occupational stress among IPTS lecturers, 25 items was measured in this section. The extracted items in the instrument were organized into five dimensions of occupational stress to analyse on organizational structure and atmosphere, personal and professional performance, intrapersonal and interpersonal relationships, home-

work interfaces and environmental factor (Asmaa et al., 2018; Azizah et al., 2016; Gorsy et al., 2015). For each items of occupational stress index as stated above, the respondents indicate on a scale from 1 (strongly disagree) to 5 (strongly agree) the extent to which they agree or disagree with the statements (e.g., I have to do a lot of work in this job, I get less salary in comparison to the quantum of my labour/work). The respondents given their rate on the series of statements regarding on the perception of agree and disagree.

### **3.5.2 Musculoskeletal Discomfort**

To measure the musculoskeletal discomfort among IPTS lecturers, standardized Nordic musculoskeletal questionnaire was used which is a reliable and effective instrument used in a wide variety of occupational group to study musculoskeletal discomfort. This musculoskeletal discomfort was measured with the instruments consisted of a human basic anatomy diagram displaying the nine anatomical regions from superior to inferior. Participants answered based on their troubles in the indicated areas during the preceding 12 months to 7 days affecting their normal activity. The musculoskeletal discomfort measured when the individual experiences with the conditions that affect muscles, tendons, ligaments, joints, peripheral nerves and blood vessels that cause symptoms including pain, numbness, tingling, aching stiffness or burning sensation (Sirajudeen et al., 2018).

### **3.5.3 Psychological Stress**

Perceived Stress Scale (PSS) with ten items was used in this study to measure the level of psychological stress among IPTS lecturers. This PSS measures the global

experience of stress by evaluating emotions and thought over the past months. It will analyse an individual's life events that have happened suddenly and the thing he/she can't control in his/her life (Sandhu et al., 2015). For each items of PSS as stated above, the respondents will indicate on a scale from 0 (never) to 4 (very often) the extent to which they don't experience of frequency of experience regards to the statements (e.g., In the last three months, how often have you felt that you were unable to control important things in your life, In the last three months, how often have you been angered because of things that happened that were out of your control) (Klein et al., 2016; Taylor, 2015). The respondents given their rate on the series of statements regarding on the perception of the occurrence.

#### **3.5.4 Job Satisfaction**

In this study, the job satisfaction among IPTS lecturers was measured by using adapted Job Satisfaction Questionnaire (JSQ) with 20 items comprise of supervision, working conditions, colleagues, pay, responsibility, work itself, advancement, security and recognition (Ismail, H.A. 2011). For each item of JSQ as stated above, the respondents rated on a scale from 1 (strongly disagree) to 5 (strongly agree) the extent to which they agree or disagree with the statements (e.g., Lecturing provides me with an opportunity to advance professionally, I like the people with whom I work, my immediate supervisor gives me assistance when I need help). The respondents given their rate based and on the series of statements regarding on the perception of agree and disagree.

### **3.6 MEASUREMENT OF VARIABLES/INSTRUMENTATION**

#### **3.6.1 Validation of Instruments**

A close-ended questionnaire was used for this quantitative research to obtain necessary information from the respondents. The questionnaire consists of five sections namely Section A (Demographic Profile), Section B (Occupational Stress), Section C (Psychological Stress), Section D (Musculoskeletal Discomfort) and Section E (Job Satisfaction). All the items in the instruments were constructed in English.

The instruments in this study were measured by using two scales namely nominal scale and ordinal scale. Section A was on a nominal scale to measure personal data such as age, gender, years of experience, salary range and etc. Ordinal scale is another type of scale used by applying a five-point Likert scale ranging from 1 strongly disagree to 5 strongly agree for Section B and E (Table 3.1), 0 never to 4 very often for Section C, for Section D it will be scored as 0, 1, 2, 3 and 4 based on the severity.

**Table 3.1***Five-point Likert Scale*

Choices	Scale	Choices	Scale
Strongly disagree	1	Never	0
Disagree	2	Almost never	1
Somehow agree	3	Sometimes	2
Agree	4	Fairly often	3
Strongly agree	5	Very often	4

Source: Vagias &amp; Wade (2006)

**Table 3.2**

Sources of Instruments

Variables	Item	Scales	Sources
<b>Section A</b>	14	Nominal scale	
Demographic Profile			
<b>Section B:</b>	25	Ordinal Scale	(Asmaa et al., 2018;
Occupational Stress Index		(5-point Likert	Azizah A. et al., 2016;
(Dependent Variable)		scale)	Dr. Karshan B.
			Chothani, 2015; Gorsy
			et al., 2015; Kapildev
			S. Khudaniya & Dr. S.
			M. Kaji, 2014;

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			Mateescu & Chraif, 2015)
<b>Section C: Psychological Stress</b> (Independent Variable)	10	Ordinal Scale (5-point Likert scale)	(Klein et al., 2016)
<b>Section D:</b> Musculoskeletal Discomfort (Independent Variable)	9	Ordinal Scale (5-point Likert scale)	(Kourinka et al., 1987, Joanne, 2007)
<b>Section E: Job Satisfaction</b> (Independent Variable)	20	Ordinal Scale (5-point Likert scale)	(Amazt & Idris, 2011; Azizah A. et al., 2016; Dr. Karshan B. Chothani, 2015; Kapildev S. Khudaniya & Dr. S. M. Kaji, 2014; Mateescu & Chraif, 2015)

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### 3.6.2 Pilot Test

A pilot study is a method that carried out by the researcher to represent all the procedures on the actual research flow which is mainly to identify validation and viability of the research by looking on the inclusion and exclusion criteria of the

research. This is also to provide a platform for the researcher to assessing the instruments that will be using for the study and checking the suitability of the data collection process (Junyong, 2017).

A total of 51 respondents (minimum of 10% from sample) was participated in the pilot test. The questionnaires that have been answered by the respondents of the pilot test was analysed for Cronbach Alpha value to test the reliability by using SPSS. The value that been obtained from the complete instrument was 0.876 and it was in good order to proceed with the studies. The items in the instrument been remain and used was used in the actual data collection. About 1 month duration took place to complete the pilot study from the stage of instrument distribution (Google Form), data collection and analysis.

### **3.7 SAMPLING DESIGN**

Sampling design can be categorized into probability or non-probability sampling. Probability sampling is a design used when the researcher identified the members of the population that likelihood being selected for the sample while the non-probability sampling is when members of the population have not been identified to be selected for the sample by the researcher (Lorraine et al., 2012).

Non-probability sampling method was used where the sample of IPTS lecturers were selected by using convenience sampling. Lorraine et. al. (2012) stated that convenience sampling which is also known as accidental sampling or haphazard



sampling is the process of choosing the one who happens to be eligible at the moment in the concept “just because they are there”.

### **3.8 DATA COLLECTION PROCEDURES**

Data collection procedures conducted in two stages. Stage one involved the data collection for pilot test whereby the second stage data collection for the main analysis. The data was collected from the IPTS lecturers throughout Malaysia. Due to Movement Control Order (MCO), the questionnaire was distributed through online method via Google forms. For the main data collection that involves 380 lecturers, it took about two months to achieved the minimum 380 respondents.

### **3.9 DATA ANALYSIS**

Data analysis give the valuable information on this study and to make conclusion based on the result obtained. The collected data was analysed using the SPSS version 26.0.

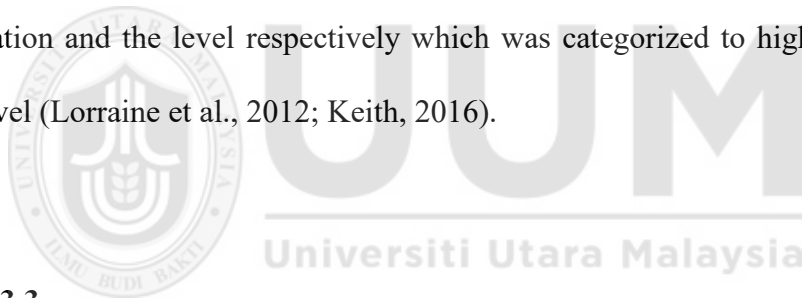
#### **3.9.1 The Reliability of Instruments**

According to Taber (2018), high quality test required in research study and Cronbach’s Alpha is widely used to measure the reliability of the instruments. In Cronbach’s Alpha reliability test, the value should be closer to 1.0 which means the higher the value, the perfect the reliability. The range of Cronbach less than 0.6 considered poor, 0.60 to 0.70 is acceptable and more than 0.80 is good scale for instruments (Keith, 2016).

### 3.9.2 Data Analysis Test

The data analysis was divided into two method namely descriptive analysis and inferential analysis. For the descriptive analysis, the sociodemographic variables in Section A were measured on the frequency distribution and together with the level of occupational stress, psychological stress level, musculoskeletal discomfort level, job satisfaction level in term of low level, moderate level and high level.

For the items in Section B, C, D and E, the score responded by the respondents was been total up for the total score to determine the level of occupational stress, musculoskeletal discomfort level, job satisfaction level. Table 3.3 shows the total score calculation and the level respectively which was categorized to high, moderate and low level (Lorraine et al., 2012; Keith, 2016).



**Table 3.3**

Total Score and Level

<b>Variables</b>	<b>Items (n)</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>
Level of Occupational Stress	25	25-58	59-92	93-125
Level of Psychosocial Stress	10	0-13	14-27	28-40
Level of Musculoskeletal Discomfort	9	0-12	13-24	25-36
Level of Job Satisfaction	20	20-46	47-93	94-120

Inferential analysis was used for comparison test and correlation test. Normality test was done to determine the type of test to be used based on parametric

and non-parametric. Since all the variables are non-parametric ( $p\text{-value} < 0.05$ ), Mann-Whitney U test was used to compare for the variable with between two groups variables, meanwhile, Kruskal Wallis test was used to compare the variables between more than two groups variables.

In order to determine the significant relationship between the independent variables and dependent variable, Spearman Correlation Coefficient analysis been performed due to the non-parametric sample. According to scale model by Davies (1971), the strength of the correlation (r-value) will be determined based in (r-value) nearest to 1. The (r-value) ranges 0.01 to 0.09 is very low relationship, 0.10 to 0.29 is low relationship, 0.30 to 0.49 is moderate relationship, 0.50 to 0.69 is strong relationship, and 0.7 and above is very strong relationship (Patrick et al., 2018). Addition to this, Multiple Regression Analysis was conducted to determine the dimension relationship between the independent variables with the occupational stress among the private higher education institutes.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.1 INTRODUCTION OF CHAPTER**

This chapter presents finding of this study followed by discussion on the finding. This study explored the prevalence of occupational stress and its risk factors among private higher education institutes (IPTs) lecturers in Malaysia. The sociodemographic of the respondents is presented followed by the results and discussion on the four research questions based on the data obtained through the instrument. The finding was discussed simultaneously with results.

