Psychological Morbidities Amongst House Officers in Kuching, Sarawak, Malaysia

by

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Declaration

I hereby declare that the work of this thesis is entirely my own except for quotations and summaries which have been duly acknowledged.

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Certification

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LIST OF ABBREVIATIONS

DASS	Depression, anxiety and stress scale
CISS	Coping inventory in stressful situations
USM	Universiti Sains Malaysia
NMRR	National Medical Research Registry
CI	Confidence interval
OR	Odds Ratio
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
US	United States

LIST OF APPENDICES

ABSTRAK

Pendahuluan: Morbiditi psikologi adalah lazim di kalangan kakitangan kesihatan. Ini termasuk pegawai perubatan siswazah yang sedang melalui peralihan dari seorang pelajar perubatan ke doktor sebenar. Pada masa ini, mereka akan mengalami perubahan emosi dan mungkin menunjukkan ciri-ciri kemurungan, kerisauan dan tekanan

Objektif: Kajian ini bertujuan menentukan kadar kemurungan, kerisauan dan tekanan serta mekanisme mengatasi morbiditi psikologi tersebut di kalangan pegawai perubatan siswazah di Kuching, Sarawak. Faktor-faktor sosiodemografik termasuk usia, jantina, bangsa, 'posting' semasa, status perkahwinan, asal,dan pengajian tempatan/luar juga telah diambil kira.

Methodologi: Kajian ini dijalankan di kalangan 227 pegawai perubatan siswazah di Hospital Umum Sarawak, Kuching, Sarawak dalam tempoh 3 bulan. Maklumat sosiodemografik seperti umur, jantina, taraf perkahwinan, 'posting', tempoh 'posting', asal dan tempat pengajian dikaji.Kajian DASS dan CISS juga digunakan untuk mengkaji tahap kemurungan, kerisauan dan tekanan serta mekanisme mengastasinya.

Keputusan: Secara keseluruhannya, kadar kemurungan, kerisauan dan tekanan adalah tinggi di kalangan pegawai perubatan siswazah di Kuching, Sarawak. Kadar kerisauan adalah tertinggi pada tahap 50%, diikuti dengan kadar tekanan 43% dan kemurungan 42%. Tiada perbezaan ketara antara faktor demografik dengan

kemurungan, kerisauan dan tekanan.Didapati bahawa terdapat kaitan antara graduan tempatan dan luar negara dimana graduan luar negara didapati mempunyai kadar kemurungan, kerisauan dan tekanan yang lebih tinggi ($p<0.001$).Didapati juga ada perkaitan ketara antara mekanisme emosi dengan tahap kemurungan, kerisauan dan tekanan ($p<0.001$), cara menghadapi tekanan berasaskan tugas dengan kemurungan ($p=0.04$), tekanan dan distraksi ($p=0.02$) dan mekanisme pengelakkan sosial dengan kemurungan ($p=0.03$).

Kesimpulan: Prevalens kemurungan, kerisauan dan tekanan yang tinggi di kalangan pegawai perubatan siswazah di Kuching, Sarawak. Pada masa yang sama tiada perkaitan ketara antara faktor sosiodemografik dengan kadar kemurungan, keriasauan dan tekanan. Didapati graduan luar negara juga mempunyai kadar kemurungan, kerisauan dan tekanan yang lebih tinggi berbanding graduan tempatan dan cara menghadapi tekanan melalui emosi dilihat lebih tinggi di kalangan yang mempunyai kemurungan, kerisauan dan tekanan.

ABSTRACT

BACKGROUND: Psychological morbidities are common amongst healthcare professionals. This includes junior house officers who are just transitioning from being a medical student to a doctor. They undergo many stressors during this period and hence might suffer from higher psychological morbidities such as depression anxiety and stress.

OBJECTIVE: The purpose of this study is to determine the prevalence of psychological morbidities such as Depression, Anxiety and Stress and their coping mechanisms in a population of house officers in Sarawak General Hospital, Kuching, Sarawak. The socio-demographic factors were also evaluated.

METHOD: This is a cross-sectional study involving 227 house officers in Sarawak General Hospital, Kuching, Sarawak over a period of 3 months. The socio-demographic factors including age, sex, marital status, current posting, duration of posting, place of graduate and state of origin were evaluated. The DASS (depression, anxiety and stress scale) and CISS (coping inventory in stressful situations) were completed to assess the psychological morbidities and their corresponding coping mechanisms.

RESULTS: The overall prevalence of depression, anxiety and stress amongst house officers in Sarawak General Hospital is high. The highest psychological morbidity noted is anxiety, which is 50% of the population, followed by stress 43% and depression 42%. There is no significant association between socio-demographic

factors such as gender, marital status and state of origin with depression, anxiety and stress. However there is a significant association between local and foreign graduates whereby foreign graduates show a higher prevalence of depression, anxiety and stress ($p<0.001$). There is significant association between emotion oriented coping and depression, anxiety and stress ($p<0.001$). There is also significant association between task oriented coping and depression ($p=0.04$), distraction oriented coping and stress ($p=0.02$) and social diversion oriented coping and depression ($p=0.03$)

CONCLUSION: There is a high prevalence of depression, anxiety and stress amongst house officers in Kuching, Sarawak with no association to the socio-demographic factors. However, there is a significant association between local and foreign graduates with the prevalence of DASS and higher prevalence of DASS is seen in emotion oriented coping.

CHAPTER 1

Introduction

Healthcare is a field, which deals with matters of life and death in a daily setting. Because of this, working in a healthcare environment can be stressful. These stressful situations are further compounded by the long working hours, lack of staffing and an expected level of performance by the peers and supervisors. Hence, psychological morbidities seem to be higher amongst healthcare workers.

This situation is especially true when junior doctors first join the fold. The transition from being a medical student to a junior house officer itself is a stressful experience. The unfamiliar roles and responsibilities suddenly becomes a burden to them. The long and odd working hours as well as the unfamiliar environments in which they are put into further exacerbates these.

In Malaysia, the transition from a medical student to a registered and qualified medical officer takes approximately 2 years. After graduating from their respective universities, the medical student first applies to the Public Services Department, Malaysia and Ministry of Health, Malaysia in which they are assigned various hospitals. They will then join these hospitals as house officers (Wooijdy, 2008). These hospitals are teaching hospitals where there will be specialists to supervise these new house officers.

The new house officers are then required to rotate around 6 departments each consisting of 4 months to make up a total of 24 months. The mandatory departments in which they are required to join is Medical, Surgical, Paediatrics, Obstetrics and Gynaecology, Orthopedics, Accident & Emergency, Anesthesiology and others. During this period, they are required to learn, observe and perform various tasks required as a house officer to enable them to function independently when they become medical officer (Wooijdy, 2008).

As of 2014, there are a total of 141 government hospitals, 1039 clinics and 28949 doctors (Ministry of Health, 2014). The ratio of doctors to the population is currently at 1:633 (Ministry of Health, 2014). Malaysia is currently targeting a doctor to population ration of 1:400 by the year 2020 (Times, 2012). With this in view, there will be an increase in the training of these junior doctors, which is also known as housemanship.

The training methodologies for these house officers were recently introduced. This is to cater to this overwhelming increase in number of trainee doctors or house officers. The original ‘on-call’ system was abolished and the ‘shift’ system was introduced (Selvadurai, 2012). This new system was to give the new house officers a balanced and more conducive learning experience. However, as with all new systems, there are teething problems. These teething problems might ultimately lead to stress and might precipitate various other psychological co-morbidities.

CHAPTER 2

Literature Review

Psychological morbidities are common amongst healthcare professionals. These psychological morbidities include depression, anxiety and stress. Features to suggest depression are self-disparaging, dispirited, the feeling of that life is of no value, pessimistic, unable to feel enjoyment, inability to become involved and lacking initiative. In anxiety, they usually exhibit apprehension, trembling, multiple somatic features such as dryness of the mouth, breathing difficulties, palpitations and persistent worrying. In stress, subjects usually show features of being over-aroused, tense, inability to relax, touchy, temperamental, irritable, easily startled, nervy and intolerant to delay or interruption (Lovibond, 1995).

These symptoms are ever present in all levels of society. However, there are particularly more prominent in the healthcare fraternity especially doctors. Even as they begin their journey as full-fledged doctors, as medical students, they already exhibit some high levels of psychological morbidities. It is reported in Nepal that up to 21% of the medical students suffer from a form of psychological morbidity (Sreeramareddy, Shankar, & Binu, 2007). In an earlier study, up to 31% of medical students in the United Kingdom exhibit features of emotional disturbance (Firth, 1986). A later study, which was published in the United States, it demonstrated that up to 57% of medical students documented levels of stress or distress which 23% showing clinical levels of depression (Mosley et al., 1994). In the Indian scene, up to

73% of medical students perceived stress from various factors (Supe, 1998). In Malaysia, Sherina published a report, which showed that up to 41% of medical students in a local university exhibited psychological stress (Sherina, Rampal, & Kaneson, 2004). A systemic review performed in 2004, revealed that there is a high majority of medical students in the US has a degree of psychological morbidity (Dyrbye, Thomas, & Shanafelt, 2006). Even in an African country such as Nigeria, it is noted that medical students were subjected to a high level of stress and psychological issues (Omigbodun et al., 2006).

