QUALITY OF LIFE, COPING STRATEGIES AND THEIR ASSOCIATED FACTORS AMONG HOSPITAL HOUSE OFFICERS IN KELANTAN

by

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TABLE OF CONTENTS

CHAPTER TWO: LITERATURE REVIEW

CHAPTER THREE: METHODOLOGY

CHAPTER FOUR: RESULTS

CHAPTER FIVE: DISCUSSION

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

A&E	Accident and Emergency
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval
CME	Continuous Medical Education
COPE	Coping Orientation to Problems Experienced
CPD	Continuous Professional Development
MC	Medical Certificate
O&G	Obstetrics and Gynaecology
OR	Odds Ratio
QOL	Quality of Life
SD	Standard Deviation
VIF	Variance Inflation Factor
WHO	World Health Organisation
WHOQOL	World Health Organisation Quality of Life

ABSTRAK

Kualiti hidup, strategi menangani dan faktor-faktor yang berkaitan dengannya di kalangan pegawai perubatan siswazah hospital di Kelantan.

Pengenalan: Kebelakangan ini, sektor perubatan telah membuktikan pengaruhnya yang penting sebagai bidang pekerjaan yang sangat mempengaruhi kualiti hidup pekerjanya. Di Malaysia, peringkat pegawai perubatan siswazah adalah tempoh latihan praktikal yang diselia secara berstruktur setelah tamat pengajian di institusi perubatan. Ia dikatakan sebagai tempoh yang paling mencabar dalam kerjaya perubatan. Selalunya, strategi menangani dikaitkan dengan kualiti hidup sebagai salah satu sifat penyesuaian diri. **Objektif:** Kajian ini bertujuan untuk menentukan kualiti hidup, strategi menanganinya serta faktor-faktor yang berkaitan dengannya di kalangan pegawai perubatan siswazah hospital di Kelantan. **Metodologi:** Satu kajian keratan rentas telah dijalankan dari April 2018 ke April 2020 di semua hospital kerajaan di Kelantan iaitu Hospital Universiti Sains Malaysia (HUSM), Hospital Raja Perempuan Zainab II(HRPZ II), Hospital Tanah Merah (HTM) dan Hospital Kuala Krai (HKK). Seramai 370 pegawai perubatan siswazah yang telah berdaftar dengan Majlis Perubatan Malaysia dan telah bekerja selama sekurang-kurangnya lapan bulan di hospital kerajaan di Kelantan telah menyertai kajian ini. Borang kaji selidik World Health Organization Quality of Life-BREF (WHOQOL-BREF) dan Brief Coping Orientation to Problems Experienced Scale (Brief COPE) yang disahkan dalam Bahasa Melayu telah diberi dan dijawab secara sendiri semasa sesi CME di jabatan dan hospital masing-masing. **Keputusan:** Untuk bahagian kualiti hidup, skor untuk domain kesihatan fizikal, psikologi, perhubungan sosial dan kesihatan alam sekitar

adalah 44.0%, 56.0%, 56% dan 63.0%. Majoriti pegawai perubatan siswazah telah menganggap kualiti hidup mereka sebagai 'sederhana' (57.8%) dan 'berpuas hati' dengan kesihatan mereka (43%). Purata (sisihan piawai) bagi strategi yang paling kerap digunakan oleh pegawai perubatan siswazah untuk manangani cabaran yang dihadapi adalah agama [6.56 (1.10)], menyalahkan diri [6.51 (0.97)], penafsiran yang berpositif [6.33 (1.09)], sokongan dalam bentuk nasihat dan galakkan [6.33 (1.20)] dan perancangan [6.22 (1.17)]. Juga, amalan strategi menangani yang berfokus kepada masalah (72.8%) dan emosi (68.1%) tidak banyak berbeza dikalangan peserta penyelidikan ini. Perkhidmatan para pegawai yang tidak dilanjutkan [Regresi (b) Terselaras (95% Julat Keyakinan (JK)]: 3.09 (0.42, 5.76) p=0.023] dan menggunakan sokongan emosi [b Terselaras (95% JK): 1.92 (0.88, 2.95) p<0.001] dan perancangan [b Terselaras (95% JK): 1.10 (0.08, 2.12) p=0.034] sebagai strategi menangani didapati sebagai faktor-faktor yang berkaitan dengan jumlah skor kualiti hidup yang lebih tinggi. Pegawai perubatan siswazah perempuan [b Terselaras (95% JK): 0.27 (0.02, 0.52) p=0.005] dan berada dalam rangkaian perkhidmatan yang terakhir [b Terselaras (95% JK): 0.82 (0.12, 1.77) p=0.038] berpotensi untuk memperolehi jumlah skor yang lebih tinggi untuk strategi menangani yang berfokus kepada masalah. Pegawai perubatan siswazah lelaki [b Terselaras (95% JK): 0.22 (-0.89, 1.34) p=0.046], keturunan Melayu [b Terselaras (95% JK): 0.23 (0.20, 0.52) p=0.013] dan bekerja di HRPZ II [b Terselaras (95% JK): 1.22 (0.34, 2.11) p=0.001], HTM [b Terselaras (95% JK): 1.56 (0.55, 2.58) p<0.001] dan HKK [b Terselaras (95% JK): 1.69 (0.57, 2.82) p<0.001] telah didapati sebagai faktor-faktor yang berkaitan dengan jumlah skor yang lebih tinggi untuk strategi menangani yang berfokus kepada emosi. **Kesimpulan:** Secara amnya, majoriti pegawai perubatan siswazah hospital di Kelantan berasa bahawa kualiti hidup mereka adalah sederhana dan berpuas hati