#### **4.2 RESPONSE RATE**

In two months, a total of 400 responses were collected back through the google form, however, 20 of the responses is not usable either only part of questionnaire was attempted. Hence only 380 responses are used for this study analysis. Thus, given that the sample size examined in this study was 380, indicating 95 percent of usable questionnaire. The response rate was excellent and sufficient for this study since the minimum required samples was 378.

#### **4.3 RELIABILITY TEST**


Table 4.1 shows the value of Cronbach's Alpha that been obtained for the items in the instrument. The value obtained was 0.876 for the 64 items been tested. Since the value

is more than 0.80, it shows that the instrument was in good scale which means it was valid and reliable to be used in this study.

The value of Cronbach's Alpha was measured separately based on the sections in the questionnaire together with the overall complete questionnaire. It shows that all the values are obtained more than 0.80 and it is in good scale. The value obtained for the section measured for occupational stress with 25 items was 0.926, psychological stress with 10 items was 0.868, musculoskeletal discomfort with 9 items obtained 0.849 and finally on job satisfaction with 20 items obtained 0.897. The complete questionnaire was also been tested the reliability with 64 items and was obtained 0.876 as the Cronbach's Alpha value.

**Table 4.1**

Reliability Analysis



<b>Section</b>	<b>Cronbach's Alpha</b>	<b>Number of items</b>
<b>Occupational Stress</b>	0.926	25
<b>Psychological Stress</b>	0.868	10
<b>Musculoskeletal Discomfort</b>	0.849	9
<b>Job Satisfaction</b>	0.897	20
<b>Complete Questionnaire</b>	0.876	64

## 4.4 DESCRIPTIVE ANALYSIS

### 4.4.1 Sociodemographic Data

The sociodemographic data was collected through implementing Section A of the research instrument as attached in Appendix I. The sociodemographic data revealed general demographic characteristics of the private higher education institutes (IPTS) lecturers in Malaysia such as age, body mass index, gender, race, highest education level, marital status, monthly salary range, years of experiences, current position, managerial position, employment status, currently studying status and nationality. Result of the sociodemographic data of the private higher education institutes (IPTS) lecturers in Malaysia (Table 4.2) were obtained from 380 respondents.

**Table 4.2**

*Sociodemographic characteristics of the private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

Item	Frequency, n (%)
<b>Age</b>	
25 – 29 years old	80 (21.1)
30 – 34 years old	88 (23.2)
35 – 39 years old	62 (16.3)
40 – 44 years old	51 (13.4)
45 – 49 years old	60 (15.8)
50 – 54 years old	8 (2.1)
55 – 59 years old	11 (2.9)
60 – 64 years old	20 (5.3)

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<b>Gender</b>	
Male	108 (28.4)
Female	272 (71.6)
<b>Race</b>	
Malay	166 (43.7)
Chinese	66 (17.4)
Indian	117 (30.8)
Others	31 (8.2)
<b>Body Mass Index (BMI)</b>	
Underweight	48 (12.6)
Normal / Healthy Weight	152 (40.0)
Overweight	135 (35.5)
Obesity	45 (11.8)
<b>Highest Education Level</b>	
Bachelor Degree	20 (5.3)
Master	275 (72.4)
PhD	85 (22.4)
<b>Marital Status</b>	
Single	109 (28.7)
Married	262 (68.9)
Divorced	1 (0.3)

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Widow	8 (2.1)
<b>Monthly Salary Range</b>	
Below RM 2500	111 (29.2)
RM 2501 – RM 3499	79 (20.8)
RM 3500 – RM 4499	15 (3.9)
Above RM 4500	175 (46.1)
<b>Years of Experiences</b>	
1 – 5 years	115 (30.3)
6 – 10 years	72 (18.9)
11 – 15 years	70 (18.4)
16 – 20 years	87 (22.9)
21 – 25 years	2 (0.5)
26 – 30 years	30 (7.9)
31 – 35 years	3 (0.8)
36 – 40 years	1 (0.3)
<b>Current Position</b>	
Junior Lecturer	23 (6.1)
Lecturer	199 (52.4)
Senior Lecturer	158 (41.6)
<b>Managerial Position</b>	
Head of Department	91 (23.9)

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Head of Program	80 (21.1)
Dean	26 (6.8)
Director	8 (2.1)
None	175 (46.1)
<b>Employment Status</b>	
Permanent	162 (42.6)
Contract	218 (57.4)
<b>Currently Pursuing Status</b>	
Studying	207 (54.5)
Not Studying	173 (45.5)
<b>Nationality</b>	
Malaysian	356 (93.7)
Non-Malaysian	24 (6.3)

Table 4.3 above summarizes the sociodemographic distribution of private higher education institutes (IPTS) lecturer in Malaysia for the sample of 380 respondents. With the total of 380 lecturers participated in this study, majority of the lecturers are Malaysian with 93.7% representing 356 lecturers meanwhile 24 lecturers are professional expatriates. There are eight groups of ages been measured and this highest age group was 30-34 years old with 23.3% of the respondents representing 88 lecturers followed by 25-29 years old with 21.1% of the respondents representing 80 lecturers, 16.3% representing 62 lecturers of age group 35-39 years old, 60 lecturers

from the age group 45-49 years old, 51 lecturers representing the age group 40-44 years old with 13.4%, 5.3% of the respondent from the age group of 60-64 years old, followed by 2.9% from the age group of 55-59 years old and the most least are from group 50-54 years old with 8 lecturers.

Based on the age distribution, it can be summarized the majority of the lecturers are between 25 to 39 years old with total of 60.6% of the respondents. This situation might be due to the lecturer who still in the junior level of position and also might be due to the age factors requirement from the universities or colleges policies. Most of the lecturers in this age group in the midst of developing the career track to another stage by pursuing studies and also gaining working experiences. The second majority group was from the age 40 to 49 years old with 29.2% of overall respondents followed by 10.3% for the age between 50 to 64 years old. The less number in this both groups might be due to the career development of the lecturers where they might be transferred to management position or they involved in research fields due to their expertise in their related fields. This is because, most of the universities and colleges promotes the lecturer with various years experiences into the top management position such as deans, deputy vice chancellors, directors, auditors and etc. where they don't involve in the teaching position.

The next factor was the gender of the respondents. Out of 380 lecturers that participate in this study, about three quarter of the lecturers are female with 71.6% representing 272 lecturers and 28.4% of the respondents representing 108 male lecturers. From this, it can be concluded that the number of female lecturers is higher

than the number of male lecturers. This level of differences is might be due to the most of the male graduates looking on the field work and management work rather than join into this academic field, meanwhile the female graduate most commonly pursue their studies in higher level and during the time they might been absorbed as tutor so it causes them to choose the academic pathway as their career field.

Malaysia is a country of multi-races which are Malay, Chinese, Indian and others which can be from Borneo or other races. This concept applies among lecturers where our lecturers in Malaysia also representing all the races. Out of 380 lecturers, 43.7% out of the respondents are Malay lecturer, 17.4% from the respondents are Chinese lecturers, 30.8% from the total respondents are Indian lecturers and the remaining 31 lecturers are representing the group of other races lecturers.

When look on the physical site of a lecturer, the height and weight are important in the determination of body mass index (BMI). BMI is a measure of body fat based on the height and weight that applies to adult men and women. BMI is a person's weight in kilograms divided by the square of height in meters. There are four groups of BMIs been measured in this study namely underweight (below 18.5), normal weight or healthy weight (18.5 to 24.9), overweight (25.0 – 29.9) and obesity (more than 30.0). Among the lecturers participated in this study, 12.6% of the respondents representing 48 lecturers are underweight, 40% of the respondents representing 152 lecturers are within normal weight and healthy weight, 35.5% of the respondents representing 135 lecturers are overweight and the remaining 11.8% of respondents are

obesity which represented by 45 lecturers. It can summarize that the lecturers mostly fall in the group of normal weight or healthy weight followed by overweight.

The minimum requirement to be a lecturer in private higher education institutes, the lecturer should have a bachelor degree with additional relevant working experience in the field. In this study, it shows that 5.3% of respondents which representing 20 lecturers are Bachelor degree holder, majority are Master degree holder with 72.4% representing 275 lecturers and philosophy doctorate with 22.4% representing 85 lecturers. Only least number of lecturers are from bachelor degree group, it might be due to their position as junior lecturer or in the midst of pursuing their studies in postgraduate level. About 95% of the total respondent are completed their postgraduate either only with master degree or together with the doctorate. Addition to this, there are 54.5% representing 207 lecturers are still in the terms of pursuing their studies to advance level such as post-basic certificate and postgraduate (master and doctorate). It's another additional requirement that needed to be fulfill by the private higher education institutes that to employ the lecturer with postgraduate degree. This requirement in one of the conditions from authorities' bodies that govern the higher education institution such as Malaysian Qualification Agency (MQA) and Ministry of Higher Education (MOHE). So, from this study we can say that majority of the private higher education institutes applies the condition.

The next variables that been tested in the sociodemographic profile section was the marital status of the lecturers who participated in this study. Four groups of marital status were measured namely single, married, divorced and widow. This study was

participated by 28.7% of respondent which representing 109 lecturers which still single, together with 262 lecturers are married which represent 68.9%, 0.3% representing 1 lecturer from divorced group and the remaining 8 lecturers representing 2.1% are widow.