When these data is extrapolated to full-fledged doctors, the results are almost similar. It is noted that up to 22% of the doctors in an Italian hospital exhibited a certain degree of psychological morbidity (Grassi & Magnani, 2000). Caplan also documented that up to 47% of hospital specialist and consultants showed high levels of stress and up to 29% showed clinical symptoms (Caplan, 1994). A study conducted locally in one of the university hospitals showed that up to 34% of the doctors have a certain degree of psychological stress (Zainal & Dasen, 1999). In the UK, Firth-Cozens documented that the level of psychological stress has maintained at a rate of approximately 28% when observed longitudinally throughout the years (Firth-Cozens, 2003). A Turkish study noted that doctors in the emergency department had 29% frequency of depression and up to 28% frequency for anxiety (Erdur et al., 2006). A Yemeni report in 2012 indicated a prevalence of psychological morbidity as high as 68% amongst the doctors there (Dubai & Rampal, 2012).

Of course, sandwiched between the medical student to a fully registered medical officer lies the domain of a house officer or ‘junior doctors’. Certainly the stresses and

psychological morbidity that is prevailing during their course of their studies would've been described or exhibited during the period of their internship or housemanship. In an early study in the UK, it was noted that there is a 20% higher frequency of depression in house officers as when compared to the medical students (Firth-Cozens, 1987). A Greek study around that time also noted that Greek junior doctors also exhibited a higher level of stress (Antoniou, Davidson, & Cooper, 1986).

The psychological distress endured by young or junior doctors were further proven by a study in 1997 amongst junior doctors in the UK (Baldwin, Dodd, & Wrate, 1997). Across the years, it is noted that stress levels remain high in junior doctors based on a study in Germany (Ochsmann, Lang, Drexler, & Schmid, 2011). The results were also almost replicated by another study in Germany, whereby junior doctors exhibited higher incidences of depression (Weigl, Hornung, Petru, Glaser, & Angerer, 2012). In Kelantan, Malaysia, it is noted that up to 56% of house officers reported stress, a staggering 57% reported levels of anxiety and 44% reported levels of depression (Husain, 2011). In another study in 2011, it is documented that a cohort of house officers in Kelantan, Malaysia reported to be up to 31% (Yusoff, Tan, & Esa, 2011).

It is noted when psychological morbidities are compared amongst the genders in house officers or junior doctors, most of the studies as mentioned above does not show any gender particular gender more prevalent in developing these symptoms.

There are limited studies however to establish the prevalence of psychological morbidities amongst married and unmarried doctors.

Coping skills play an integral part in the management of stress and other psychological issues in an individual. Hence in the context of a junior house officer, it is imperative the coping skills of these house officers are optimal as to deal with the ongoing stressors of being at work. It is reported that with higher emotional distress, there is a higher maladaptive coping in a cohort of medical students (Mosley et al., 1994; Sreeramareddy et al., 2007). These maladaptive coping skills might extend beyond the years of being a medical student all the way to housemanship. Interestingly, it was demonstrated that house officers in Hospital USM, Kelantan, Malaysia tend to cope based on emotion (Yusoff et al., 2011).

There are many coping assessment tools currently present. Amongst them are the COPE inventory and the Coping Inventory in Stressful Situation (CISS). All coping inventory assesses 2 main domains which are problem or task focused and emotion coping. In the COPE inventory, the 2 main domains are further divided into 15 dimensions(Schwarzer & Schwarzer, 1996), whereas the CISS assesses coping in 3 main domains such as task oriented, emotion oriented and avoidance (Endler & Parker, 1990).

As this is the first study assessing the coping mechanism amongst the house officers in Kuching, Sarawak, the CISS inventory was chosen. It is a simpler and broader inventory based on stable factors that were replicated across various samples (Schwarzer & Schwarzer, 1996).

Task oriented coping refers to coping methods where problem solving strategies are used to solve an ongoing problem or stressor. This method includes ways to minimize

the problem by cognitive restructuring or ways to alter the landscape of the problem to minimize its direct effects.

In emotion oriented coping, it basically means using self oriented emotional expression, which is to directly reduce the effects of an ongoing stressor. These emotional reactions include being angry, self blame, becoming very ‘tensed up, self-pre-occupation and daydreaming. Occasionally, emotion oriented coping itself generates more stress than reducing it.

Avoidance oriented coping is another method of coping in various situations. The basic core of this method is to avoid the stress altogether. This can be further described as either distraction, whereby the individual engages in another form of activity as a way to ‘distract’ the attention away from the current ongoing stressor. Another method of coping is social diversion. In social diversion, the individual having these stressors cope by preforming social oriented activities, like going out with friends and etc.

It is crucial to note that these coping methods mentioned above other than task oriented coping are not optimal as it only delays or prolongs an individual from directly dealing with the ongoing stressors or problems. Hence it is also interesting to note the association between the psychological morbidities with these various coping methods.

CHAPTER 3

3.1 General objectives

To determine the prevalence of psychological morbidities (depression, anxiety and stress) as well as the coping skills in a population of house offiers in a teaching tertiary centre in Kuching, Sarawak.

3.2 Specific objectives

1. To determine the prevalence of psychological morbidities among house officers in a teaching tertiary centre in Kuching, Sarawak

2. To determine the association of socio-demographic factors and psychological morbidities among house officers in a teaching tertiary centre in Kuching, Sarawak

3. To determine the association between coping skills and psychological morbidities among house officers in a teaching tertiary centre in Kuching, Sarawak

3.3 Research Questions

1. What is the prevalence of psychological morbidities amongst house officers in Kuching, Sarawak

2. Is there a significant association socio-demographic factors and psychological morbidity

3. Is there a significant association between coping methods and psychological morbidities

CHAPTER 4

Methodology

4.1 Study design

This was a cross sectional study conducted in Sarawak General Hospital, which is one of the training hospitals in East Malaysia. Data collection among house officers was completed within three months which included socio-demographic characteristics, levels of depression, anxiety, stress well as their coping mechanisms.

4.2 Research setting

The study was conducted in Sarawak General Hospital. This hospital is a training hospital for house officers in Kuching, Sarawak. It is a 765 bedded hospital. It is the only teaching hospital in the state capital of Kuching. Every year, house officers from various states of Malaysia are posted to Sarawak General Hospital for housemanship. They consist of those graduating from both private and government medical colleges as well as abroad.

Hence Sarawak General Hospital would be able to provide a good and myriad representation of house officers in Malaysia. As previously mentioned, all house officers are required to complete 2 years of posting. These postings are Medicine, Surgery, Obstetrics and Gynecology, Paediatrics, Emergency and Trauma as well as Orthopedics. Currently there are no sequence in whichever departments the

house officers have to complete. Upon completion of housemanship, the house officers are then put in various other departments depending or need or transferred out to the peripheries.

Currently, Sarawak General Hospital has a population of approximately 300 house officers.

4.3 Study population

This study was conducted on house officers who fulfilled the inclusion criteria currently in various postings in Sarawak General Hospital. There are 300 house officers currently in Sarawak General Hospital.

4.4 Sampling Method

The sampling method used in this study was universal sampling method. House officers who fulfilled the inclusion criteria were given a self-administered DASS (Depression, Anxiety and Stress Scale) questionnaire and CISS (Coping Inventory for Stressful Situations) questionnaire to be completed and returned. They were also required to provide their social-demographic data, which were incorporated into the questionnaire.

4.5 Sampling frame

Data collection was done among house officers in Sarawak General Hospital within a 3-month period from May to July 2015.

4.6 Inclusion criteria

4.6.1 Malaysian trainee doctors undergoing training in Sarawak General Hospital

4.6.2 House officers who consented for the study

4.7 Exclusion criteria

4.7.1 Non-Malaysian house officers currently working in Sarawak General

4.7.2 Hospital House officers who did not consent for the study

4.7.3 Any house officers who, have a diagnosed psychiatric condition or is under follow up with the psychiatric department.

4.8 Sample size

Sample size was calculated using Epi Info version 7 software using the single proportion formula. Based on a population of 300 house officers, and using the highest prevalence rate of 57% in the anxiety domain (DASS) from a previous local study (Husain, 2011). At a confidence level of 95% the minimum number of samples required is 168 (Islam, Aponte, & Brown, 2015). However, factoring a possible dropout rate of 20%, the required number of total samples required is 211.

$$n = \left(\frac{z}{\alpha}\right)^2 p(1-p)$$

z = the probability distribution (1-α)

α = level of significance (type I errror)

p = the anticipated proportion

Δ = the precision from the anticipated proportion

4.9 Study instruments

4.9.1 DASS 42 (Depression, Anxiety and Stress Scale)

The DASS 42 is a 42 item self-rated questionnaire designed to measure the severity of a range of symptoms common to depression, anxiety and stress. It measures these 3 domains concurrently. There is also a short form version of this scale (DASS 21) also measuring these 3 domains, however the DASS 21 subscale taps a more general dimension the psychological morbidities. The DASS 42 gives more reliable scores and more information regarding the specific symptoms, therefore the DASS 42 was preferred (Lovibond, 1995).