dengan kesihatan mereka. Strategi-strategi menangani didapati mempengaruhi pelbagai aspek kualiti hidup mereka. Di antaranya, sebahagian daripada strategi menangani berfokus kepada emosi merupakan strategi yang paling banyak digunakan. Juga, beberapa faktor sosio-demografi dan pekerjaan didapati berkaitan dengan strategi menangani dikalangan mereka.

Kata-kata kunci: kualiti hidup, strategi menangani, pegawai perubatan siswazah,

ABSTRACT

Quality of life, coping strategies and their associated factors among hospital house officers in Kelantan.

Introduction: Over the years, medicine has proven itself to be an occupational field that quite severely affects the quality of life (QOL) of its employees. In Malaysia, Housemanship is a period of structured supervised practical training upon completion of medical school. It has been said to be the most challenging period of one's medical career. Coping has always been associated with QOL as a feature of adaptation. **Objective:** This study was aimed to determine the QOL, coping strategies and their associated factors among hospital house officers in Kelantan. **Methodology:** A cross-sectional study was conducted from April 2018 to April 2020 in all government hospitals of Kelantan which were Hospital Universiti Sains Malaysia (HUSM), Hospital Raja Perempuan Zainab II (HRPZ II), Hospital Tanah Merah (HTM) and Hospital Kuala Krai (HKK). A total of 370 house officers registered to the Malaysian Medical Council who have been working in public hospitals of Kelantan for at least eight months participated in this study. The validated Malay versions of World Health Organization Quality of Life-BREF (WHOQOL-BREF) and Brief Coping Orientation to Problems Experienced Scale (Brief COPE) questionnaires were self-administered. **Results:** For QOL, the scores for physical, psychological, social relationships and environmental health domains were 44%, 56.0%, 56.0% and 63.0% respectively. Majority of the house officers had perceived their QOL to be 'moderate' (57.8%) and 'satisfied' with their health (43.0%). Mean [standard deviation (SD)] of the five most frequently used coping strategies were religion [6.56 (1.10)], self-blame [6.51 (0.97)], positive reframing [6.33 (1.09)], the use of instrumental support [6.33 (1.20)] and

planning [6.22 (1.17)]. Also, it was reported that problem focused coping (72.8%) and emotion focused coping (68.1%) were almost equally practised by our study participants Not being extended in service [Adjusted regression (b) [(95% confidence interval (CI)]: 3.09 (0.42, 5.76) p=0.023], using emotional support [Adjusted b (95% CI): 1.92 (0.88, 2.95) p<0.001] and planning [Adjusted b (95% CI): 1.10 (0.08, 2.12) p=0.034] were significantly associated with higher total scores of QOL. Female house officers [Adjusted b (95% CI): 0.27 (0.02, 0.52) p=0.005] and those attached to their final posting [Adjusted b (95% CI): 0.82 (0.12, 1.77) p=0.038] were predisposed to a higher total score of problem focused coping. Being male [Adjusted b (95% CI): 0.22 (-0.89, 1.34) p=0.046], Malay ethnicity [Adjusted b (95% CI): 0.23 (0.20, 0.52) p=0.013] and being posted to HRPZ II [Adjusted b (95% CI): 1.22 (0.34, 2.11) p=0.001], HTM [Adjusted b (95% CI): 1.56 (0.55, 2.58) p<0.001] as well as HKK [Adjusted b (95% CI): 1.69 (0.57, 2.82) p<0.001] were factors found to be associated to a higher total score of emotion focused coping strategies. **Conclusion:** Majority of the hospital house officers in Kelantan had generally perceived their QOL and health to be moderate and satisfactory. The choice of certain coping strategies strongly influences various aspects of their QOL. Among them, several emotion focused coping strategies were found to be most prevalent. Finally, certain socio-demographic and occupational factors were observed to be associated with the different types of coping strategies among them.

Keywords: quality of life, coping strategies, house officers

CHAPTER ONE

INTRODUCTION

This introduction chapter shall provide a general overview on the vital aspects of this study which includes quality of life within the medical field and coping strategies. The discussion is then scoped to the impacts of quality of life in medicine as well as the process of housemanship. Justification of the study and research questions, objectives and hypotheses are then finally highlighted at the end of this chapter.