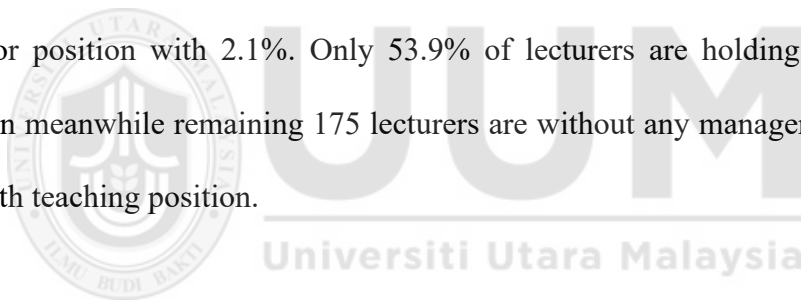
The monthly salary range among the lecturer is one of the most important factors in job satisfaction. The better the salary, the better the outcome and satisfaction toward the output and job. Four groups of salary range been measured in this study, below RM 2500, RM 2501 to RM 3499, RM 3500 to RM 4499, and above RM 4500. Among the respondents, 29.2% representing 111 lecturers are from the salary group below RM 2500. There are 20.8% representing 79 lecturers been paid monthly salary as amount range between RM 2501 to RM 3499, 3.9% of the respondents representing 15 lecturers receiving between RM 3500 to RM 4499 as the monthly salary and the remaining 46.1% of the respondent which are the majority representing 175 lecturers been paid the monthly salary range above RM 4500. The range of monthly salary normally will be based on the working experiences, qualification, position or any additional task or portfolio hold by the lecturer.

As discussed, the monthly salary determined by the working experiences, qualification, position or any additional task or portfolio hold by the lecturer, together with the working experiences of the lecturer. As tabulated in Table 4.2 above, the working experiences divided into eight groups. Among the 380 respondents, the majority was from group 1 to 5 years of working experiences with 30.3% representing 115 lecturers, followed by 22.9% of respondents representing 87 lecturers with 16 to

20 years of experiences, for the group of 6 to 10 years and 11 to 15 years of experiences, 18.9% and 18.4% of respondents representing 72 and 70 lecturers respectively. Together with this, 7.9% representing 30 lecturers are with 26 to 30 years of experiences, 3 lecturers with 31 to 35 years, 2 lecturers with 21 to 25 years and the remaining are 1 lecturer with longest years of working experiences with 36 to 40 years. The years of working experiences also an important factor which might contribute to the occupational stress and the causes.

The position of the lecturer normally will be based on their education qualification, years of experiences in teaching industries as well they experience in the related fields. The positions are junior lecturer, lecturer and senior lecturer before the lecturer been promoted to professorship based on the university requirements. This study we just focused on the lecturers from junior lecturer to senior lecturer level. Among all the respondents, 6.1% representing 23 lecturers are junior lecturers which are tally with the number of bachelor degree holder lecturers about 5.3%, followed by the majority with 52.4% of respondents with the position of lecturer representing 199 lecturers and the senior lecturer with 41.6% representing 158 lecturers. Together with this, 57.4% of respondents representing 218 lecturers are in contract term position meanwhile 42.6% of respondents representing 162 lecturers are in permanent position in their respective institutes. In some private higher education institutes, the determination of this position also be based on the key performance index (KPI) that assessed annually.

Besides the position of academic, lecturers also need to take some responsibilities with some managerial portfolio. This managerial position can be in the faculty based or sometimes will be as additional task to assist the operation of the institutes. There are four categories of managerial position been measured in this item namely. Head of Department (HOD) is the person who in charge in the managing and heading a specific department, Head of Program (HOP) which mainly leading and coordinating program under a faculty or department, Dean responsible in managing and leading a faculty and Director which lead the center or schools. Head of Department been hold by 91 lecturers representing 23.9% of the respondents, followed by 21.1% of respondents representing 80 lecturers holding position of Head of Program, 26 lecturers with 6.8% holding Dean position and 8 lecturers holding Director position with 2.1%. Only 53.9% of lecturers are holding the managerial position meanwhile remaining 175 lecturers are without any managerial position and just with teaching position.



All the sociodemographic distribution discussed above was compared the significance with the variables of this study which are occupational stress, psychological stress, musculoskeletal discomfort and job satisfaction. All the comparison and the correlation of this was discussed in the inferential analysis part.

#### **4.4.2 Measurement on The Level of Variables**

The respondent rate on each item for the sections in the instrument been evaluated and calculated to determine the level of variables. This evaluation was to measure the level of occupational stress (Section B), level of psychological stress (Section C), level of

musculoskeletal discomfort (Section D) and level of job satisfaction (Section E). From this part, we can determine the levels of the occupational stress and level of contributing factors among private higher education institutes lecturers in Malaysia.

#### 4.4.2.1 Level of Occupational Stress

Level of occupational stress was measured through Section B of the instrument with 25 items been tested. The choices of rate based of Likert scale range 1 to 5, where 1 is strongly disagree to 5 is strongly agree. The choices of the 380 respondents been summarized in Table 4.3.

**Table 4.3**

*Total respondent's answer for each rating on the level of occupational stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

Item	Statement	Frequency, n				
		1	2	3	4	5
1.	I have to do a lot of work in this job	0 (0)	0 (0)	26 (6.8)	137 (36.1)	217 (57.1)
2.	I am unable to carry out my assignment to my satisfaction on account of excessive load of work and lack of time.	1 (0.3)	65 (17.1)	69 (18.2)	124 (32.6)	121 (31.8)
3.	The available information relating to my job-role and its	63 (16.6)	61 (16.1)	103 (27.1)	67 (17.6)	86 (22.6)



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	outcomes are vague and insufficient					
<b>4.</b>	I am unable to perform my duties smoothly owing to uncertainty and ambiguity of the scope of my jurisdiction and authorities.	49 (12.9)	48 (12.6)	81 (21.3)	115 (30.3)	87 (22.9)
<b>5.</b>	It is not clear that what type of work and behavior my higher authorities and colleagues expect from me.	45 (11.8)	119 (31.3)	89 (23.4)	67 (17.6)	60 (15.8)
<b>6.</b>	I am not provided with clear instructions and sufficient facilities regarding the new assignments trusted to me.	42 (11.1)	82 (21.6)	87 (22.9)	82 (21.6)	87 (22.9)
<b>7.</b>	It becomes difficult to implement all of a sudden, the new dealing procedures and policies in place of those already in practice.	11 (2.9)	37 (9.7)	105 (27.6)	78 (20.5)	149 (39.2)
<b>8.</b>	In order to maintain group conformity sometimes I have to do/produce more than usual.	8 (2.1)	33 (8.7)	53 (13.9)	149 (39.2)	137 (36.1)
<b>9.</b>	I am compelled to violate the formal and administrative	86 (22.6)	52 (13.7)	74 (19.5)	99 (26.1)	69 (18.2)

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	procedures and policies owing					
	to group/political pressures.					
<b>10.</b>	The responsibility for the	10	42	89	170	69
	efficiency and productivity of	(2.6)	(11.1)	(23.4)	(44.7)	(18.2)
	many employees is thrust upon					
	me					
<b>11.</b>	I bear the great responsibility	3	24	90	172	91
	for the progress and prosperity	(0.8)	(6.3)	(23.7)	(45.3)	(23.9)
	of this organization.					
<b>12.</b>	I have to work with persons	108	108	140	15	9
	whom I like	(28.4)	(28.4)	(36.8)	(3.9)	(2.4)
<b>13.</b>	My colleagues do cooperate	149	158	61	7	5
	with me voluntarily in solving	(39.2)	(41.6)	(16.1)	(1.8)	(1.3)
	administrative and industrial					
	problems					
<b>14.</b>	There exists sufficient mutual	78	134	107	61	0
	co-operation and team-spirit	(20.5)	(35.3)	(28.2)	(16.1)	(0)
	among the employees of this					
	Organization/Department.					
<b>15.</b>	My assignments are of	15	41	166	121	37
	monotonous nature	(3.9)	(10.8)	(43.7)	(31.8)	(9.7)
<b>16.</b>	I get ample opportunity to	47	183	117	17	16
	utilize my abilities and	(12.4)	(48.2)	(30.8)	(4.5)	(4.2)
	experience independently.					

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<b>17.</b>	My suggestions and cooperation are not sought in solving even those problems for which I am quite competent.	30 (7.9)	68 (17.9)	117 (30.8)	126 (33.2)	39 (10.3)
<b>18.</b>	Higher authorities do care for my self-respect.	39 (10.3)	136 (35.8)	99 (26.1)	43 (11.3)	63 (16.6)
<b>19.</b>	This job has enhanced my social status.	58 (15.3)	156 (41.1)	118 (31.1)	23 (6.1)	25 (6.6)
<b>20.</b>	My higher authorities do not give due significance to my post and work	16 (4.2)	77 (20.3)	120 (31.6)	87 (22.9)	80 (21.1)
<b>21.</b>	I get less salary in comparison to the quantum of my labor/work.	16 (4.2)	21 (5.5)	142 (37.4)	73 (19.2)	128 (33.7)
<b>22.</b>	I am seldom rewarded for my hard labor and efficient performance	24 (6.3)	55 (14.5)	134 (35.3)	45 (11.8)	122 (32.1)
<b>23.</b>	I do my work under tense circumstances.	6 (1.6)	61 (16.1)	125 (32.9)	87 (22.9)	101 (26.6)
<b>24.</b>	I often feel that this job has made my life cumbersome	24 (6.3)	71 (18.7)	102 (26.8)	92 (24.2)	91 (23.9)
<b>25.</b>	Being too busy with official work I am not able to devote	7 (1.8)	56 (14.7)	102 (26.8)	124 (32.6)	91 (23.9)

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sufficient time to my domestic  
and personal problems.

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(1-Strongly Disagree; 2-Disagree; 3-Somewhat Agree; 4-Agree; 5-Strongly Agree)

The output that obtained in Table 4.3 been calculated into total score and been categorized into three level of occupational stress. The minimum total score was 25 to the maximum score of 125. As described in Chapter 3 (Table 3.3), the level been categorized into low (25 to 58), medium (59 to 92) and high (93 to 125). The prevalence level of occupational stress among private higher education institutes in Malaysia been tabulated in Table 4.4.

**Table 4.4**  
*Level of occupational stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

<b>Level</b>	<b>Frequency, n (%)</b>
Low	47 (12.4)
Medium	213 (56.1)
High	120 (31.6)

Table 4.4 explains that the level of occupational stress among IPTS lecturers varies accordingly. Among the 380 respondents, 12.4% respondents representing 47 lectures are experiencing low level of occupational stress, 56.1% respondents representing 213 lecturers with medium level of occupational stress and 120 lecturers with high level of occupational stress representing 31.6 of the respondents. Among these three levels of

categories, majority lecturers are experiencing medium level stress followed by high level.

This output is similar with the findings of Desouky and Allam (2017), that majority of individuals in teaching profession suffering with moderate to high level of occupational stress. In the similar study, it stated that about 67.6% of the respondents suffering with moderate to high level of occupational stress and it was the higher globally. This current study obtain higher percentage for moderate to higher level of occupational stress than the previous study, which was about 20% more than the studies by Desouky and Allam (2017). Darwish et. al. (2015) and Mohamed (2018) said, the nature of the academicians works is also stressful. Various research demonstrated that, individuals in teaching profession were found to be significantly above average in the rates of stress related matter.