In the depression domain, the scale assesses dysphoria, hopelessness, devaluation of life, self-depreciation, lack of interest/ involvement, anhedonia and inertia.

In the anxiety domain, the scale assesses autonomic arousal, skeletal muscle situational anxiety and subjective experience of an anxious effect.

As for the stress domain, the scale assesses difficulty relaxing, nervous arousal, ease of being upset or agitated, irritable/over-reactive and impatient.

DASS is often used for screening emotional disorders (e.g., adjustment disorders, major depression, anxiety disorder, or dysthymia).

In completing the DASS, the individual is required to indicate the presence of a symptom over the previous week. Each item is scored from 0 (did not apply to me at all over the last week) to 3 (applied to me very much or most of the time over the past week)

The essential function of the DASS is to assess the severity of the core symptoms of Depression, Anxiety and Stress. The DASS 42 has a very good reliability as the Cronbach's alpha is 0.91 for depression, 0.84 for anxiety and 0.90 for stress (Crawford & Henry, 2003; Lovibond, 1995).

Although DASS may contribute to the diagnosis of anxiety or depression, it is not designed as a diagnostic tool. The DASS is not meant to replace a comprehensive clinical interview.

The scoring for the DASS questionnaire is divided to 5 categories according to the various scales (Lovibond, 1995), thus scores 10,8,14 and above for depression, anxiety and stress respectively are categorized as present for the studies psychological morbidities.

Table 4.1 DASS severity rating

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely severe	>28	>20	>34

4.9.2 CISS (Coping Inventory for stressful situations)

The Coping Inventory in Stressful Situations (CISS) is a self-rated questionnaire. It provides a multidimensional approach in exploring coping mechanisms. CISS consists of 48 items and is used for predicting the various coping mechanisms used. There are 2 versions of the CISS – adult or adolescent. Using CISS, coping styles can be classified to 3 categories which is Task oriented (16 items), emotionally oriented (16 items) and avoidance oriented (16 items). For avoidance, it is further sub classified to 2 sub-scales which is distraction (8 items) and social diversion (8 items). CISS is both validated in the English and Malay form. However, only the English version would be used. The rights to use and publish the questionnaires was purchased through Multi Health Services Inc. (MHS) (Endler & Parker, 1990). The CISS inventory was chosen

The questions are rated with a 5 point rating frequency scale ranging from (1) 'not at all' to (5) 'very much'. The higher the scoring, of any of the 5 mentioned subscales, there is a greater degree of coping activity for that individual in the corresponding coping mechanism or dimension. In this questionnaire, the alpha co-efficiencies are highly satisfactory across the normative groups (0.69-0.92) for every measured subscale. The CISS inventory was decided as it provides a simpler broader classification of coping as compared to it's comtemporaries because of it's satisfactory psychometric properties, stable factor structures and good cross validation.

4.9.3 Socio-demographic data

The socio-demographic component was added to the CISS and DASS and was filled by the respondents. Additional data such as current posting, duration of housemanship completed and graduating medical college were included. The questionnaires were coded to identify the respondents.

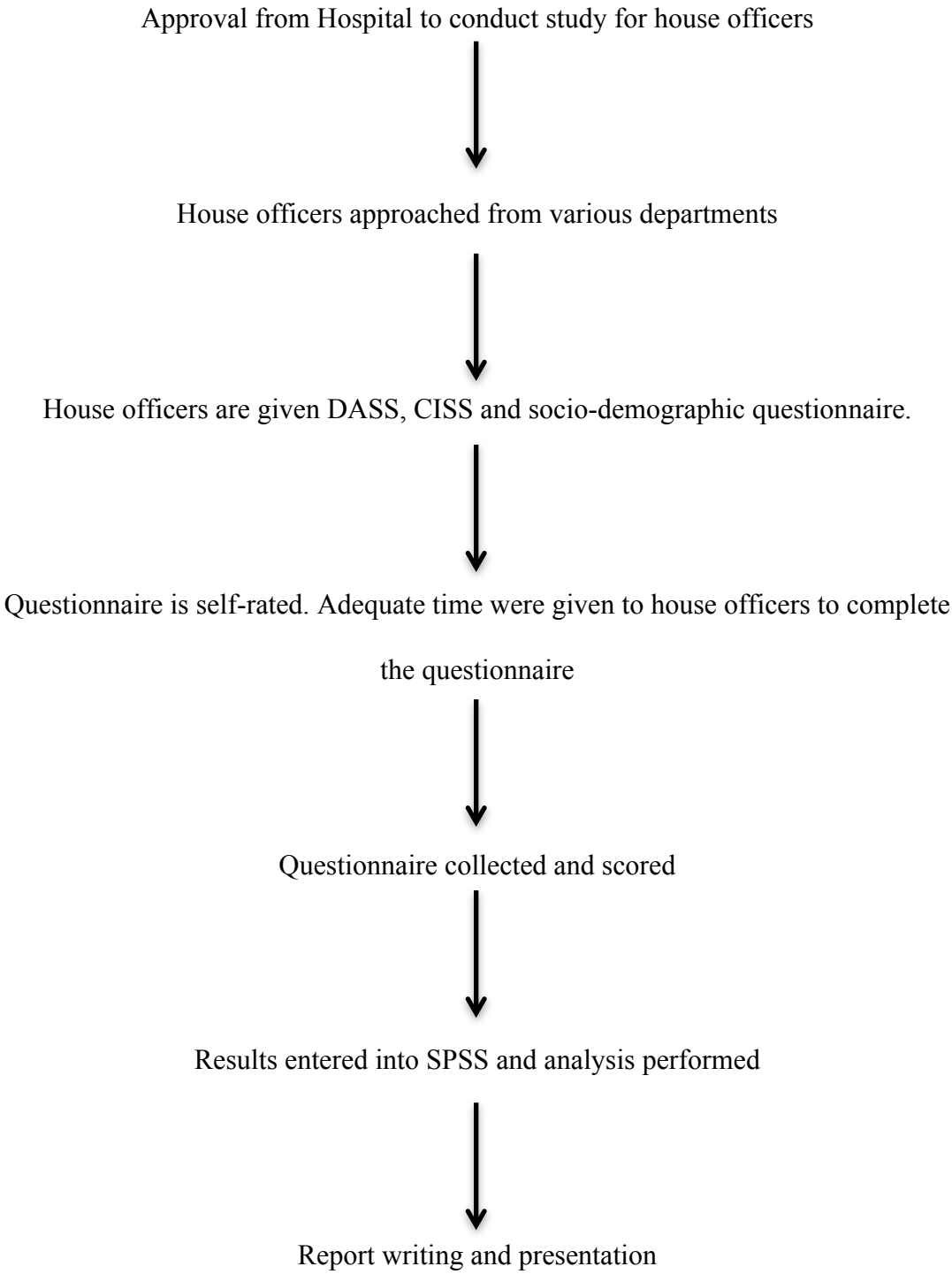
Study Variables

1) Age
2) Gender
3) Race
4) Current posting
5) Duration of housemanship
6) Graduating medical schools
7) Marital status
8) Place of origin

4.10 Study procedure

House officers working in Sarawak General Hospital attached in the various departments were approached. The purpose of the interview and questionnaire was explained and elaborated. Those interested were asked to complete a consent form. They were given questionnaires to fill. Ample time was given to fill these questionnaires and majority completed within 15 minutes. Any house officers who scored significantly in the questionnaires were referred to the psychiatric department for further evaluation and assessment.

4.11 Flow Chart of study



4.12 Statistical analysis

Data analysis was performed with SPSS (statistical package for social studies) and the appropriate statistical tests were used to analyze the data collected. The calculated outcome variables were presented in mean (SD) and frequency (%) whenever possible. The association between the presence of depression, anxiety and stress, and the other studied variables were analysed using Chi square analysis. Therefore the studied psychological morbidities were analysed as 2 outcomes whereby scores from 10, 8, 15 and above for depression, anxiety and stress respectively were present in the studied population (Lovibond, 1995).

Multivariable analysis using logistic regression (Table 5.7, 5.8, 5.9) was performed to account for confounding factors. Analysis of Covariance (ANCOVA) (Table:5.14, 5.15, 5.16, 5.17, 5.18) was performed to determine the association of DASS with CISS accounting for the various confounding factors. This study would consider a ‘p’ value of less than 0.05 significant with a confidence interval of 95%.

4.13Ethical consideration

The ethics committee from USM (University Sains Malaysia) was consulted for approval for this study prior to commencement. Further approval from the National Medical Research and Ethics committee was also sought as the samples were acquired from Ministry of Health, Malaysia hospitals. Only consenting participants would be assessed. Any participants with a significant

score would be further evaluated or referred to the relevant department for further screening or counseling.