1.1 Quality of life among doctors

Quality of life (QOL) is defined by the WHO as, 'an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns' (WHO, 1998). It is a broader indicator of an individual's health and well-being, and it includes components that may not yet be addressed by current healthcare interventions. Also, it is known to be an expansive construct as it encompasses both health-related and non-health-related components.

Occupational status, in a varying degree, has been perceived to be associated with the QOL of an individual. Although it is common for people from all walks of life and various occupational groups to describe their work as difficult and stressful, it seems that there are certain occupations that carry a significant amount of excessive burden compared to the others. Medicine, for one, has certainly proven itself to be an occupational field that quite severely affects the QOL of its employees (Gholami *et*

al., 2013). It is a sensitive issue as it deals with the life of human beings directly. The amount of burden rendered on doctors, who are perceived to be the immediate cause of life or death of patients is relatively high. In return, this condition gives rise to distress, a sense of reduced effectiveness and motivation, as well as the development of dysfunctional attitudes and behaviours at work (Maroof Hassan *et al.*, 2014).

Doctors are a part of 'professional workers' that are generally perceived by the general public as a distinguished class of workers who serve the needs of the community, enjoy considerable prestige and job autonomy. They are also perceived to be shielded from stressful work situations that are common to non-professional workers such as excessive job pressure, task monotony and lack of job control (Shidhaye *et al.*, 2011).

Thus, the physical and mental health of a medical practitioner has always been a topical issue as their service involves taking care of other people's lives in which even the simplest or minor mistakes could be severely costly and unfortunately irreversible at times. It is mostly expected that the medical doctor himself must be in a perfect and healthy state of body and mind simply because their QOL may affect the quality of medical treatment through effects of professionalism, commitment and attention to details (Dyrbye *et al.*, 2010).

However, despite the relatively high job prestige and status they apparently enjoy, doctors have been found to experience various kinds of stressors related to their work and workplace, which more oftenly affects their QOL. There have been several studies done in the past that have provided strong evidence to prove that medical practitioners, (especially those of the younger generation) undoubtedly experience a very much distressed QOL that eventually becomes a strong determining factor for poor work performance and the quality of medical care (Makames *et al.*, 2012; Deshpande *et al.*,

2013). Besides that, the recent increase in medical legality issues have further burdened the QOL of doctors especially of those from Asia, where culture and medical practise resonate and affect each other.

Consequently, the incidence of self-harm and suicide among young medical professionals has been reported to be showing an upward trend. Each year, more than four hundred medical doctors take their own lives, likely related to an increasing trend of poor QOL. Around 20% of them have reported using substances to help them cope with a fraction of them potentially having a substance misuse problem during their lifetime (Stehman *et al.*, 2019). Hence, addressing the QOL among this occupational group is a necessity of the hour.

1.2 Coping Strategies

Coping is more commonly known as a process of managing both external and internal demands that are appraised as taxing or exceeding the resources available to a certain individual (Folkman, 2013). Many preceding studies that have been done both locally and internationally have shown that coping plays quite a significant role in the adaptation to stressful and difficult life events (Lim *et al.*, 2010; Kaalra, 2016). A stressful situation may be considered a threat for a particular person but not necessarily for his/her neighbour. Two different people may become stressed by the same situation, but for different reasons. As we can all be potentially affected for one or the other reason, it is important that we choose a suitable coping strategy depending on our perception on the severity of the particular situation experienced.

In terms of occupational demands and stressors, Lazarus (1993) offered some of the earliest formulations of the concept of stress, which have since evolved into the

transactional model of stress and coping. This model emphasizes that the individual differences in outcomes, such as QOL, are strongly mediated by the process of coping. The gravity of QOL experienced in forms of thoughts, emotions, feelings as well as behaviours depends on appraisals of the situation which involves a judgement about whether the situational demands exceed resources available and the ability to cope if it does. Most of the publications in recent years have unanimously reported that good and positive coping mechanisms can counter the effect of occupational stress to a certain extent, alleviating an individual's QOL (Deshpande *et al.*, 2013).

Cognitive appraisal is a key element that helps to explain the individual differences in responses to such situations. Through 'primary appraisal,' an individual evaluates the significance of an event to determine whether it is stressful and threatening to his or her well-being. The individual then assesses the event's potential for creating harm, loss, or personal growth, a process that is called 'secondary appraisal'. Following the appraisal process is coping, which entails involuntary and conscious cognitive and behavioural efforts intended to reduce the perceived discrepancy between environmental demands and available personal resources.

However, primary and secondary appraisal cannot be considered as separate processes but are interdependent and influence each other. Although there is disagreement about the causal directionality and the relative importance of the concepts of appraisal and coping, most researchers agree that these are fundamental elements that lead to QOL (Paro *et al.,* 2010). With that being said, each person reacts differently towards burdens and challenges faced, depending on their own coping skills. Failing to cope adequately causes deterioration of academic and professional performances, diminishing their overall QOL.