Added by Darwish et. al. (2015), the needs of the management to fulfil the situation due to the large number of students per class, lack of resources to support the teaching system are one of the factors that lead to the high prevalence of occupational stress among the lecturers.

#### **4.4.2.2 Level of Psychological Stress**

Items in Section C are designed to measure the level of psychological stress. A total of 10 items been measures in this section. The choices of rate based of Likert scale

range 0 to 4, where 0 is never to 4 is very often. Table 4.5 detailed the choices of the 380 respondents.

**Table 4.5**

*Total respondent's answer for each rating on the level of psychological stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

***In the last THREE (3) months, how often have you....***

Item	Statement	Frequency, n (%)				
		0	1	2	3	4
1.	Been upset because of something that happened unexpectedly?	14 (3.7)	73 (19.2)	100 (26.3)	87 (22.9)	106 (27.9)
2.	Felt that you were unable to control important things in your life?	15 (3.9)	61 (16.1)	151 (39.7)	61 (16.1)	92 (24.2)
3.	Felt nervous and "stressed"?	10 (2.6)	81 (21.3)	64 (16.8)	121 (31.8)	104 (27.4)
4.	Felt confident about your ability to handle your personal problems?	0 (0)	38 (10.0)	103 (27.1)	143 (37.6)	96 (25.3)
5.	Felt that things were going your way?	4 (1.1)	28 (7.4)	146 (38.4)	148 (38.9)	54 (14.2)

<b>6.</b>	Found that you could not cope with all things you had to do?	9 (2.4)	107 (28.2)	133 (35.0)	91 (23.9)	40 (10.5)
<b>7.</b>	Been able to control irritations in your life?	9 (2.4)	48 (12.6)	141 (37.1)	107 (28.2)	75 (19.7)
<b>8.</b>	Felt that you were on top of things?	22 (5.8)	19 (5.0)	167 (43.9)	162 (42.6)	10 (2.6)
<b>9.</b>	Been angered because of things that happened that were out of your control?	42 (11.1)	58 (15.3)	152 (40.0)	44 (11.6)	84 (22.1)
<b>10.</b>	Felt difficulties were piling up so high that you could not overcome them?	32 (8.4)	62 (16.3)	118 (31.1)	105 (27.6)	63 (16.6)

(0-Never; 1-Almost Never; 2-Sometimes; 3-Fairly Often; 4-Very Often)

The output that obtained in Table 4.5 been calculated into total score and been categorized into three level of psychological stress. The minimum total score was 0 to the maximum score of 40. As described in Chapter 3 (Table 3.3), the level been categorized into low (0 to 13), medium (14 to 27) and high (28 to 40). The prevalence level of psychological stress among private higher education institutes in Malaysia been tabulated in Table 4.6.

Psychological factors that affect the lecturers such as the demand on the daily task, level of stress experienced, the supports and gained from surrounding either in physically or mentally, the dissatisfaction on the current duties together with the

repetitive occurrence of the same duties might lead the lecturers to have the psychological stress (Darwish et al., 2015).

**Table 4.6**

*Level of psychological stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

<b>Level</b>	<b>Frequency, n (%)</b>
Low	10 (2.6)
Medium	254 (66.8)
High	116 (30.5)

Data gathered in Table 4.5 are further being categorized into three level namely low, medium and high level of psychological stress (refer Table 4.6). On the low level of psychological stress, there was 2.6% respondents representing 10 lecturers. Majority was on the medium level of psychological stress with 66.8% respondents representing 254 lecturers followed by 116 lecturers with 30.5% experiencing high level of psychological stress.

#### **4.4.2.3 Level of Musculoskeletal Discomfort**

Items in Section D are designed to measure the level of musculoskeletal discomfort among the respondents. A total of 9 items been measures in this section which comprises of nine anatomical parts of the body that related to musculoskeletal



discomfort or disorder. The choices of rate based of Likert scale range 0 to 4, where 0 is never to 4 is severe condition. Table 4.7 detailed the choices of the 380 respondents.

**Table 4.7**

*Total respondent's answer for each rating on the level of musculoskeletal discomfort among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

Item	Part of the body	Frequency, n (%)				
		0	1	2	3	4
1.	Neck	143 (37.6)	37 (9.7)	40 (10.5)	40 (10.5)	120 (31.6)
2.	Shoulders	136 (35.8)	38 (10.0)	13 (3.4)	24 (6.3)	169 (44.5)
3.	Upper back	244 (64.2)	12 (3.2)	0 (0)	15 (3.9)	109 (28.7)
4.	Elbows	308 (81.1)	18 (4.7)	7 (1.8)	19 (5.0)	28 (7.4)
5.	Wrists/ Hands	246 (64.7)	21 (5.5)	9 (2.4)	34 (8.9)	70 (18.4)
6.	Lower Back	204 (53.7)	39 (10.3)	0 (0)	32 (8.4)	105 (27.6)
7.	Hips/ Thighs	324 (85.3)	18 (4.7)	0 (0)	12 (3.2)	26 (6.8)
8.	Knees	278 (73.2)	24 (6.3)	0 (0)	18 (4.7)	60 (15.8)

9.	Ankles/ Feet	245	11	0	19	105
		(64.5)	(2.9)	(0)	(5.0)	(27.6)

(0- Never; 1-Having troubles in the last 7 days; 2-Have been prevented from carrying out normal activities (e.g. job, housework, hobbies) on the last 12 months; 3-Had trouble (such as ache, pain, discomfort, numbness) at any time during the last 12 months; 4-Have seen a physician during the last 12 months)

Data gathered in Table 4.7 are further being categorized into three level namely low, medium and high level of musculoskeletal discomfort (refer Table 4.8). On the low level of musculoskeletal discomfort, there highest majority was having low level of musculoskeletal discomfort with 72.1% representing 274 lecturers, followed by medium level of musculoskeletal discomfort with 24.2% representing 92 lecturers. The low and medium level of musculoskeletal discomfort showing that the lecturers either never experienced the discomfort or they might suffer with the discomfort that disrupt their normal activities and had trouble in terms of pain and numbness. Very least number of lecturers, 3.7% representing 14 lecturers are having high level of musculoskeletal discomfort. With this in mind, we can sum up that the lecturers that having high level of musculoskeletal discomfort might suffer with the discomfort that disrupt their normal activities, had trouble in terms of pain and numbness, together with consulting physician for the treatment.

The native of the lecturers' job to frequently use the computers and their daily works are depends on it from the module preparation, documentation till the lecture presentation. This also involving the repetitive movements among them such as typing, reading, writing and seating or standing in prolonged duration. Some institutes are

required the lecturers to perform some research activities, so they need to keep reading for some long time which also might be the contributor for this musculoskeletal discomfort mainly on the neck and low back (Darwish et al., 2015).

In studies by Vaghela and Parekh (2017), it stated that about 75% of the lecturers are suffered with musculoskeletal discomfort. Out of this rate, the more effected was the female lecturers due to their muscle strength together with some kind of biological factors such as hormonal factors.

Darwish et. al. (2015) together with Erick and Smith (2011), said that about 40% to 95% person of academicians are suffered with musculoskeletal discomfort and the most parts that affected towards the suffering person was upper limbs, neck and on the back part which towards the low back. They also concluded that academicians are at the high risk of developing musculoskeletal discomfort.

**Table 4.8**

*Level of musculoskeletal discomfort among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

<b>Level</b>	<b>Frequency, n (%)</b>
Low	274 (72.1)
Medium	92 (24.2)
High	14 (3.7)

#### 4.4.2.4 Level of Job Satisfaction

Level of job satisfaction among the IPTS lecturers in Malaysia was measured through the items that designed in Section E. This section consists of 20 items that been measures based on the choices of rate based of Likert scale range 1 to 5, where 1 is strongly dissatisfy to 5 is strongly satisfy. Table 4.9 detailed the choices of the 380 respondents.

**Table 4.9**

*Total respondent's answer for each rating on the level of job satisfaction among private higher education institutes (IPTS) lecturers in Malaysia. (N=380)*

Item	Statement	Frequency, n (%)				
		1	2	3	4	5
1.	Lecturing provides me with an opportunity to advance professionally	0 (0)	4 (1.1)	57 (15.0)	134 (35.3)	185 (48.7)
2.	The work of a lecturer consists of routine activities	2 (0.5)	60 (15.8)	44 (11.6)	123 (32.4)	151 (39.7)
3.	I am not getting ahead in my present lecturer position	14 (3.7)	116 (30.5)	123 (32.4)	51 (13.4)	76 (20.0)
4.	I receive recognition from my immediate supervisor	45 (11.8)	46 (12.1)	153 (40.3)	91 (23.9)	45 (11.8)

<b>5.</b>	I do not have the freedom to make my own decisions	40 (10.5)	38 (10.0)	162 (42.6)	93 (24.5)	47 (12.4)
<b>6.</b>	My immediate supervisor offers suggestions to improve my lecturing	55 (14.5)	30 (7.9)	165 (43.4)	63 (16.6)	67 (17.6)
<b>7.</b>	Lecturing provides for a secure future	35 (9.2)	15 (3.9)	89 (23.4)	142 (37.4)	99 (26.1)
<b>8.</b>	I get along well with my colleagues	0 (0)	0 (0)	60 (15.8)	178 (46.8)	142 (37.4)
<b>9.</b>	My immediate supervisor gives me assistance when I need help	35 (9.2)	2 (0.5)	115 (30.3)	128 (33.7)	100 (26.3)
<b>10.</b>	Working conditions in my college / university are comfortable	52 (13.7)	25 (6.6)	107 (28.2)	91 (23.9)	105 (27.6)
<b>11.</b>	Lecturing provides me the opportunity to help my students learn	0 (0)	18 (4.7)	43 (11.3)	90 (23.7)	229 (60.3)
<b>12.</b>	I like the people with whom I work	5 (1.3)	11 (2.9)	108 (28.4)	129 (33.9)	127 (33.4)
<b>13.</b>	My students respect me as a lecturer	0 (0)	3 (0.8)	41 (10.8)	138 (36.3)	198 (52.1)
<b>14.</b>	Lecturing is very interesting work	0 (0)	10 (2.6)	49 (12.9)	133 (35.0)	188 (49.5)