4.14 Operational Definition

- House officer - a Malaysian graduate medical doctor undergoing training in a tertiary teaching hospital

- Race – categorized to 7 categories consisting of the main races in Malaysia which includes Malay, Indian, Chinese and 2 more races localized to east Malaysia which are the Bumiputera Sarawak and Bumiputera Sabah.

    - Bumiputera Sarawak consists of all the indigenous races of Sarawak which includes Iban, Bidayuh, Melanau, Orang Ulu.
    - Bumiputera Sabah consists of all the indigenous races of Sabah which includes the Kadazan, Murut, Bajau, Dusun and others.

- Duration of posting – duration of a house officer in a current posting rounded to the nearest month.

- Current posting - the department in which the house officer is currently working in at the time of answering the questionnaire.

- Graduating university – university from which the house officer graduated from, categorized to either local university which includes the various twinning programs and foreign graduates from universities across the world.

- Depression - depression domain in DASS scores more than 9

- Anxiety – anxiety domain in DASS scores more than 7

- Stress – stress domain in DASS scores more than 14

- DASS – Depression, Anxiety and Stress Scale

- CISS – Coping Inventory in Stressful Situations

CHAPTER 5

Results

5.1 Socio-demographic profiles

Two hundred and twenty seven questionnaires were returned. Of that population, the mean age was 26.1 years (SD=1.2). They consist of 100 (44.1%) males and 127 (55.9%) female respondents. Majority of the respondents were unmarried 88.5% versus married 10.1%. The respondents came from various departments such as surgical 45(19.8%), paediatrics 42(18.5%), orthopedics 42(18.5%), medical 36(15.9%), obstetrics and gynaecology 30(13.2%), emergency and trauma 20(8.4%) and others 7(2.3%). Of the total respondents, 116(52.5%) graduated from local universities versus 104(47.1%) whom graduated from foreign universities. 113(49.8%) of the respondents were from Sarawak whereas the remaining 114(50.2%) house officers originate from other states from Malaysia. The racial demographics include 125(55.15) Chinese, 60(26.4%) Malays, 18(7.9%) Indians and 21(9.3%) and Bumiputera Sarawakians.

Table 5.1 Socio-demographic profiles (N=227)

Sociodemographic characteristics	n	%	Mean (SD)
Gender			
Male	100	44.1	
Female	127	55.9	
Age			
23-25	76	33.5	
26-28	143	63	26.08(1.91)
29-30	8	3.5	
Ethnicity			
Malay	60	26.4	
Chinese	125	55.1	
India	18	7.9	
Bumiputera Sarawak	21	9.3	
Bumiputera Sabah	2	0.9	
others	1	0.4	
Origin			
Sarawak	113	49.8	
Non-Sarawak	114	50.2	
Marital Status			
Unarried	202	89.8	
Married	23	10.2	
Graduate			
Local	117	51.5	
Foreign	104	45.8	

Table 5.2 Socio-demographic profiles (posting) (N=227)

Posting	n	%
Medical	36	15.9
Surgical	45	19.8
Obgyn	30	13.2
Paediatrics	42	18.5
Accident & Emergency	20	8.8
Orthopedics	42	18.5
Anesthesiology	5	2.2
Others	7	3

5.2 Prevalence of depression, anxiety and stress amongst house officers

It is noted that 41.9%(n=95) demonstrated positive scores of depression whereby up to 14.1%(n=32) showed severe to very severe scores of depression. As for the anxiety scores, it is shown that 50%(n=113) demonstrated positive scores for anxiety whereby 23%(n=113) showed severe to very severe scores. Stress levels are also significant amongst the respondents, with somewhat similar proportions to depression where only 42.7%(n=96) showed positive levels of stress. Only 9.8%(n=22) gives a severe to very severe scores for stress.

Table 5.3 Prevalence of psychological morbidity amongst house officers

(N=227)

Psychological morbidity	n	%
Depression		
No	131	58
Yes	95	42
Anxiety		
No	113	50
Yes	113	50
Stress		
No	129	57.3
Yes	96	42.7

5.2.1 Severity of Depression, Anxiety and Stress amongst house officers

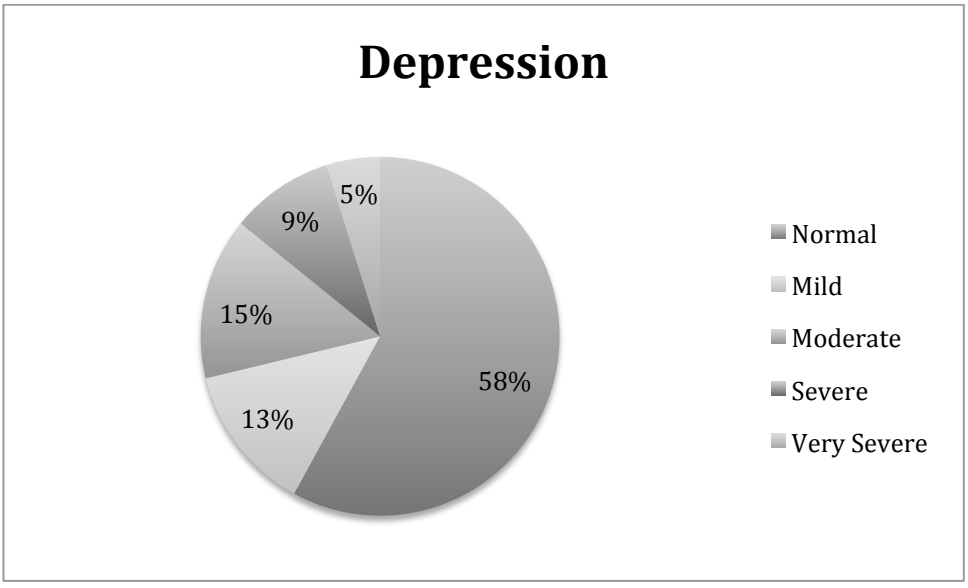


Figure 5.11 Severity of anxiety amongst house officers

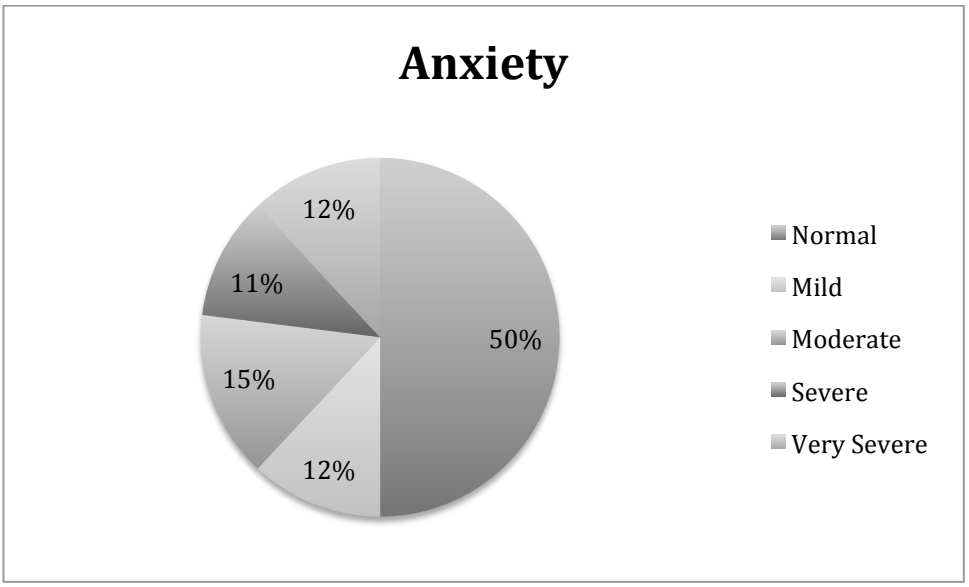


Figure 5.12 Severity of Anxiety domain amongst officers

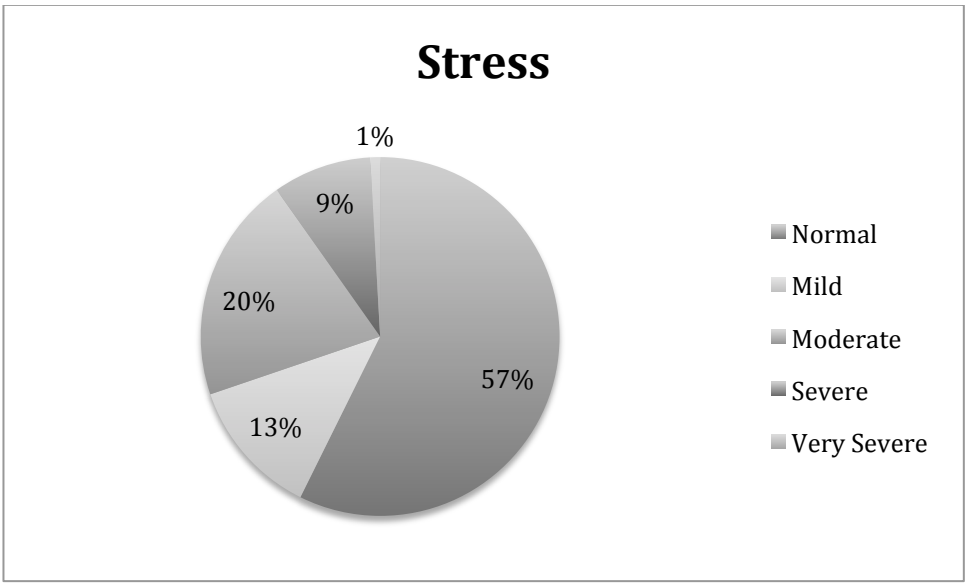


Figure 5.13 Severity of stress amongst house officers

5.3 Association between depression, anxiety and stress (DASS) amongst house officers and their socio-demographic characteristics

In this study, it was observed that there was a significant difference in depression, anxiety and stress scores between local and foreign graduates and depression, where foreign graduates demonstrated higher scores for depression (p=0.001, CI 1,4) , anxiety (p=0.01, CI 2,6) and stress (p=0.002, CI 1,4) as compared to their local counterparts.