1.3 Impacts of QOL within the medical field

Literature in the past have unanimously highlighted that the QOL experienced by an individual can be severely affected upon failure of adequate coping strategies applied promptly and appropriately (D' Amico *et al.,* 2013; Yehia *et al.,* 2016; Zvauya *et al.,* 2017). Such an effect on QOL may lead to several adverse and unfavourable complications. The table below, outlines in brief, the impacts of QOL experienced by medical personnel that have been documented in recent years.

Table 1.1: Impacts of QOL among medical personnel

Impact	Study
Almost 40% of doctors had intentions of early retirement due to their nature and pressure from work, as described by physical exhaustion as well as burnout that had affected their overall QOL	Brett *et al.,* 2010
Ineffective coping of stress among medical interns imminently influences their perceived QOL, which results in an increase of workplace accidents and decrease of workplace success	Sen *et al.,* 2010
As medical providers, the QOL of doctors is of high priority, as it can put them at risk of mood disorders as well as having irritable and berating behaviours that can lead to self-isolation and it's devastating consequences	Rosenstein and Michelle Mudge-Riley, 2010

Table 1.1 Continued

Impact	Study
Physicians who presented with an altered QOL due to symptoms of depression had reported more sleep problems, eating disorders and altered relationships with friends and family	Embriaco *et al.*, 2012
Occupational demands faced by nurses had led to hazardous impacts on their perceived QOL, resulting in seriously impaired provision of quality care and the efficacy of health services delivery as a whole	Sharma *et al.*, 2014
High workload, being an important contributor to the QOL of doctors and nurses was among the factors that had led to the highest rate of prescription errors	Salmasi *et al.*, 2015
Maladaptive coping skills and poor coping mechanisms by doctors is positively associated with their QOL, resulting in high job dissatisfaction and early retirement among them	Vijendren *et al.*, 2015
Due to exposure to a highly stressful work environment, the QOL of health care workers is highly compromised, putting them at greater risk of self-inflicted/accidental needle stick injuries	Gupta *et al.*, 2015
Exposure to demanding working environments without the adequate and appropriate use of coping mechanisms may inevitably cause detrimental effects on the QOL of healthcare providers, forcing them to change jobs or even quit their practice earlier than planned	Al Mazrouei *et al.*, 2015

1.4 Housemanship/Medical internship

Housemanship/Medical internship is perceived to be the most arduous, demanding and challenging period of one's medical career and is experienced as a trial by fire. It has been considered to be the best form of professional training for doctors, but at the same time, an extremely difficult chapter of their lives (Susmita *et al.,* 2013). As previously reported, it is a highly stressful course, characterised by frequent encounters with ill patients and diagnostic challenges besides having the opportunity to be involved in the psychological and social aspects of medicine as well as the desire to contribute to the community (Abdulghani *et al.,* 2014).

In Malaysia, the Medical Act 1971 defines 'Housemanship' / 'Internship' as a period of structured supervised practical training upon completion of medical school. In certain countries, undergraduate medical education ends with internship. However, in Malaysia, it is only imposed after graduation from medical school, and it is a period of tremendous changes. Section 13(2) of the Medical Act 1971 states that fresh medical graduates should undergo compulsory training for a duration of no shorter than 2 years to produce professional and patient-oriented doctors for the betterment of our public health services (Han, 2017).

Such major clinical posting rotations are to be carried out at designated government or teaching hospitals prior to registration with the Malaysian Medical Council. This intense 2-year apprenticeship training period involves supervised postings, of four months each, through different medical specialities which include Orthopaedics, General Medicine, Surgery, Accident & Emergency, Obstetrics & Gynaecology and Paediatrics.

It combines service and training roles formulated in such a way to ensure that these future physicians will be able to gain the appropriate and adequate knowledge, skill and experience as well as the correct attitude rather than merely employment and provision of compulsory services. Successful completion of this program will require specific documentation including satisfactory reports from both supervisors and head of departments which would then indicate that the house officer is now capable and eligible to serve independently.

Housemanship can be considered as a kind of experiential learning during which recent graduates take the opportunity to apply acquired knowledge and skills from their medical school training to real-world situations, and it provides an opportunity for them to integrate and consolidate their thinking and actions. Also, it bridges the gap between the medical school and being board eligible for medical specialty training. The overall goal is to produce knowledgeable, competent, and professional physicians who are equipped to care for the nations' sick community, provide advancements in medical science education and research, and most importantly, promote public health care.

1.5 Study Rationale

There are several reasons that justifies the nobility of this study. Firstly, this study is dedicated to the health of a specific occupational group, being house officers. This is a period of hospital based service and training of fresh graduates by close and stern supervision by their designated attending physicians and medical officers. These newly graduated doctors are expected to be directly responsible for the health and wellbeing of patients under their care. This is a markedly high difference compared

to the years spent in medical universities where they are not responsible for the management of patient's health and life itself. Therefore, in the hierarchy of a clinical management team, a house officer is found to be the one suffering from occupational stress the most (Vivekanandan *et al.*, 2016).