15.	The administration in my college / university communicates its policies well	57 (15.0)	49 (12.9)	87 (22.9)	157 (41.3)	30 (7.9)
16.	My immediate supervisor treats everyone equitably	36 (9.5)	42 (11.1)	133 (35.0)	84 (22.1)	85 (22.4)
17.	My colleagues stimulate me to do better work	17 (4.5)	25 (6.6)	127 (33.4)	161 (42.4)	50 (13.2)
18.	I am responsible for planning my daily lesson	0 (0)	11 (2.9)	7.2 (18.9)	77 (20.3)	220 (57.9)
19.	I am well paid in proportion to my ability	64 (16.8)	61 (16.1)	130 (34.2)	107 (28.2)	18 (4.7)
20.	I do not get cooperation from the people I work with it	75 (19.7)	102 (26.8)	124 (32.6)	39 (10.3)	40 (10.5)

(1-Strongly Dissatisfy; Dissatisfy; 3-Somehow Satisfy; 4-Satisfy; 5-Strongly Satisfy)

**Table 4.10**

*Level of job satisfaction among private higher education institutes (IPTs) lecturers in Malaysia. (N=380)*

Level	Frequency, n (%)
Low	0 (0)
Medium	379 (99.7)
High	1 (0.3)

As a result, based on Table 4.9, the level of job satisfaction among the respondents been categorized into three categories from low level to high level as summarized in Table 4.10. There is no any respondent that with low level of job satisfaction. It is shows that only 1 lecturer are having high level of job satisfaction which represent 0.03%. Overall, on 99.7% of the respondents representing 379 lecturers are having medium level of job satisfaction towards their current working situation. This can conclude that, all the lecturer are adjusting themselves and make satisfaction towards their duties and responsibilities. De Simone et. al. (2016) reported that there is high prevalence of job satisfaction among the individuals in teaching profession.

## **4.5 INFERENCE ANALYSIS**

### **4.5.1 Normality Test**

Normality test was performed to decide if the collected data for this study was drawn from normally distribution population (parametric) or not normally distributed (non-parametric). This normality test is vital to decide the type of inferential analysis to be performed in this research.

**Table 4.11***Test of Normality – Kolmogorov-Smirnov. (N=380)*

<b>Variable</b>	<b>Statistic</b>	<b>p value</b>
Age	0.181	0.000
Body Mass Index	0.232	0.000
Gender	0.451	0.000
Race	0.278	0.000
Highest Education Level	0.411	0.000
Marital Status	0.380	0.000
Monthly Salary Range	0.305	0.000
Years of Experience	0.170	0.000
Current Position	0.310	0.000
Managerial Position	0.305	0.000
Employment Status	0.379	0.000
Currently Studying Status	0.364	0.000
Nationality	0.539	0.000
Occupational Stress	0.104	0.000
Psychological Stress	0.139	0.000
Musculoskeletal Discomfort	0.136	0.000
Job Satisfaction	0.078	0.000

\*significant value  $p > 0.05$  (Normally distributed)

Table 4.11 shows the significance value for normality. The significance value ( $p > 0.05$ ) should be obtained to determine that the sample was normally distributed (parametric) and ( $p < 0.05$ ) for the sample not normally distributed (non-parametric).



As a result, it shows that all the variables in sociodemographic, independent variables and dependent variable are non-parametric which is not normally distributed. The test that will be choose for inferential analysis will be based on this non-parametric. As a rule, for comparison test, Mann Whitney U test and Kruskal Wallis test will be used, meanwhile for correlation, Spearman test will be used.

## 4.5.2 Comparison Test

### 4.5.2.1 Gender

**Table 4.12**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on gender among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Gender	
	Z value	p value
Occupational Stress	-1.592	0.111
Psychological Stress	-0.955	0.340
Musculoskeletal Discomfort	-1.828	0.067
Job Satisfaction	-1.186	0.236

\*significant value  $p < 0.05$

As tabulated in Table 4.12, a Mann Whitney test showed that the gender difference in scores between the male group (n=108) and female group (n=272) for the occupational stress, psychological stress, musculoskeletal discomfort and job satisfaction are not statistically significant. Desouky and Allam (2017) said, there is the gap of difference

for the occupational between gender. It shows that, female having higher level of occupational stress compared to male lecturers. Contrast with this, Nwimo and Onwunaka (2015) said that male lecturers are having higher level of occupational stress compared to female lecturers, it is due to the abilities of the female to cop up with the stress and able to handle throughout since they experience with their kids and house roles. Studies by Vaghela and Parekh (2017) stated that there is significance difference in occupational stress and musculoskeletal discomfort compared with gender. It shows that females having higher prevalence compared to the male lecturers. Studies by Darwish et. al. (2015) founds that there is high prevalence of musculoskeletal discomfort among female lecturers compared to male lecturers in China, Turkish and India. It shows that there was a significance differences in the gender towards the musculoskeletal discomfort.

#### 4.5.2.2 Employment Status

**Table 4.13**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on employment status among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Employment Status	
	Z value	p value
Occupational Stress	-2.637	0.008*
Psychological Stress	-1.670	0.095
Musculoskeletal Discomfort	-1.585	0.113
Job Satisfaction	-4.557	0.000*

\*significant value  $p < 0.05$

As results in Table 4.13, a Mann Whitney test showed that the employment status difference in scores between the permanent position group (n=162) and contract position group (n=218). The difference between groups of employment status is statistically significant with occupational stress (p=0.008) and job satisfaction (p<0.001) since the significant value (p<0.005).

#### 4.5.2.3 Current Study Status

**Table 4.14**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on currently studying status among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Current Study Status	
	Z value	p value
Occupational Stress	-1.944	0.052
Psychological Stress	-2.225	0.026*
Musculoskeletal Discomfort	-2.293	0.022*
Job Satisfaction	-2.699	0.007*

\*significant value p < 0.05

On the other hand, to compare the variables with the current study status of the lecturers, a Mann Whitney test showed as in Table 4.14 that the current study status difference in scores between the currently pursuing study group (n=207) and not pursuing study group (n=173). The difference between groups of current study status

is statistically significant with psychological stress ( $p=0.026$ ), musculoskeletal discomfort ( $p=0.022$ ) and job satisfaction ( $p=0.007$ ) since the significant value ( $p<0.005$ ).

#### 4.5.2.4 Age

**Table 4.15**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on age among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Age		
	df	X <sup>2</sup> value	p value
Occupational Stress	7	86.995	0.000*
Psychological Stress	7	93.579	0.000*
Musculoskeletal Discomfort	7	91.824	0.000*
Job Satisfaction	7	39.426	0.000*

\*significant value  $p < 0.05$

In comparison to the groups of age, 25-29 years old ( $n=80$ ), 30-34 years old ( $n=88$ ), 35-39 years old ( $n=62$ ), 40-44 years old ( $n=51$ ), 45-49 years old ( $n=60$ ), 50-55 years old ( $n=8$ ), 55-59 years old ( $n=11$ ) and 60-64 years old ( $n=20$ ) with the variables, a Kruskal Wallis was used and the output showed as in Table 4.15. The Kruskal Wallis test showed that the difference in scores between groups of age were statistically significant with occupational stress, Chi-square (2) = 86.995,  $p < 0.001$ ; psychological stress, Chi-square (2) = 93.579,  $p < 0.001$ ; musculoskeletal discomfort, Chi-square (2) = 91.824,  $p < 0.001$ ; and job satisfaction, Chi-square (2) = 39.426,  $p < 0.001$ . Desouky

and Allam (2017) said, there is the gap of difference for the occupational between the groups of age. It shows that, the older the age, the higher the level of occupational stress. The significant different for the groups of ages towards the occupational stress are due to the indirect factors such as the working experiences and together with the health status of the individual (Poulsen et al., 2017; Rozman et al., 2019).

#### 4.5.2.5 Body Mass Index (BMI)

**Table 4.16**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on body mass index among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Body Mass Index (BMI)		
	df	X <sup>2</sup> value	p value
Occupational Stress	3	29.977	0.000*
Psychological Stress	3	15.907	0.001*
Musculoskeletal Discomfort	3	7.908	0.048*
Job Satisfaction	3	24.970	0.000*

\*significant value  $p < 0.05$

Not only the groups of ages are statistically significant with all the variables but also statistically significant for the level of body mass index (BMI). In comparison to the levels of body mass index, underweight (n=48), normal / healthy weight (n=152), overweight (n=135), and obesity (n=45) with the variables, a Kruskal Wallis was used and the output showed as in Table 4.16. The Kruskal Wallis test showed that the

difference in scores between the levels of body mass index were statistically significant with occupational stress, Chi-square (2) = 29.977,  $p < 0.001$ ; psychological stress, Chi-square (2) = 15.907,  $p = 0.001$ ; musculoskeletal discomfort, Chi-square (2) = 7.908,  $p = 0.048$ ; and job satisfaction, Chi-square (2) = 24.970,  $p < 0.001$ .

#### 4.5.2.6 Race

**Table 4.17**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on race among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Race		
	df	X <sup>2</sup> value	p value
Occupational Stress	3	5.491	0.139
Psychological Stress	3	9.450	0.024*
Musculoskeletal Discomfort	3	18.443	0.000*
Job Satisfaction	3	28.927	0.000*

\*significant value  $p < 0.05$

Unlike with the groups of age and level of body mass index, the groups of races not statistically significant with the occupational stress. To compare the differences of the groups of races, Malay (n=166), Chinese (n=66), Indian (n=117), and others (n=31) with the variables, a Kruskal Wallis was used and the output showed as in Table 4.17. The Kruskal Wallis test showed that the difference in scores between the levels of body mass index were statistically significant with psychological stress, Chi-square

(2) = 9.450,  $p = 0.024$ ; musculoskeletal discomfort, Chi-square (2) = 18.443,  $p < 0.001$ ; and job satisfaction, Chi-square (2) = 28.927,  $p < 0.001$ .

#### 4.5.2.7 Highest Education Level

**Table 4.18**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on highest education level among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Highest Education Level		
	df	X <sup>2</sup> value	p value
Occupational Stress	2	47.235	0.000*
Psychological Stress	2	30.959	0.000*
Musculoskeletal Discomfort	2	4.855	0.088
Job Satisfaction	2	5.186	0.075

\*significant value  $p < 0.05$

Table 4.18 shows the Kruskal Wallis test output to compare the differences of the highest education levels, bachelor degree (n=20), master degree (n=275), PhD (n=85), and others (n=31) with the variables. The output shows that there is statistically significant difference in the levels of highest education level with occupational stress, Chi-square (2) = 47.235,  $p < 0.001$  and psychological stress, Chi-square (2) = 30.959,  $p < 0.001$ .