There was also a significant difference found between states of origin (p=0.017) and anxiety scores among the house officers, where non-sarawakian house-officers have significantly higher anxiety scores compared to the Sarawakian house-officers.

Otherwise, age, gender, marital status, race, and posting showed no significant association with depression, anxiety and stress scores.

Table 5.4 Association between depression and socio-demographic factors

		Depressed		X2
		No n(%)	Yes n(%)	P-value
Gender	Male	57(43.5)	43(45.3)	0.794
	Female	74(56.5)	52(54.7)	
Marital Status	Unmarried	118(90.1)	83(89.2)	0.84
	Married	13(9.9)	10(10.8)	
Graduate	Local	85(66.4)	32(34.8)	0.01
	Foreign	43(33.6)	60(65.2)	
Origin	Sarawak	69(52.7)	43(45.3)	0.272
	Others	62(47.3)	52(54.7)	

Table 5.5 Association between anxiety and socio-demographic factors

		Anxiety		X2
		No n(%)	Yes n(%)	P-value
Gender	Male	42(46.0)	48(42.5)	0.592
	Female	61(54.0)	65(57.5)	
Marital Status	Unmarried	100(88.5)	101(91.0)	0.538
	Married	13(11.5)	10(9.0)	
Graduate	Local	71(64.0)	46(42.2)	0.001
	Foreign	40(36.0)	63(57.8)	
Origin	Sarawak	65(57.5)	47(41.6)	0.017
	Others	48(42.5)	66(48.4)	

Table 5.6 Association between stress and socio-demographic factors

		Stress		X2
		No n(%)	Yes n(%)	P-value
Gender	Male	59(45.7)	41(42.7)	0.651
	Female	70(54.3)	55(57.3)	
Marital Status	Unmarried	118(91.5)	82(87.2)	0.304
	Married	11(8.5)	12(2.8)	
Graduate	Local	78(61.9)	38(40.9)	0.002
	Foreign	48(38.1)	55(59.1)	
Origin	Sarawak	68(52.7)	43(44.8)	0.24
	Others	61(47.3)	53(55.2)	

However, after controlling for gender, marital status , graduating university and state of origin, the significant independent socio-demographic factor associated with depression was either local or foreign graduates. It is observed that the foreign graduates had significantly higher risk for developing depression (OR 3.851) as compared to local graduates.

Table 5.7 Association between depression and socio-demographic factors: A multivariate analysis (Logistic Regression)

Depression			
		OR 95% CI	P-value
Gender	Male		
	Female	0.963(0.542,1.708)	0.896
Marital Status	Unmarried		
	Married	1.513(0.595,3.846)	0.384
Graduate	Local		
	Foreign	3.851(2.165,6.851)	<0.001
Origin	Sarawak		
	Others	1.217(0.690,2.148)	0.498

In the anxiety domain, foreign or local graduates as well as state of origin were found to be significant independent socio-demographic factors associated with anxiety. Foreign graduates have 2.43 times risk of developing possible anxiety compared to local graduates. Non-local (non-sarawakians) were also observed to have 1.77 times higher risk of developing anxiety as compared to the local (Sarawakians)

Table 5.8 Association between anxiety and socio-demographic factors: A multivariate analysis (Logistic Regression)

Anxiety			
		OR 95% CI	P-value
Gender	Male		
	Female	1.233(0.707,2.150)	0.46
Marital Status	Unmarried		
	Married	0.859(0.347,2.128)	0.743
Graduate	Local		
	Foreign	2.427(1.394,4225)	0.002
Origin	Sarawak		
	Others	1.772(1.022,3.073)	0.042

In the stress domain, local versus foreign graduates was the only significant independent sociodemographic factor associated with stress where foreign graduates have 2.52 times the risk of developing possible stress as compared to the local graduates. These findings were observed after controlling for gender, marital status, graduating university and state of origin.

Table 5.9 Association between stress and socio-demographic factors: A multivariate analysis (Logistic Regression)

Stress			
		OR 95% CI	P-value
Gender	Male		
	Female	1.151(0.657,2.016)	0.623
Marital Status	Unmarried		
	Married	1.905(0.771,4.705)	0.162
Graduate	Local		
	Foreign	2.524(1.439,4.427)	0.001
Origin	Sarawak		
	Others	1.260(0.724,2.193)	0.414

5.4 Coping mechanism and socio-demographic characteristics

In the context of coping mechanisms (using the CISS), it is noted that there is a significant difference in the coping styles between gender amongst the house officers whereby the females appear to utilize emotion oriented coping mechanisms and the mean difference in their scores are significant (p=0.015, CI -6.47,-0.070). It is also noted that graduates graduating from foreign universities were also more inclined to cope with emotion orientated coping mechanisms (p=0.01, CI -8.6,-2.9). However it is observed that there is no significant difference in the various coping mechanisms when compared to origin and marital status.

Table 5.10 Difference in coping mechanisms and gender

Coping mechanism	Mean (SD)		p-value
	Male	Female	
Task	57.34(11.75)	57.54(10.89)	0.909
Emotion	44.73(10.76)	48.31(11.08)	0.015
Avoidance	53.05(12.47)	53.51(11.71)	0.775
Distraction	27.25(6.52)	27.97(6.68)	0.42
Social Diversion	16.29(4.85)	16.55(4.33)	0.669

Table 5.11 Difference in coping mechanisms and marital status

Coping mechanism	Mean (SD)		p-value
	Unmarried	Married	
Task	57.65(10.99)	55.61(13.58)	0.412
Emotion	46.9(11.29)	44.78(9.21)	0.387
Avoidance	53.68(12.18)	49.74(9.57)	0.135
Distraction	27.85(6.68)	26.04(5.70)	0.215
Social Diversion	16.47(4.64)	15.87(3.63)	0.55

Table 5.12 Difference in coping mechanisms and place of graduation

Coping mechanism	Mean (SD)		p-value
	Local	Foreign	
Task	58.28(10.88)	56.60(11.79)	0.27
Emotion	43.94(10.42)	49.68(11.05)	<0.001
Avoidance	52.20(11.39)	54.45(12.74)	0.167
Distraction	27.06(6.57)	28.34(6.72)	0.156
Social Diversion	16.05(4.11)	16.75(4.99)	0.255

Table 5.13 Difference in coping mechanisms and origin

Coping mechanism	Mean (SD)		p-value
	Sarawakian	Others	
Task	57.86(10.70)	57.08(11.81)	0.603
Emotion	46.18(11.74)	47.29(10.37)	0.45
Avoidance	53.50(12.34)	53.12(11.75)	0.808
Distraction	27.81(7.07)	27.50(6.13)	0.733
Social Diversion	16.33(4.62)	16.54(4.52)	0.721

5.5 Association between coping methods (CISS) and the presence of psychological morbidities (DASS)

The association between psychological morbidities and coping mechanism were analyzed. It is found that there is a significant difference in mean scores for task orientated coping mechanism and presence depression where respondents without depression tend to utilize task oriented coping mechanisms. However, there is no significant association between anxiety and stress against task oriented coping mechanism.

Table 5.14 Association between task oriented coping and DASS (ANCOVA)

DASS				
		Mean(std.error)	95% CI	p-value
Depression	No	58.6(1.5)	(55.7,61.4)	0.04
	Yes	53.9(1.5)	(50.9,56.9)	
Anxiety	No	58.2(1.5)	(55.3,61.1)	0.19
	Yes	54.5(1.5)	(51.5,57.4)	
Stress	No	57.5(1.5)	(54.5,60.4)	0.166
	Yes	55.3(1.5)	(52.3,58.3)	

*adjusted for gender, marital status, origin and graduate school

**3 domains were analysed independently

Depression, anxiety and stress were found to be significantly associated with emotion oriented coping mechanism. Significantly higher scores in emotion oriented coping mechanism were observed in all 3 psychological morbidities.