Undoubtedly, this will eventually affect their QOL. However, this is a crucial period in the journey of medical practitioners in which the transformation of an academic medical student into a responsible medical practitioner who is very well capable in carrying out the roles of a fully pledged doctor occurs. As they are the future of our nation's medical service, it is very important to acknowledge and thereafter protect their QOL. Their health has to be taken care of first, for them to care and treat others well as they are regarded as first line service providers in a hospital.

By doing so, we will be able to avoid certain negative outcomes (such as commuting accidents, needle stick injuries, wrongful prescriptions, medical errors etc.) resulting from poor QOL of these house officers. Hence, as previous studies have reported that negative life experiences of these young doctors can have a direct implication on the continuity of medical care for patients (Stehman *et al.,* 2019), recognizing the importance of their QOL will not only benefit them but will also have a positive impact on the outcome of patient's illness.

Secondly, most if not all previous studies done internationally (Yussuf *et al.,* 2013; Alosaimi *et al.,* 2015; Stehman *et al.,* 2019) and locally (Yusoff and Jie, 2011; Tan *et al.,* 2013; Al-Dubai *et al.,* 2013) amongst house officers had focused mainly on the psychological aspect (depression, anxiety, burnout) of health. The incidences of stress and stress related illnesses such as anxiety, depression and burnout among the medical professionals has been very well established by these researchers. It was then

concluded that the medical field is prone to exert an inadvertent negative effect on one's mental health with a high frequency of psychological impact that only increases by the day (Stehman *et al.*, 2019). However, these results do not reflect the complete QOL of a house officer, as there are other aspects that equally contribute to one's QOL. These compelling evidence and reports might be suggestive, even provocative, but fail to provide a broad portrait on how house officers actually perceive their QOL.

As not all the domains of QOL were assessed and reported, the results attained do not provide a complete insight into this matter. To the best of our knowledge, there seems to be a severe lacking and inadequacy of data pertaining to the QOL of house officers as a whole, which includes the other relevant aspects such as psychological health aspect, physical health aspect, social relationships and environmental health aspect.

Also, in recent years, there has been a substantial increase in the focus on measuring health beyond the traditional indicators such as mortality and morbidity in which QOL has turned up as a significantly important outcome which needs to be seriously considered to be included in future studies (Kate *et al.*, 2014). Great attention has been focused on many different populations ever since the concept of QOL became widely accepted by society. Hence, by conducting this study, we will be able to cover all other significant aspects of the QOL (which has been previously overlooked) of hospital house officers as well as to identify the factors associated with it.

Besides that, by identifying the factors associated to poor QOL, we can provide practical guidance and recommendations to help improve the situation. It is crucial that the factors possibly affecting and influencing the QOL of house officers are identified in order for the appropriate strategies to enhance it to be developed. The

success of such interventions targeted to improve the QOL of house officers can only be done upon a decent understanding of the complexity of their QOL and the situational factors that influence it. Being a house officer should not lead to experiencing detrimental effects on their health and QOL. Upon an intensive search, we have concluded that there are extremely limited (especially in our local setting) representative data on factors that may be associated with all the relevant and important aspects of QOL among house officers.

Therefore, with the adequate and relevant information attained from this study, specific guidelines can be formulated in the future to comprehend an issue such as this that will result in short- and long-term benefits towards these young doctors' QOL. The cascading impact on these individuals, thus empowered, will be good work–life balance, improved patient care and safety, a satisfying medical career whilst contributing maximally to the country's health care. Undoubtedly, this will allow them for a better and enhanced emotional maturing, while gradually being able to develop the ability to deal with the inevitable ups and downs of their medical profession.

As many studies have been conducted on stress and coping in the medical field, they have revealed several important research issues: to what extend does QOL among house officers fluctuate following occupational demands and what are the coping strategies mostly utilized to buffer its' affect? Hence, this study was carried out to provide a reliable insight as well as to address this matter. As reported by previous researchers, exposure to healthcare related stressors without adequate, appropriate and positive coping strategies may lead to psychological morbidity and a decline in the QOL (Bittner *et al.,* 2011; West *et al.,* 2011). Therefore, understanding the commonly used coping strategies among house officers can provide valuable insights for

designing interventions to improve their QOL. Uncovering information with regard to the relationship between different types of coping strategies and QOL may also assist in better understanding of the adjustment process among house officers.

There is also a need to understand the differences in the coping factors used by the house officers which is believed to help in designing specific management strategies. By doing so, we can identify what factors influence the ability of certain house officers to cope with occupational demands faced, while others succumb to it. Therefore, this study was designed to determine perceived QOL and coping strategies among house officers and compare them on several socio-demographic and clinical variables. As mentioned before, doctors themselves need to maintain an adequate composure in order to serve the society in a better way. Therefore, understanding their faulty coping and addressing them is required for the betterment of both themselves, as well as the public.