#### 4.5.2.8 Marital Status

**Table 4.19**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on marital status among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Marital Status		
	df	X <sup>2</sup> value	p value
Occupational Stress	3	16.398	0.001*
Psychological Stress	3	6.832	0.077
Musculoskeletal Discomfort	3	14.706	0.002*
Job Satisfaction	3	18.041	0.000*

\*significant value  $p < 0.05$

The level of marital status was divided into four category, single (n=109), married (n=262), divorced (n=1) and widow (n=8) in this study. In comparison to the groups of marital status with the variables, a Kruskal Wallis was used and the output showed as in Table 4.19. Among all the variables, only psychological stress does not statistically significant with the groups of marital status. Comparing to the other variables, the groups of marital status is statistically significant with occupational stress, Chi-square (2) = 16.398,  $p = 0.001$ ; musculoskeletal discomfort, Chi-square (2) = 14.706,  $p = 0.002$ ; and job satisfaction, Chi-square (2) = 18.041,  $p < 0.001$ .



#### 4.5.2.9 Monthly Salary Range

**Table 4.20**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on monthly salary range among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Monthly Salary Range		
	df	X <sup>2</sup> value	p value
Occupational Stress	3	40.407	0.000*
Psychological Stress	3	16.617	0.001*
Musculoskeletal Discomfort	3	56.543	0.000*
Job Satisfaction	3	15.902	0.001*

\*significant value  $p < 0.05$

Monthly salary range is one of the important factors among the lecturers. There are four groups of monthly salary range from less than RM2500 to above RM4500. In comparison to the levels of monthly salary range, below RM 2500 (n=111), RM 2501 to RM 3499 (n=79), RM 3500 to RM 4499 (n=15) and above RM 4500 (n=175) with the variables, a Kruskal Wallis was used and the output showed as in Table 4.20. The Kruskal Wallis test showed that the difference in scores between the levels of monthly salary range were statistically significant with all the variables. The significance is occupational stress, Chi-square (2) = 40.407,  $p < 0.001$ ; psychological stress, Chi-square (2) = 16.617,  $p = 0.001$ ; musculoskeletal discomfort, Chi-square (2) = 56.543,  $p < 0.001$ ; and job satisfaction, Chi-square (2) = 15.902,  $p = 0.001$ .

#### 4.5.2.10 Years of Working Experiences

**Table 4.21**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on years of working experiences among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Years of Working Experiences		
	df	X <sup>2</sup> value	p value
Occupational Stress	7	71.704	0.000*
Psychological Stress	7	76.655	0.000*
Musculoskeletal Discomfort	7	32.848	0.000*
Job Satisfaction	7	10.190	0.178

\*significant value  $p < 0.05$

This part will compare the differences of the groups of working experiences with the variables. Years of working experiences is the total cumulative of working experiences of the lecturers. To compare the differences of the years of working experiences, 1-5 years (n=115), 6-10 years (n=72), 11-15 years (n=70), 16-20 years (n=87), 21-25 years (n=2), 26-30 years (n=30), 31-35 (n=3) and 36-40 years (n=1) with the variables, the Kruskal Wallis test been used and the output was tabulated as in Table 4.21. It shows that, among all the variables, only job satisfaction does not statistically significant with the groups of working experiences. Comparing to the other variables, the groups of years of working experiences is statistically significant with occupational stress, Chi-square (2) = 71.704,  $p < 0.001$ ; psychological stress, 76.655,  $p < 0.001$ ; and musculoskeletal discomfort, Chi-square (2) = 32.848,  $p = 0.002$ . Occupational stress, psychological stress and physical strain might be directly sort of affected the working

individual as their length of services in increasing due to the exposure on the condition continuously without any adjustment. In contrast with this, some of the working individuals make the working environment to satisfy with themselves so that they can have the better job satisfaction to perform better (Amira et al., 2020; GuiXia & Rashid, 2019; Wang et al., 2017).

#### 4.5.2.11 Current Position

**Table 4.22**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on current position among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Current Position		
	df	X <sup>2</sup> value	p value
Occupational Stress	2	23.671	0.000*
Psychological Stress	2	17.376	0.000*
Musculoskeletal Discomfort	2	57.392	0.000*
Job Satisfaction	2	6.108	0.047*

\*significant value  $p < 0.05$

As we looking on other sociodemographic factors, current working position also an important part to be compare with the variables. To compare the differences of the current working position, junior lecturer (n=23), lecturer (n=199) and senior lecturer (n=158) with the variables, the Kruskal Wallis test been used and the output was summarized in Table 4.22. The Kruskal Wallis test showed that the difference in scores

between the current working position were statistically significant with all the variables. The significance obtained was occupational stress, Chi-square (2) = 23.671,  $p < 0.001$ ; psychological stress, Chi-square (2) = 17.376,  $p < 0.001$ ; musculoskeletal discomfort, Chi-square (2) = 57.392,  $p < 0.001$ ; and job satisfaction, Chi-square (2) = 6.108,  $p = 0.047$ .

#### 4.5.2.12 Managerial Position

**Table 4.23**

*Comparison of level of psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress on managerial position among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Comparison	Managerial Position		
	df	X <sup>2</sup> value	p value
Occupational Stress	4	36.369	0.000*
Psychological Stress	4	38.829	0.000*
Musculoskeletal Discomfort	4	40.928	0.000*
Job Satisfaction	4	44.524	0.000*

\*significant value  $p < 0.05$

This part will compare the differences of the managerial positions with the variables. Managerial position is a sort of an additional task together with the teaching task. To compare the differences of the managerial position, head of department (n=91), head of program (n=80), dean (n=26), director (n=8) and without any managerial position (none) (n=175) with the variables, the Kruskal Wallis test been used and the output

was tabulated as in Table 4.23. The Kruskal Wallis test showed that the difference in scores between the current working position were statistically significant with all the variables. The significance obtained was occupational stress, Chi-square (2) = 36.369,  $p < 0.001$ ; psychological stress, Chi-square (2) = 38.829,  $p < 0.001$ ; musculoskeletal discomfort, Chi-square (2) = 40.928,  $p < 0.001$ ; and job satisfaction, Chi-square (2) = 44.524,  $p < 0.001$ .

### 4.5.3 Correlation Test

#### 4.5.3.1 Relationship Between Sociodemographic Factors and Occupational Stress

**Table 4.24**

*Relationship between sociodemographic factors and level of occupational stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Relationship	Occupational Stress	
	p value	r value
Age	0.002*	-0.157
Gender	0.329	0.050
Race	0.783	-0.014
Body Mass Index	0.000*	0.227
Highest Education Level	0.000*	-0.267
Marital Status	0.004*	-0.148
Monthly Salary Range	0.000*	-0.287
Years of Experiences	0.066	-0.095
Current Position	0.000*	-0.204
Managerial Position	0.044*	-0.104

Current Studying Status	0.144	-0.075
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\*significant value  $p < 0.05$

Table 4.24 explains the summary of correlation between the sociodemographic factor with the level of occupational stress. A Spearman test was used to determine the correlation between them. A Spearman's rho correlation test showed that the relationship between level of occupational stress is statistically significant with the age ( $r = -0.157, p = 0.002$ ), body mass index ( $r = 0.227, p < 0.001$ ), highest education level ( $r = -0.267, p < 0.001$ ), marital status ( $r = -0.148, p = 0.004$ ), monthly salary range ( $r = -0.287, p < 0.001$ ), current position ( $r = -0.204, p < 0.001$ ), and managerial position ( $r = -0.104, p = 0.044$ ). Among all the relationship, only body mass index has the weak positive correlation meanwhile the other relationship was weak negative correlation. The strength of the correlation determined by the value of correlation coefficient ( $r$  value). Alves et. al. (2020) stated that, there is significance relationship between gender, length of service towards the occupational stress among academicians.

#### 4.5.3.2 Relationship Between Sociodemographic Factors and Psychological Stress

**Table 4.25**

*Relationship between sociodemographic factors and level of psychological stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Relationship	Psychological Stress	
	p value	r value
Age	0.016*	-0.123
Gender	0.211	0.064

Race	0.572	0.029
Body Mass Index	0.016*	-0.123
Highest Education Level	0.001*	-0.174
Marital Status	0.018*	-0.121
Monthly Salary Range	0.000*	-0.246
Years of Experiences	0.000*	-0.212
Current Position	0.009*	-0.134
Managerial Position	0.382	-0.045
Current Studying Status	0.607	0.026

\*significant value  $p < 0.05$

Table 4.25 explains the summary of correlation between the sociodemographic factor with the level of psychological stress. A Spearman test was used to determine the correlation between them. A Spearman's rho correlation test showed that the relationship between level of occupational stress is statistically significant with the age ( $r = -0.123$ ,  $p = 0.016$ ), body mass index ( $r = -0.123$ ,  $p = 0.016$ ), highest education level ( $r = -0.174$ ,  $p = 0.001$ ), marital status ( $r = -0.121$ ,  $p = 0.018$ ), monthly salary range ( $r = -0.246$ ,  $p < 0.001$ ) and current position ( $r = -0.134$ ,  $p = 0.009$ ). All the correlation strength was weak negative correlation.

### 4.5.3.3 Relationship Between Sociodemographic Factors and Musculoskeletal Discomfort

**Table 4.26**

*Relationship between sociodemographic factors and level of musculoskeletal discomfort among private higher education institutes (IPTs) lecturers in Malaysia. (N=380).*

Relationship	Musculoskeletal Discomfort	
	p value	r value
Age	0.918	0.005
Gender	0.552	-0.031
Race	0.181	-0.069
Body Mass Index	0.000*	0.292
Highest Education Level	0.013*	-0.127
Marital Status	0.402	-0.043
Monthly Salary Range	0.828	0.011
Years of Experiences	0.257	-0.058
Current Position	0.000*	-0.197
Managerial Position	0.012*	0.128
Current Studying Status	0.040*	0.105

\*significant value  $p < 0.05$

The correlation between the sociodemographic factor with the level of musculoskeletal discomfort explained in Table 4.26. A Spearman test was used to determine the correlation between them. A Spearman's rho correlation test showed that the relationship between level of occupational stress is statistically significant with the



body mass index ( $r = 0.292$ ,  $p < 0.001$ ), highest education level ( $r = -0.127$ ,  $p = 0.013$ ), current position ( $r = -0.197$ ,  $p < 0.001$ ), and managerial position ( $r = 0.128$ ,  $p = 0.012$ ). Out of the four sociodemographic factors that have significant relationship, body mass index and managerial position having weak positive relationship with the musculoskeletal discomfort, meanwhile, highest education level have the weak negative correlation towards musculoskeletal discomfort.