Table 5.15 Association between emotion oriented coping and DASS (ANCOVA)

DASS				
		Mean (std.error)	95% CI	p-value
Depression	No	43.2(1.3)	(40.5,45.8)	<0.001
	Yes	49.3(1.3)	(46.5,52.0)	
Anxiety	No	42.1(1.3)	(39.5,44.6)	<0.001
	Yes	50.2(1.3)	(47.6,52.8)	
Stress	No	41.8(1.3)	(39.2,44.3)	<0.001
	Yes	50.4(1.3)	(47.9,53.0)	

*adjusted for gender, marital status, origin and graduate school

**3 domains were analysed independently

The mean scores for distraction oriented coping mechanisms were significantly higher in respondents with no stress.

Table 5.16 Association between distraction oriented coping and DASS (ANCOVA)

DASS				
		Mean(std. error)	95% CI	p-value
Depression	No	27.2(0.9)	(25.5,29.0)	0.577
	Yes	26.7(0.9)	(24.9,28,4)	
Anxiety	No	27.4(0.9)	(25.7,29.1)	0.267
	Yes	26.4(0.9)	(24.7,28.2)	
Stress	No	27.0(0.9)	(25.3,28.7)	0.02
	Yes	26.9(0.9)	(25.1,28.6)	

*adjusted for gender, marital status, origin and graduate school

**3 domains were analysed independently

The mean scores for social diversion oriented coping mechanisms were significantly higher in respondents with no depression.

Table 5.17 Association between social diversion oriented coping and DASS (ANCOVA)

DASS				
		Mean(std. error)	95% CI	p-value
Depression	No	16.8(0.6)	(15.6,18.0)	0.036
	Yes	15.5(0.6)	(14.2,16.7)	
Anxiety	No	16.5(0.6)	(15.3,17.6)	0.393
	Yes	15.9(0.6)	(14.7,17.1)	
Stress	No	16.4(0.6)	(15.2,17.6)	0.581
	Yes	16.0(0.6)	(14.8,17.2)	

*adjusted for gender, marital status, origin and graduate school

**3 domains were analysed independently

There were no significant association between avoidance oriented coping with depression, anxiety and stress.

Table 5.18 Association between avoidance oriented coping and DASS (ANCOVA)

DASS				
		Mean	95% CI	p-value
Depression	No	53.3(1.6)	(50.2,56.4)	0.068
	Yes	50.1(1.6)	(46.9,53.3)	
Anxiety	No	53.0(1.6)	(49.9,56.2)	0.126
	Yes	50.5(1.6)	(47.3,53.6)	
Stress	No	52.5(1.6)	(49.4,55.7)	0.75
	Yes	51.1(.16)	(47.9,54.2)	

*adjusted for gender, marital status, origin and graduate school

**3 domains were analysed independently

CHAPTER 6

Discussion

6.1 Socio-demographic features of respondents

The number of respondents are 227 house officers and the demographics of the house officers in Sarawak General hospital includes a myriad of races both from within Sarawak and other states of Malaysia. Their ages range from 23 years to 30 years, and the mean age was 26 years old. This corresponds to the age that they graduate from their universities. The gender distribution between males and females is almost equal at 44% and 56%, respectively. This data shows that clearly both males and females in Malaysia have equal opportunities in pursuing medical careers. It also demonstrates that females are consistently considering the choice of medical careers perhaps sacrificing on the notion of being married and having children as being in the medical career is indeed challenging. This is also consistent with the idea that Malaysia, as it enters the developed nation status where the female gender is indeed empowered to pursue whichever career without bias (Ahmad, 1998).

The racial composition of these house officers are that majority of them are chinese 55% followed by Malays 26% and the others making up the remaining 19%. It is interesting to note that the Bumiputera Sarawak which encompasses the indigenous tribes of Sarawak, mainly the Iban, Bidayuh, Melanau and others make up only 9.3% of the racial distribution of the house officers in Sarawak,considering that these

indigenous tribes of Sarawak consist of the majority of the state. This clearly shows that the medical profession is still lacking amongst the indigenous people of Sarawak. It also indirectly demonstrates the socio-economic status of these indigenous tribes of Sarawak, as there is only a small proportion of them who are in the professional fields. It is also argued that the opportunities for these minorities to pursue further education is still limited (Ringgit, 2015).

It is not surprising that majority of the respondents are unmarried making up to 89% of the respondents. This might suggest that doctors, mainly the house officers tend to marry later in their careers, perhaps upon completion of their housemanship. This factor can be attributed to the long working hours and hectic schedule as being against settling in a marriage.

In this study, there was almost equal distribution between local (52%) and foreign graduates (48%). This implies that both the local and foreign universities are contributing to the current glut in house officers in Malaysia (Chin, 2013). It also suggest that the economy is still healthy in which Malaysians are still able to go abroad to pursue their medical education, when medical education is one of the most expensive courses available. However, it is seen that psychological morbidities are much higher in these foreign graduates as compared to local graduates, which will be discussed later.

Another point to note that the distribution between house officers that are locally from Sarawak and from other parts of Malaysia is equal. This finding is rather surprising as

previously, it was thought that many non-Sarawakians are reluctant to serve in Sarawak because of the distance and career opportunities.

This finding seems to disprove the notion. Perhaps, the various measures initiated by the Ministry of Health, Malaysia might contribute to this(Ringgit, 2015). Amongst others is making it compulsory for house officers to be transferred to various states in Malaysia, including Sabah and Sarawak. The improved logistics connecting both east and west Malaysia would also contribute to this. Previously the frequency and prices of flights connecting east and west Malaysia have improved hence making this part of Malaysia more accessible. The other factor is the improved opportunities for advancement of the medical careers also lead to many house officers willing to be posted to Sarawak. The ministry of health has recently decided that priorities would be given to Medical officers working in east Malaysia to enroll in the masters program which is the next step for specializing, hence the willingness of the house officers to work in Sarawak, or east Malaysia.

6.2 Prevalence of depression, anxiety and stress amongst house officers

Based on the data, it is demonstrated that the house officers working in Sarawak General Hospital demonstrated high levels of depression, anxiety and stress. This is consistent with all other previous studies performed in other countries (Erdur et al., 2006; Grassi & Magnani, 2000; Sreeramareddy et al., 2007). The results are also similar to a previous study conducted in Kota Bharu, which also demonstrated high levels of depression, anxiety and stress amongst its house officers (Husain, 2011). Similar to that observed in these studies, socio-demographic factors such as age,

gender, or marital status does not show any significant association with the development of psychological morbidities. It was expected that marital status or state of origin would have been a protective factor against the development of psychological morbidities (Gove, 1972)however evidently, such association was not found.

With this relatively high prevalence of psychological morbidities identified in this study, it is now important to identify the reasons behind this prevalence. In the context of house officers working in Kuching, Sarawak, there are many other factors that can be considered, such as the working environment, the supervisors, the shift system and other interpersonal issues. Hence it should be highlighted that all new incoming house officers be given counseling and stress management before entering housemanship. A preliminary psychological assessment should also be undertaken to assess the potential for developing psychological morbidities.

6.3 Relationship between the socio-demographic factors and DASS

This study observed a significant difference in depression, anxiety and stress scores between local and foreign graduates where those graduating from foreign universities show a higher depression, anxiety and stress scores. In Malaysia, the issues of graduating medical schools have become an interesting topic. It is noted that there were some discrepancy between the accreditation of these various foreign universities which provide medical education for Malaysian graduates (Arukesamy, 2014; Yong, 2013). The syllabus and sometimes the language taught were not consistent with the standard medical syllabus found in Malaysia. When house officers graduate from

these universities, they were trained differently and hence this might contribute to a higher incidence of depression, stress and anxiety scores as they struggle to grasp the medical environment in Malaysia.

There are several other factors that might cause this discrepancy in depression, anxiety and stress scores between foreign and local graduates. The obvious factor is that those trained overseas are generally not accustomed to the local settings. During the final years of their medical education, the local students would have had postings in the various departments in the local hospital, these acts as preparatory factor to the local hospital scene whereby these students will acclimatize and adapt to the wards, staff and also working environment. Conversely, the foreign medical graduates would acclimatize and adapt to the Malaysian hospital. They only start adapting and acclimatizing during the period of housemanship. This certainly will explain the higher depression, anxiety and stress scores amongst them.

Another possible reason is that the expectation from a foreign graduate versus a local graduate. It is often regarded that the foreign graduates should perform better or at par with the local graduate and hence these causes 'performance anxiety' whereby they are often given a higher scrutiny as compared to the local graduates (Cruez, 2014; Yong, 2013).The syllabus of the medical education might also play a role in this increase in DASS scores. Many a time, the emphasis of diseases occurring in other parts of the world outweigh the common diseases in Malaysia, hence when the junior house officers are exposed to these local illnesses and diseases, they are not well-versed in it and hence causes an increase in the DASS scores.