Furthermore, most studies conducted previously on coping strategies in the medical field have been carried out among medical students (George *et al.,* 2016; Al Zamil, 2017; Zvauya *et al.,* 2017). To the best of our knowledge, house officers are rarely the focus of such studies. Therefore, this study was carried out to fill in the information gap within this particular occupational group.

Apart from that, majority of the studies that have been conducted before among house officers only comprised them from a single establishment. These study subjects were either from a singular hospital or a singular department of a certain hospital (Tan *et al.*, 2013; Yusoff and Jie, 2011; Susmita *et al.*, 2013; Liu *et al.,* 2016; Vivekanandan *et al.,* 2016). Hence, although these studies provide constructive information and evidence, it did not suffice to be inferred to represent a state or a nation. However,

this study is planned to cover all hospital house officers in the entire state of Kelantan. It will help provide more valid and credible evidence that can be used for such inference and representation. Therefore, this study is intended to expand on the limited body of literature that is currently available. As it covers a wider geographical region, it will help us to not only understand the gross difference among QOL and coping patterns, but also to make the results more acceptable.

Apart from acquiring baseline data, we will be able to address this crucial yet somewhat overlooked issue that imposes boundless consequences to the medical field. In addition to that, we will also be able to determine the coping strategies used by these housemen that influence their QOL. We believe that the data obtained and reported here will be constituted as among the earliest large-scale sampling of local house officers' reports on their perceived QOL, coping strategies and their associated factors. It is an attempt to increase awareness about the QOL among house officers and their ways of dealing with it. Apart from being able to learn the current state of QOL and to guide the stakeholders with better coping skills, this study is also a long-overdue step in the path of addressing a doctor's health and well-being.

1.6 Research Questions

What is the quality of life and coping strategies among hospital house officers in Kelantan?

What are the factors associated with the quality of life of hospital house officers in Kelantan?

What are the factors associated with coping strategies among hospital house officers in Kelantan?

1.7 Research Objectives

1.7.1 General Objective

To study the quality of life, coping strategies and their associated factors among hospital house officers in Kelantan.

1.7.2 Specific Objectives

To determine the quality of life and coping strategies of hospital house officers in Kelantan.

To identify the factors associated with the quality of life of hospital house officers in Kelantan.

To identify the factors associated with coping strategies among hospital house officers in Kelantan.

1.8 Research Hypothesis

The quality of life of hospital house officers in Kelantan is associated with socio-demographic factors, occupational factors, personal factors and coping strategies.

The coping strategies among hospital house officers in Kelantan are associated with socio-demographic factors and occupational factors.

CHAPTER TWO

LITERATURE REVIEW

This chapter shall review and evaluate the available literature on the QOL and its associated factors among house officers both globally, as well as in our local setting. It is then followed by literature on the classification of coping strategies, how it mediates QOL and used within the medical field as well as the factors it has been reported to be associated with. It reflects background information, theoretical perspectives and methodological considerations of relevance. The conceptual framework of this study has also been included at the end of this chapter.

2.1 QOL among house officers

2.1.1 Global setting

Medical internship, also known as housemanship is the transition period from being a medical student to becoming a junior doctor, and it typically entails a considerable differ in QOL. As medical students, these individuals were required to simply be observers on clinical rotations and attend classroom lectures. However, as house officers, they bear responsibility for primary care and have to work first-hand with multidisciplinary teams of various specialties. This increased responsibility for patient care along with a highly stressful working environment have indeed altered the QOL of house officers (Brennan *et al.,* 2010).

There have been a considerable amount of published literature done around the world that have proven the significant psychological burden carried among house officers. House officers, who are persistently faced by demanding occupational factors are highly susceptible to depressive symptoms over time, which can lead to severe negative outcomes such as suicidal ideations. This particular component of QOL (psychological health) has been of high interest among most previous researchers in view of the fact that high levels of occupational demands and pressure inevitably leads to psychiatry morbidity such as anxiety and depression. This is because stress-induced activation of the hypothalamo-pituitary axis of the brain leads to changes in neurotransmitters such as serotonin, dopamine and nor-epinephrine, which results in psychopathology (Kumar *et al.*, 2013).

A study that was carried out in India quite recently had reported that QOL among house officers had actually declined during their internship (Susmita *et al.*, 2013). This study had observed a significant drop in the mean scores of all four domains of QOL, when compared prior to and after the commencement of internship. The greatest decline in QOL was seen among the female study subjects, with almost half of the study population (45%) perceived themselves to have neurotic traits since their mandatory two year service obligation as house officers. Also, a significant decline in all domains scores of 5 points or more was present among those who were posted to rural hospitals. It was then emphasized by the authors that such a decline in the QOL among house officers could indeed have been under reported as there was a possibility that most of the highly distressed house officers might have already quit the program, leading to an under-representation of the problem.