#### 4.5.3.4 Relationship Between Sociodemographic Factors and Job Satisfaction

**Table 4.27**

*Relationship between sociodemographic factors and level of job satisfaction among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

Relationship	Job Satisfaction	
	p value	r value
Age	0.934	0.004
Gender	0.529	0.032
Race	0.931	0.004
Body Mass Index	0.524	-0.033
Highest Education Level	0.085	0.088
Marital Status	0.572	0.029
Monthly Salary Range	0.317	0.052
Years of Experiences	0.215	-0.064
Current Position	0.488	-0.036
Managerial Position	0.320	0.051
Current Studying Status	0.275	0.056

\*significant value  $p < 0.05$

The correlation between the sociodemographic factor with the level of job satisfaction explained in Table 4.27. A Spearman test was used to determine the correlation between them. A Spearman's rho correlation test showed that there is no any significant relationship between level of job satisfaction with the sociodemographic factors. In a studies that conducted by Bhanu and Babu (2018), it concluded that job satisfaction is significantly related to age, gender, education level and monthly salary range.

#### 4.5.4 Relationship Between Variables

**Table 4.28**

*Relationship between psychological stress, musculoskeletal discomfort, job satisfaction and occupational stress among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

<b>Relationship</b>	<b>p value</b>	<b>r value</b>
PS – OS	0.000*	0.612
MSD – OS	0.000*	0.350
JS – OS	0.183	0.068

(OS- Occupational Stress; PS- Psychological Stress; MSD- Musculoskeletal Discomfort; JS- Job Satisfaction)

\*significant value  $p < 0.05$

This Spearman test done to determine the relationship between all the variables of this study. The correlation was tested between occupational stress (OS), psychological stress (PS), musculoskeletal discomfort (MSD) and job satisfaction (JS). A Spearman's rho correlation test showed that there is significant relationship between

psychological stress and occupational stress ( $r = 0.612$ ,  $p < 0.001$ ) which shows moderate positive correlation between them. This correlation might be due to the situation where the occupational related stress triggered the individual mentally and disturb from performing or acting on anything. It causes the academicians to suffer with the psychological stress. Similar significant relationship between occupational stress and psychological stress was identified with weak positive correlation (Desouky & Allam, 2017; Nwimo & Onwunaka, 2015).

Musculoskeletal discomfort also has significant correlation (moderate positive correlation) with occupational stress ( $r = 0.350$ ,  $p < 0.001$ ). All the significant correlation are moderate positive correlation. Nwimo and Onwunaka (2015) said there is interconnection between occupational stress with the mental stress and also with the physical strain or discomfort. Various studies conducted previously reported that the lack in the psychological factors is one of the main causes that triggered musculoskeletal discomfort among the lecturers. The psychological factors that been integrated was the low colleague support, mental health and high expectation towards the jobs (Darwish et al., 2015).

Siddique and Farooqi (2014), together with Rana and Soodan (2019) statements supporting this study that there is no significant relationship between occupational stress and job satisfaction. Opposite to this statement, Harish and Parbha (2018), said that there is strong negative significant relationship between job satisfaction and occupational stress among academicians. Psychological stress and

musculoskeletal discomfort are correlated due to the internal factors of the variables that are interconnected between each other in the workplace or working environment.

#### **4.5.5 Multiple Regression Analysis**

Based on Table 4.29, it shows that two independent variables, psychological stress ( $p < 0.001$ ) and job satisfaction ( $p < 0.001$ ) are significantly influenced the occupational stress. There is one independent variable, musculoskeletal discomfort that is not significantly influenced the occupational stress. The result show that all of the independent variables explained 52.5 % (refer Adjusted R Square) of the total variation in occupational stress. As overall model is good fit ( $p = 0.000$ ). The summary of the result is presented in Table 4.30.



**Table 4.29**

*A Model summary of multiple regression between occupational stress, psychological stress, musculoskeletal discomfort and job satisfaction among private higher education institutes (IPTS) lecturers in Malaysia. (N=380).*

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>ANOVA Sig.</b>	<b>Coefficients Sig.</b>
Psychological Stress	0.727	0.529	0.525	11.484	0.000*	0.000*
Musculoskeletal Discomfort						0.468
Job Satisfaction						0.000*

\*significant value  $p < 0.05$



**Table 4.30***Hypothesis Testing Results*

<b>Hypothesis</b>		<b>Decision</b>
H <sub>a</sub> I:	There is a significant relationship between occupational stress and psychological stress	Significant (p-value < 0.001) H <sub>a</sub> accepted
H <sub>0</sub> I:	There is no significant relationship between occupational stress and psychological stress	H <sub>0</sub> rejected
H <sub>a</sub> II:	There is a significant relationship between occupational stress and musculoskeletal	H <sub>a</sub> rejected
H <sub>0</sub> II:	There is no significant relationship between occupational stress and musculoskeletal	Not significant (p-value = 0.468) H <sub>0</sub> accepted
H <sub>a</sub> III:	There is a significant relationship between occupational stress and job satisfaction	Significant (p-value < 0.001) H <sub>a</sub> accepted
H <sub>0</sub> III:	There is no significant relationship between occupational stress and job satisfaction	H <sub>0</sub> rejected

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 INTRODUCTION**

This chapter discuss on the conclusion and also the recommendation for the future finding by looking on the limitations.

#### **5.2 CONCLUSION**

This research evaluated the occupational stress and the contributing factor (psychological stress, musculoskeletal discomfort and job satisfaction) among private higher education institutes (IPTs) lecturers in Malaysia. A total of 380 lecturers that participated in this study somehow represented the total population of private higher learning institutes (IPTs) lecturers in Malaysia. The result of this study revealed that the most of the lecturers had moderate to high level of occupational stress and psychological stress, low to moderate level of musculoskeletal discomfort, and moderate level of job satisfaction.

Based on the correlation result of variables with the sociodemographic factors, it shows that age, marital status and monthly salary range are correlated with occupational stress and psychological stress. The body mass index, highest education level, and current position are correlated with occupational stress, psychological stress, and musculoskeletal discomfort. Managerial position is correlated with occupational

stress, and lastly musculoskeletal discomfort, years of experiences correlated with the psychological stress.

The objective of this study was mainly to identify the correlation between the independent variables (psychological stress, musculoskeletal discomfort and job satisfaction) and dependent variable (occupational stress) among IPTS lecturer in Malaysia. It shows that there was significant correlation between occupational stress and psychological stress. This shows that psychological stress is one of the contributing factors towards the prevalence of occupational stress and it answered the hypothesis 1 positively. This can be related with the current phenomenon of online teaching period. The lecturers facing a tremendous of psychological stress due to higher work expectation from the management, instructions to create a various of online teaching method in a given short time, besides that the pressure was given by students in not complying to the method of the online teaching. The lecturers become the middle person between the management and students, and all the dissatisfaction of students towards the management been showed to the lecturers and if the lecturer brought up this issue to the management, the lecturers been pointed out and asked to resolve the matter. It somehow creates a big impact to the mentally and led to occupational stress as well.

On the hypothesis 2, it was rejected since there is no any significant correlation between the prevalence of occupational stress and musculoskeletal discomfort. This is might be due to the lecturers work posture are not mainly affected since they not affected much on physically since not involving carrying or lifting heavy load. Besides



that, since most of the lecturers are working home during this study was conducted, it can be said that the lecturer adjusts the sitting or working posture according to the stability and convenient during at home.

Similar to hypothesis 1, hypothesis 3 also been accepted since there is significant relationship between prevalence of occupational stress and job satisfaction. This relationship is highly related due the personal perception on the job that they perform and also on the awards or recognition that they received. Most of the lecturers are not satisfied with the job and cause them to have occupational stress due to the management perception on the lecturer's duties and responsibilities are very low. The low level of job satisfaction highly causes the relationship with occupational stress because only lecturers that not having job satisfaction will contribute towards the occupational stress.

As a final conclusion and to answer the objective of this study, alternate hypothesis I, null hypothesis II and alternate hypothesis III accepted, meanwhile, null hypothesis I, alternate hypothesis II, and null hypothesis III rejected.

### **5.3 RECOMMENDATIONS**

It reveals that the research targets have been accomplished after finishing this study. There were however, few items to remember in order to maximize the results. In order to collect the reliable statistics, other approaches such as direct long physical interview session or real observation method could be performed in the future. In addition, the

workers response should be compared to other country lecturers or other field academicians in order to correct the gap present to provide better functional roles of academicians.

The management should facilitate the institution with the suitable furniture or work station which can improve the proper physical posture together with the musculoskeletal comfort for long term. Besides this, the lecturers as an individual should also concern on the applying proper postures during performing any task in the work place. In meanwhile of time, the lecturers can make some sort of light exercise in the workstation which can give some sort of relaxation for the muscles after long period of strain. Either the management or the lecturers should put some effort on the ergonomic factors individually and manage themselves from the over strain and the injuries from it.

Throughout this study, it can be suggested that, to reduce or prevent the prevalence of occupational stress among the lecturers, the contributing factors should be analysed to identify the exact factor that be the causes and need to eliminate it based on individual perspective for the benefits of the teachers and together with the institution.

The study proposes that the lecturers need additional support to overcome their level of stress that caused by the work. The management of the private higher education institutes to develop some programs such as stress management programs which can expose the lecturers on the proper way to manage the stress which can

benefit for their both personal and work, which indirectly can create a healthy lifestyle among them.

Finally, this study been conducted during the movement control order (MCO) period and all the teaching and learning session was conducted online means the lecturers are work from home. This study should be conducted again in future once the physical method teaching and learning session begins to compare the prevalence of occupational stress and the contributing factors. This study also can be furthered by involving lecturers from local higher education instates which the data can be compared on the occurrence.

#### **5.4 LIMITATION OF STUDY**

Movement control order (MCO) was one of the main issues found throughout completion of this study. The earlier plan for the movement to meet the lecturer physically throughout Malaysia failed due to MCO and only online data collection method was performed. This distracted the data collection process where earlier its planned to be the structured sampling. In future, it will be good if the research can perform the study by do some observational studies when dealing with the physical segment such as musculoskeletal discomfort or any ergonomic related factors. Besides this, this data not much can be resembling the throughout population of lecturers in Malaysia since it is using convenient sampling.