The training of medical students in a foreign university also differ. The medical students abroad are not often exposed to procedures. Due to the strict policies in the hospital abroad, many medical students are mere observers in different procedures such IV line insertion, catheterization and others. As compared to a local medical students who have the chance to perform these procedures, when they become house officers, these lack of experience will precipitate in the form of psychological morbidities.

It is found that in this study, there is no association between marital status with prevalence of psychological morbidities. This is an interesting point to note as many a time, the reason for reluctance of a house officer to be transferred to another state is because of their marital status. They give the reason that they don't want to be away from their spouse. Statistically, in the context of the Kuching setting, it is only seen that only 10.2% of the house officers are married. Hence being married does not represent the entire population of these house officers. In this sense, it is found that the marital status does not play any role in either precipitating a psychological morbidity or being protective against developing psychological morbidity. However, this study did not pursue the issue of being apart from the spouse as a possible factor or contributing to development of psychological morbidities.

Another observation is that being away from the state of origin or 'hometown' did not precipitate psychological morbidities amongst house officers. This again is an important factor to consider. House officers use the excuse of being away from their 'hometowns' as a reason for not reporting to another state. They give various reasons like they would like to look after their aging parents, or be close to their 'hometown'

after being away for so long during their university days. It is thought that those who does so, majority of them do so reluctantly. As they are kept away or apart from their parents, siblings or relatives, it is often believed that this might contribute or might be a factor in which they might develop some for of psychological morbidity. In this study, there is no association between being in away in another state and the prevalence of psychological morbidity. Working away from their hometown or working in their hometown did not show any form of protection towards developing psychological morbidities. Hence with his new information, perhaps the reason of being away from family should no longer be considered when posting a house officer to another state where there is a need of manpower.

6.4 Psychological morbidities and coping

As for the coping mechanisms of these house officers, there is a discernable difference in their coping mechanisms. The coping mechanisms differ with the presence or absence of the psychological morbidity.

The most obvious finding is that the house officers who scored positively of the 3 domains of psychological morbidity (depression, anxiety and stress) have a tendency to cope using the emotion oriented coping. These can be explained by various reasons.

Emotional oriented coping are ways that reduce the negative response associated with emotional reactions. As mentioned previously, these reactions can be self-blame, being angry, etc. Due to the fact that these psychological morbidities contain effective

components, hence many house officers are prone to cope with emotional expression. This can be a vicious cycle as emotion oriented coping can itself worsen the underlying psychological morbidity. Hence when this occurs, there would be a gradual worsening to the severity of these psychological morbidities. In order to curb this, stress management and coping techniques should be introduced into the house-officer teaching curriculum to enable to cope better and hence reduce the possibility of developing psychological morbidities.

It is also found that a certain population of house officers who has no depression utilizes task oriented coping mechanisms more frequently. This coping mechanism is favoured as it directly resolves the ongoing stressor or problem. With the resolution of the ongoing stressor or problem, certain it will alleviate all the factors resulting in a reduction in the psychological morbidity. Hence it can be postulated that task oriented coping mechanisms might actually be protective or reduce the depression of the various psychological morbidities.

Another interesting point to note is that the respondents without depression also uses social diversion as a coping mechanism. This can be simply explained in a way that social interactions with other peers or family might improve the outcome of psychological morbidities especially in the domain of depression. Perhaps, going out with fellow colleagues for a movie, or a cup of coffee might actually alleviate the depressive symptoms that might be present. Hence it is useful to introduce social group activities amongst the house officers in a bid to reduce the depressive component.

The relationship between stress and distraction oriented coping mechanism is also significant. Respondents who have negative scores for stress in DASS utilizes distraction as a coping mechanism more frequently. This itself explanatory as when negative emotions or stressors arise, this individuals re-focus their attention on other forms of task as way to distract them from the current stressors. Hence it appears that this association is beneficial in the reduction of the stress domain.

6.5 Limitations and recommendations

While conducting this study, there are several limitations seen. The most prominent limitation is that this study is conducted only in one center. A multi-centered study is recommended as to assess the prevalence of depression, anxiety and stress across all teaching hospitals.

Both tools used were English version, as it was presumed that the command of English of this studied population were good and the tools were easily understood, however this may contribute to bias in the results attained. Therefore, should the study be repeated, tools in both English and Malay version should be made readily available to the studied population.

CISS is a fine model of classical test construction, however it does not reflect the complexity and heterogeneity of actual coping as in it is limited to 3 main domains. Should further elaboration is necessary to identify subgroups of coping strategies, the COPE inventory would be a better instrument as it is a finer measurement of individual differences in coping (Schwarzer & Schwarzer, 1996).

Another limitation seen is that there is a possibility that the questionnaires were not answered 'honestly' as the respondents are medically inclined and might have the tendency to minimize their scoring which ultimately lead a lesser reported prevalence. The fact that respondents who scored significantly would be assessed further might also cause these house officers to score less in their questionnaires as to prevent themselves from being referred to the counseling or psychiatric department.

Another tool should also be used to assess the source of these stressors, which might ultimately lead to these psychological morbidities as well as their coping mechanisms.

CHAPTER 7

Implications

Keeping in view the limitations that were previously discussed, this study still provides an interesting perspective to the psychological profiles of house officers working in a tertiary training hospital. It is seen that the prevalence of psychological morbidities amongst house officers is relatively high and almost similar to other studies both locally and abroad. With this data in mind, it would be a good idea to consider some sort of intervention to prevent the increase in the psychological morbidities amongst house officers. Various forms of psychosocial intervention can be performed such as counseling and stress management. Administrative policies regarding the training and postings of these house officers could also be reviewed to reduce the possible stressor involved.

The interesting finding where there is a significant association between psychological morbidities and local or foreign graduates should also be examined further. This has a huge bearing on the results as almost half of the house officers in Malaysia are trained overseas and certain measures can be offered to these returning house officers as to alleviate their stressors and hence reduce the possibility of developing psychological morbidities.

The accrediting board from the Ministry of Health or Higher education should look into the training of these house officers from these foreign universities as to assess the medical curriculum as to be accepted and relevant in the local Malaysian environment.

The supervisors and senior staff should also be advised to observe for possible psychological morbidities amongst these house officers and to refer them to the relevant units early as to prevent worsening of their psychological morbidities.

The provision of various avenues for house officers to 'vent' their frustrations and grouses via proper and conducive channels can also be established. Their frustration and grouses then can be addressed accordingly and thus alleviating their stressors.

In terms of the coping skills, a module where various coping mechanisms and skills are taught can also be introduced to these house officers to assist them in overcoming their stressors which will ultimately lead to a reduction of psychological morbidities.

CHAPTER 8

Conclusion

House officers in Sarawak General Hospital has high prevalence of psychiatric morbidities such as depression (42%), anxiety (50%) and stress (42.7%).

It is found that graduating from either a local or foreign medical school might have bearing of the presence of depression, anxiety and stress. In this aspect, house officers graduating from foreign medical schools are more prone to develop depression, anxiety and stress.

There is no significant association between gender, state of origin or marital status towards the prevalence of psychological morbidities

It is demonstrated that there is an association between depression, anxiety and stress with coping mechanisms whereby respondents with positive scores of depression, anxiety or stress are more inclined to use emotion oriented coping methods. There is also significant association between depression and task oriented coping skills, stress and distraction oriented coping skills and also depression and social diversion oriented coping skills.

CHAPTER 9

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APPENDIX I

From: **Peter Lovibond** p.lovibond@unsw.edu.au
Subject: RE: Permission to use DASS questionnaire
Date: 20 May 2015 10:25
To: Yeoh Chia Minn yeohcm@moh.gov.my

PL

Dear Dr Yeoh,

You are welcome to use the DASS in your research. Please see the DASS website www.psy.unsw.edu.au/dass/ to download the questionnaires (including translations in certain languages) and scoring key. Please also see the FAQ page on the website for further information.

Best regards,
Peter Lovibond

-----Original Message-----
From: Yeoh Chia Minn [mailto:yeohcm@moh.gov.my]
Sent: Tuesday, 19 May 2015 10:31 AM
To: Peter Lovibond
Cc: Dr Maruzairi; Dr Lau Kim Kah
Subject: Permission to use DASS questionnaire

Dear Prof Peter,

I'm Dr Chia Minn Yeoh, currently a final year trainee in MMed program for Psychiatry attached to Universiti Sains Malaysia and Hospital Sentosa, Kuching, Sarawak, Malaysia. I would like to have you permission for using the DASS questionnaire in my thesis entitled 'Psychological Morbidities Amongst House Officers in Kuching, Sarawak, MALAYSIA.

I would be grateful for your permission to use this questionnaire.

Any inconvenience caused is greatly regretted.

Thank You

DR Chia Minn YEOH
Medical Officer,
Hospital Sentosa, Kuching, Sarawak

APPENDIX II

From: **Shawna Ortiz** shawna.ortiz@MHS.com
Subject: Order Confirmation 804275
Date: 30 May 2015 02:45
To: Yeoh Chia Minn yeohcm@moh.gov.my

SO

Thank you for your recent MHS order. Please retain the following order confirmation details for your records.