Later on, a similar prospective study that was conducted among 295 house officers recruited from medical colleges in Taiwan had yielded similar results (Lin *et al.*,

2019). Using the WHOQOL-BREF questionnaire, the QOL of these young doctors were assessed before and every three months during their period of housemanship. Here, a significant drop in the total score of QOL was reported from the baseline (60.0%) to the third month (53.7%) before remaining plateau at 55.0% after nine months. Furthermore, surgical (p=0.025) and medical postings (p=0.001) were reported to be significantly associated with lower and suboptimal QOL among the study participants. However, as there was no control group to examine whether the changes of QOL among these house officers were simply caused by the burden of housemanship, the authors had strongly recommended for more studies on QOL among this specific occupational group to be conducted.

An American study that was conducted quite recently among house officers rotating in the departments of Family Medicine, Psychiatry and Anesthesia revealed that approximately 80% of them experiencing burnout, with sub-scores of 81% for emotional exhaustion and 79% for depersonalization (Goldhagen *et al.,* 2015). It was then concluded that doctors working in environments where positive attributes (such as organisational functionality, individual satisfaction and having family-work balance) are absent or less prevalent may experience higher levels of stress and be at risk of experiencing burnout. The investigators of this study also found that female medical personnel had higher odds of having negative repercussions of burnout such as anxiety and depression, which was similar to previous study findings.

In the same year, a systematic search of EMBASE, ERIC, MEDLINE, and PsycINFO for studies with information on the prevalence of depression or depressive symptoms among house officers published between January 1963 and September 2015 was conducted (Mata *et al.*, 2015). This systematic review and meta-analysis of 54 studies involving 17 560 house officers demonstrated that the overall pooled prevalence of

depression or depressive symptoms was 28.8% (between 20.9% and 43.2% of interns screened positive for depression or depressive symptoms during housemanship, depending on the instrument used). It was also highlighted here that there was an increase in such a prevalence with increasing calendar year (slope = 0.5% increase per year). The median absolute increase in depressive symptoms among them was 15.8% (range: 0.3% to 26.3%) within a year of beginning their service as house officers.

In Taiwan, a nationwide survey was conducted in the year 2010 among 555 house officers rotating in the Community Medicine department, as they were perceived to have a lighter workload, due to the absence of the need for night duty. Despite that fact, it was reported that almost half of them (45%) had personal burnout, 52% of them had work-related burnout and 23% of them had patient-related burnout (Lue *et al.,* 2010). Hence, the authors had recommended that certain therapeutic strategies such as participation in panel and group discussions, encouraging self-care through proper rest and exercise, spending quality time with family and friends, being positive and maintaining a healthy balance in life should be adapted by these house officers in order to enhance their overall QOL.

Another research conducted among house officers in Hong Kong in the recent years, revealed abnormal levels of depression, anxiety and stress among them, which were 35.8%, 35.4% and 29.2% respectively (Lam *et al.,* 2010). This study showed that house officers had a significantly increased rate of psychological disorders, compared to that of the general public. However, the authors had concluded that despite it appearing to be a little unexpected, it is understandable, given the fact that stress faced by house officers comes from real life sufferings and major life events. Also, it was noted that the vast majority of participants were assessed through self-report

inventories that measured depressive symptoms, rather than gold-standard diagnostic clinical interviews for major depressive disorder.

In Saudi Arabia, a research carried out among 404 house officers from 3 different medical colleges' hospitals revealed that nearly 73% of them had admitted to be under stressful working conditions (Abdulghani *et al.,* 2014). Most of these junior doctors were affected by a severe level of stress (34.9%), followed by mild (19.3%) and moderate (18.8%) levels of stress. It was also reported that the levels of stress were markedly higher (84%) among female house officers in comparison with their male counterparts (66.5%), which compare favorably with the scores of the same cohort in studies done previously. Experience and exposure to high levels of stress as such, will indeed be reflected upon a wide range of negative impacts on the QOL of these young doctors.

Another study that was carried out in the North Riyadh comparing house officers and administrative employees in a tertiary hospital observed higher perceived work-related stress scores among the house officers (Alosaimi *et al.,* 2016). Approximately two-thirds (65%) of them had considered their jobs to be highly stressful, with most of them (62%) having thoughts of changing their jobs or specialty. The higher stress levels among house officers reflected the fact that they had to face more demanding work conditions on a daily basis, than that their administrative peers. As a result, approximately 4% of them had reported to have had self-harming thoughts, some nearly every day (2%) or several times in the preceding month (2%).

2.1.2 Local setting

Despite such studies being done and proven around the world, information of this sort is generally lacking in Malaysia, until quite recently. A study conducted among house officers working in Hospital Universiti Sains Malaysia, in recent years, showed that there was a very high percentage (31%) of distressed house officers, in which most of the stressors were identified to be related to a stressful working environment (Yusoff and Jie, 2011).