## **5.5 IMPLICATIONS OF THE STUDY**

The data from this study can be used by the Ministry of Higher Education to rule out the problems that been faced by the lecturers so that the quality of the private higher education will be enhanced indirectly. This shows the numbers or the rate of lecturers that facing the occupational related problem such as stress and discomfort. The management of IPTS with the collaboration of MOHE need to plan a proper countermeasure and to provide insight to overcome the issues.



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## QUESTIONNAIRE

### THE PREVALENCE OF OCCUPATIONAL STRESS AND IT'S RISK FACTORS AMONG PRIVATE HIGHER EDUCATION INSTITUTES (IPTS) LECTURERS IN MALAYSIA

The aim of this survey is to study the prevalence of occupational stress and its contributing risk factors among lecturers in private higher education institutes (IPTS) in Malaysia. Your participation is voluntary to answer the following questionnaire. Your answer will be kept confidential.

#### Informed Consent Form

I would like to invite you to participate in a research study assessing the prevalence of occupational stress and its contributing risk factors among lecturers in private higher education institutes (IPTS) in Malaysia. My name is T.Nanthakumar TamilSelvam and the data collected in this questionnaire will help to fulfill the requirements for a Master of Science in Occupational Safety and Health Management, Universiti Utara Malaysia. I am under the supervision of Dr. Marziya Binti Zahar. Participation requires answering the following questions on the questionnaire. There is no planned use of deception involved in this study.

**Your Privacy:** Your participation in this study and your responses will be kept confidential. Any reference to you will be by pseudonym, including any direct quotes from your responses. This document that might personally identify you as a participant in this study will be kept confidential that only the researcher will have access to.

Date : \_\_\_\_\_

Signature : \_\_\_\_\_

**SECTION A: SOSIO--DEMOGRAPHIC PROFILE**

1.	Age		years old
2.	Height		Centimeters (cm)
3.	Weight		Kilogram (kg)
4.	Gender:	Male Female	
5.	Race	Malay Chinese Indian Others	
6.	Highest Education Level	Bachelor Degree Master Degree Ph.D	
7.	Marital Status	Single Married Divorced Widow	
8.	Monthly Salary Range	Below RM 2,500 RM 2501 – RM 3499 RM 3500 – RM 4499 RM 4500 – RM 5499 RM 5500 and above	



UUM

Universiti Utara Malaysia

9.	Year(s) of experiences	<input style="width: 80px; height: 25px;" type="text"/> year(s)	
10.	Current position	Junior lecturer Lecturer Senior lecturer	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
11.	Managerial Position ( <i>if any</i> )	Head of Department Head of Program Dean Director None	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
12.	Employment status	Permanent Contract	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
13.	Are you currently pursuing any higher education?	Yes No	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
14.	Nationality	Malaysian Others	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>





## SECTION B: OCCUPATIONAL STRESS INDEX

Please read each statement carefully and decide how you feel about your occupation / work as described by the following statement.

<p><b>Scale:</b></p> <p><b>1 = Strongly Disagree (SDA)</b></p> <p><b>2 = Disagree (DA)</b></p> <p><b>3 = Somehow Agree (SHA)</b></p> <p><b>4 = Agree (A)</b></p> <p><b>5 = Strongly Agree (SDA)</b></p>
---

No.	Items	1	2	3	4	5
1.	I have to do a lot of work in this job	1	2	3	4	5
2.	I am unable to carry out my assignment to my satisfaction on account of excessive load of work and lack of time.	1	2	3	4	5
3.	The available information relating to my job-role and its outcomes are vague and insufficient	1	2	3	4	5
4.	I am unable to perform my duties smoothly owing to uncertainty and ambiguity of the scope of my jurisdiction and authorities.	1	2	3	4	5
5.	It is not clear that what type of work and behavior my higher authorities and colleagues expect from me.	1	2	3	4	5
6.	I am not provided with clear instructions and sufficient facilities regarding the new assignments trusted to me.	1	2	3	4	5
7.	It becomes difficult to implement all of a sudden, the new dealing procedures and policies in place of those already in practice.	1	2	3	4	5
8.	In order to maintain group conformity sometimes I have to do/produce more than usual.	1	2	3	4	5
9.	I am compelled to violate the formal and administrative procedures and policies owing to group/political pressures.	1	2	3	4	5
10.	The responsibility for the efficiency and productivity of many employees is thrust upon me	1	2	3	4	5
11.	I bear the great responsibility for the progress and prosperity of this organization.	1	2	3	4	5
12.	I have to work with persons whom I like	1	2	3	4	5
13.	My colleagues do cooperate with me voluntarily in solving administrative and industrial problems	1	2	3	4	5
14.	There exists sufficient mutual co-operation and team-spirit among the employees of this Organization/Department.	1	2	3	4	5
15.	My assignments are of monotonous nature	1	2	3	4	5
16.	I get ample opportunity to utilize my abilities and experience independently.	1	2	3	4	5
17.	My suggestions and cooperation are not sought in solving even those problems for which I am quite competent.	1	2	3	4	5

18.	Higher authorities do care for my self-respect.	1	2	3	4	5
19.	This job has enhanced my social status.	1	2	3	4	5
20.	My higher authorities do not give due significance to my post and work	1	2	3	4	5
21.	I get less salary in comparison to the quantum of my labor/work.	1	2	3	4	5
22.	I am seldom rewarded for my hard labor and efficient performance	1	2	3	4	5
23.	I do my work under tense circumstances.	1	2	3	4	5
24.	I often feel that this job has made my life cumbersome	1	2	3	4	5
25.	Being too busy with official work I am not able to devote sufficient time to my domestic and personal problems.	1	2	3	4	5



## SECTION C: PSYCHOLOGICAL STRESS

Please read each statement carefully and tick your selection. This section is to measure a perceived stress in response to situation's in a person's life on the perception of stress.

**Scale:**

**1 = Never**

**2 = Almost Never**

**3 = Sometimes**

**4 = Fairly Often**

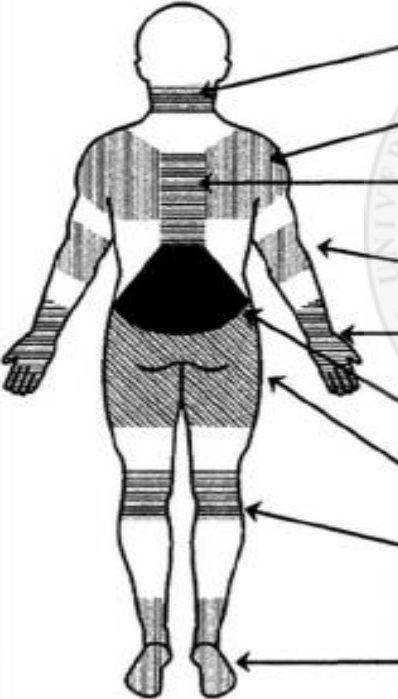
**5 = Very Often**

*In the last **THREE (3)** months, how often have you....*

No.	Items	1	2	3	4	5
1.	Been upset because of something that happened unexpectedly?	1	2	3	4	5
2.	Felt that you were unable to control important things in your life?	1	2	3	4	5
3.	Felt nervous and "stressed"?	1	2	3	4	5
4.	Felt confident about your ability to handle your personal problems?	1	2	3	4	5
5.	Felt that things were going your way?	1	2	3	4	5
6.	Found that you could not cope with all things you had to do?	1	2	3	4	5
7.	Been able to control irritations in your life?	1	2	3	4	5
8.	Felt that you were on top of things?	1	2	3	4	5
9.	Been angered because of things that happened that were out of your control?	1	2	3	4	5
10.	Felt difficulties were piling up so high that you could not overcome them?	1	2	3	4	5

## SECTION D: MUSCULOSKELETAL DISCOMFORT

Please read each statement carefully and tick your selection. This section is to measure on your musculoskeletal strain.

	Have you at any time during the last 12 months had trouble (such as ache, pain, discomfort, numbness) in:	During the last 12 months have you been prevented from carrying out normal activities (e.g. job, housework, hobbies) because of this trouble in:	During the last 12 months have you seen a physician for this condition:	During the last 7 days have you had trouble in:	
	NECK	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	SHOULDERS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	UPPER BACK	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	ELBOWS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	WRISTS/ HANDS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	LOWER BACK	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	HIPS/ THIGHS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	KNEES	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
	ANKLES/ FEET	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes

## SECTION E: JOB SATISFACTION

Please read each statement carefully and tick your selection. This section is to measure your attitude towards particular aspects of your job.

### Scale:

**1 = Strongly Disagree (SDA)**

**2 = Disagree (DA)**

**3 = Somehow Agree (SHA)**

**4 = Agree (A)**

**5 = Strongly Agree (SDA)**

No.	Items	1	2	3	4	5
1.	Lecturing provides me with an opportunity to advance professionally	1	2	3	4	5
2.	The work of a lecturer consists of routine activities	1	2	3	4	5
3.	I am not getting ahead in my present lecturer position	1	2	3	4	5
4.	I receive recognition from my immediate supervisor	1	2	3	4	5
5.	I do not have the freedom to make my own decisions	1	2	3	4	5
6.	My immediate supervisor offers suggestions to improve my lecturing	1	2	3	4	5
7.	Lecturing provides for a secure future	1	2	3	4	5
8.	I get along well with my colleagues	1	2	3	4	5
9.	My immediate supervisor gives me assistance when I need help	1	2	3	4	5
10.	Working conditions in my college / university are comfortable	1	2	3	4	5
11.	Lecturing provides me the opportunity to help my students learn	1	2	3	4	5
12.	I like the people with whom I work	1	2	3	4	5
13.	My students respect me as a lecturer	1	2	3	4	5
14.	Lecturing is very interesting work	1	2	3	4	5
15.	The administration in my college / university communicates its policies well	1	2	3	4	5
16.	My immediate supervisor treats everyone equitably	1	2	3	4	5
17.	My colleagues stimulate me to do better work	1	2	3	4	5
18.	I am responsible for planning my daily lesson	1	2	3	4	5
19.	I am well paid in proportion to my ability	1	2	3	4	5
20.	I do not get cooperation from the people I work with it	1	2	3	4	5

**THANK YOU!!**