These results were relatively higher compared to the figure mentioned earlier, by the former Malaysian Director-General of Health, Tan Sri Dr Mohd Ismail Merican where every month, at least five doctors (20%) were found to be suffering from mental illnesses (Kristhnamoorthy, 2008). It is indeed an alarming figure as it gives rise to the concern that there are many, more than the perceived usual, unhealthy doctors in the service of the general community.

Since then, a similar study was conducted in a tertiary teaching hospital among 117 house officers. It was found that the prevalence of burnout among them was 26.5% (Zuraida and Zainal, 2015). The interpretation of results from this study also found that a shorter experience in housemanship (less than six months) and being posted to Accident & Emergency unit were associated with a higher mean score of burnout among these junior doctors. As a consequence to this, the general perception of the house officers on their health and QOL is markedly diminished. However, as these results were abnormally higher than of others, it was recommended by the authors for further probing in this field, as a fair comparison of results can only be made if the conceptualization of burnout used in comparable studies is similar and standardized.

Another study carried out in the year 2010 among house officers of Universiti Kebangsaan Malaysia Medical Centre, showed a high percentage (60.7%) of them had anxiety symptoms of which 13.5% were mild, 28.1% were moderate and 19.1% were severe or very severe (Tan *et al.,* 2013). A strong association between anxiety and work related issues such as having work-family conflicts, performance pressure as well as poor relationships at work which resulted in job dissatisfaction were found in this study. Such high levels of anxiety among these medical first liners inevitably affects their QOL and management of patient care. It was then recommended that all responsible stakeholders to institute effective administrative strategies and to design and formulate evidence-based interventions that will help in reducing morbidity, and improving the QOL of the house officers as well as the quality of health care systems in Malaysia as a whole.

A cross-sectional study that was conducted among 205 house officers at the Tengku Ampuan Rahimah Hospital (HTAR) Klang, in recent years, revealed that almost 40% of them had experienced burnout during their service (Al-Dubai *et al.,* 2013). There was also a significant association between posting rotations and emotional burnout among these house officers, in which those rotating in Obstetrics & Gynaecology department had higher scores of burnout compared to those who were posted to Medical, Orthopaedics, and Surgical departments. Finally, the authors concluded that having appropriate mentorship, sufficient motivation, and fair assessments during housemanship play a significantly important role in preventing emotional burnout among house officers.

As for East-Malaysia, a study done recently among 91 house officers in Kota Kinabalu, Sabah revealed the prevalence of stress, anxiety and depression among those junior doctors were 57.1%, 63.7%, and 42.9% respectively. Approximately half

of them (50.5%) were unsatisfied with their job and had thought of quitting at least once during their term serving as a house officer, increasing their risk of stress (3.64 times) and depression (8.26 times). Sixty seven percent of them had felt that they have been overworked, while 30.8% of them felt that they were being bullied. However, the duration of work experience (in months) was found to be negatively correlated, having a protective effect for stress, anxiety and depression amongst them (Shahruddin *et al.,* 2016). Finally, the authors suggested for swift identification of factors that negatively affect the mental health of house officers as it may help inform the development of effective interventions for the reduction of stress, anxiety and depression among them.

However, as mentioned in the earlier parts of this chapter, previous researches were mainly consolidated to the psychological health domain of QOL among house officers. Thus, these studies had not paid enough attention and somehow managed to overlook the other equally relevant and contributing domains to one's QOL, which includes the psychical health, environmental health and social relationships domains. As has been mentioned by the WHO, all the aforementioned domains pay an equitably vital and important role in determining QOL as a whole (WHO, 1998).

Furthermore, from the intensive search on previous literature, we identified studies on QOL that have been carried out in the recent past were mostly among elderly (Khan and Tahir, 2014), medical students (Zhang *et al.,* 2012; Naseem *et al.,* 2016) and those with specific health morbidities (Lucas-Carrasco *et al.,* 2011; Van Esch *et al.,* 2011). This makes it incomparable as these studies did not a share a similar population of interest as of ours. Due to these reasons, we were unable to discuss previous literatures on QOL by respective domains among house officers.

2.2 Factors associated with QOL among house officers

2.2.1 Factors associated with psychological health domain of QOL among house officers

As mentioned before, most previous studies have observed preference on the psychological health domain of QOL among house officers. Psychiatric morbidity among house officers such as Anxiety, Depression and Burnout have been extensively studied by authors both locally and internationally to identify the possible factors associated to them. The table below provides a brief outline of the factors that were found to be associated with the QOL among house officers from previous literature (only comprising of a single aspect: psychological health domain):

Table 2.1: Factors associated with psychological health domain of QOL among house officers

Psychological Domain	Associated Factors	Location	Study
Depression, Anxiety	**Occupational factors** -Long working hours -Work overload	Hong Kong	Lam *et al.*, 2010
Depression	**Occupational factors** -Work overload **Socio-demographic factors** - Female gender	America	Sen *et al.*, 2010