Order Number: 804275

Inventory Id: CI2P00 Inventory Description: CISS Adult QuikScore Forms (25/pkg)
Quantity Ordered: 10 Unit Price: $ 55.00 Extended Price: $385.00

Your order will be shipped by UPS International.
Shipping and handling charges of $103.56 have been added to your order.
Your invoice or receipt will be sent to you by standard mail service to the billing address provided.

For your reference, your MHS Customer ID is 199593.
Please reference this Customer ID number when placing future orders.

If you have any questions or require further information, please contact our Client Services department at customerservice@mhs.com, or visit our website for complete contact information including hours of operation.

Thank you,
MHS Client Services

WWW.MHS.COM

UNIVERSITI SAINS MALAYSIA

Jawatankuasa Etika Penyelidikan Manusia USM (JEPeM)
Human Research Ethics Committee USM (HREC)

Universiti Sains Malaysia
Kampus Kesihatan,
16150 Kubang Kerian,
Kelantan. Malaysia.
T: 609 - 767 3000 samb. 2354/2362
F: 609 - 767 2351
E: jepem@usm.my
www.jepem.kk.usm.my

16th March 2015

2/2 - 26 3 07 09

Dr. Yeoh Chia Minn
Department of Psychiatry
School of Medical Sciences
Universiti Sains Malaysia
16150 Kubang Kerian, Kelantan.

JEPeM Code : USM/JEPeM/140195
Protocol Title : Psychological Morbidities amongst House Officers in Kuching, Sarawak, Malaysia.

Dear Dr.,

We wish to inform you that your study protocol has been reviewed and is hereby granted approval for implementation by the Jawatankuasa Etika Penyelidikan Manusia Universiti Sains Malaysia (JEPeM-USM). Your study has been assigned study protocol code **USM/JEPeM/140195**, which should be used for all communication to the JEPeM-USM related to this study. This ethical clearance is valid from **March 2015** until **February 2016.**

The following documents have been approved for use in the study.
1. Research Proposal

In addition to the abovementioned documents, the following technical document was included in the review on which this approval was based:
1. Participant Information Sheet and Consent Form (English version)
2. Participant Information Sheet and Consent Form (Malay version)
3. Questionnaires

Attached document is the list of members of JEPeM-USM present during the full board meeting reviewing your protocol.

While the study is in progress, we request you to submit to us the following documents:
1. Progress report using the **JEPeM-USM FORM 3(B) 2014: Continuing Review Application Form** every 1 year from date of approval (NOTE: In view of active ethical clearance, this report is mandatory even if the study has not started or is still awaiting release of funds.)
2. Any changes in the protocol, especially those that may adversely affect the safety of the participants during the conduct of the trial including changes in personnel, must be submitted or reported using **JEPeM-USM FORM 3(A) 2014: Study Protocol Amendment Submission Form.**
3. Revisions in the informed consent form using the **JEPeM-USM FORM 3(A) 2014: Study Protocol Amendment Submission Form.**
4. Reports of adverse events (if any) including from other study sites (national, international) using the **JEPeM-USM FORM 3(G) 2014: Adverse Events Report.**
5. Notice of early termination of the study and reasons for such using **JEPeM-USM FORM 3(E) 2014.**
6. Any event which may have ethical significance.
7. Any information which is needed by the JEPeM-USM to do ongoing review.
8. Notice of time of completion of the study using **JEPeM-USM FORM 3(C) 2014: Final Report Form.**

9. Application for renewal of ethical clearance 90 days before the expiration date of this approval through submission of **JEPeM-USM FORM 3(B) 2014: Continuing Review Application Form.**

Please note that forms may be downloaded from the JEPeM-USM website: **www.jepem.kk.usm.my**

Jawatankuasa Etika Penyelidikan (Manusia), JEPeM-USM is in compliance with the Declaration of Helsinki, International Conference on Harmonization (ICH) Guidelines, Good Clinical Practice (GCP) Standards, Council for International Organizations of Medical Sciences (CIOMS) Guidelines, World Health Organization (WHO) Standards and Operational Guidance for Ethics Review of Health-Related Research and Surveying and Evaluating Ethical Review Practices, EC/IRB Standard Operating Procedures (SOPs), and Local Regulations and Standards in Ethical Review.

Thank you.

"ENSURING A SUSTAINABLE TOMORROW"

Very truly yours,

PROF. DR. HANS AMIN VAN ROSTENBERGHE
Chairperson
Jawatankuasa Etika Penyelidikan (Manusia) JEPeM
Universiti Sains Malaysia

APPENDIX III

UNIVERSITI SAINS MALAYSIA

Jawatankuasa Etika Penyelidikan Manusia USM (JEPeM)
Human Research Ethics Committee USM (HREC)

Universiti Sains Malaysia
Kampus Kesihatan,
16150 Kubang Kerian,
Kelantan. Malaysia.
T: 609 - 767 3000 *samb.* 2354/2362
F: 609 - 767 2351
E: jepem@usm.my
www.jepem.kk.usm.my

Date of meeting : 27 January 2015
Venue : Meeting Room, Centre for Research Initiatives, Clinical and Health Sciences, USM Kampus Kesihatan.
Time : 9.00 a.m – 2.00 p.m
Meeting No : 300

Members of Committee of the Jawatankuasa Etika Penyelidikan (Manusia), JEPeM Universiti Sains Malaysia who reviewed the protocol/documents are as follows:

Member (Title and Name)		Occupation (Designation)	Male/ Female (M/F)	Tick (✓) if present when above items, were reviewed
Chairperson : Professor Dr. Hans Amin Van Rostenberghe		Chairperson of Jawatankuasa Etika Penyelidikan (Manusia), JEPeM USM	M	✓ (Chairperson)
Secretary: Mr. Mohd Bazlan Hafidz Mukrim		Research Officer	M	✓
Members :				
1.	Dato' Hj. Ellias Zakaria	Lecturer, School of Humanities	M	✓
2.	Associate Professor Dr. Nor Azwany Yaacob	Lecturer, School of Medical Sciences	F	✓
3.	Associate Professor Dr. Suzina Sheikh Abd Hamid	Lecturer, School of Medical Sciences	F	✓
4.	Dr. Teguh Haryo Sasongko	Lecturer, Human Genome Centre, USM	M	✓
5.	Dr. Azlan Husin	Lecturer, School of Medical Sciences	M	✓
6.	Dr. Sarimah Abdullah	Lecturer, School of Medical Sciences	F	✓
7.	Dr. Haslina Taib	Lecturer, School of Dental Sciences	F	✓
8.	Mr. Haji Ismail Hassan	Community Representative	M	✓

Jawatankuasa Etika Penyelidikan (Manusia), JEPeM-USM is in compliance with the Declaration of Helsinki, International Conference on Harmonization (ICH) Guidelines, Good Clinical Practice (GCP) Standards, Council for International Organizations of Medical Sciences (CIOMS) Guidelines, World Health Organization (WHO) Standards and Operational Guidance for Ethics Review of Health-Related Research and Surveying and Evaluating Ethical Review Practices, EC/IRB Standard Operating Procedures (SOPs), and Local Regulations and Standards in Ethical Review.

PROFESSOR DR. HANS AMIN VAN ROSTENBERGHE
Chairperson
Jawatankuasa Etika Penyelidikan (Manusia), JEPeM
Universiti Sains Malaysia

APPENDIX IV

JAWATANKUASA ETIKA & PENYELIDIKAN PERUBATAN
(Medical Research & Ethics Committee)
KEMENTERIAN KESIHATAN MALAYSIA
d/a Institut Pengurusan Kesihatan
Jalan Rumah Sakit, Bangsar **Tel : 03 2282 0491**
59000 Kuala Lumpur **Faks: 03 2282 8072 / 03 2282 0015**

Ruj. Kami : (6) KKM/NIHSEC/P15-396
Tarikh : 7 Mei 2015

DR YEOH CHIA MINN
HOSPITAL SENTOSA KUCHING

Tuan/Puan,

NMRR-15-216-24872 (IIR)
Psychological Morbidities Amongst House Officers In Kuching, Sarawak.

Lokasi Kajian: Hospital Umum Sarawak

Dengan hormatnya perkara di atas adalah dirujuk.

2. Jawatankuasa Etika & Penyelidikan Perubatan (JEPP), Kementerian Kesihatan Malaysia (KKM) mengambil maklum bahawa projek tersebut adalah untuk memenuhi keperluan akademik *Master of Psychiatry*

3. Sehubungan dengan ini, dimaklumkan bahawa pihak JEPP KKM tiada halangan dari segi etika ke atas pelaksanaan projek tersebut. JEPP mengambil maklum bahawa kajian ini tidak melibatkan intervensi terhadap subjek dan hanya menggunakan data data daripada **borang kaji selidik** sahaja dalam pengumpulan data kajian. Segala rekod dan data adalah **SULIT** dan hanya digunakan untuk tujuan kajian ini dan semua isu serta prosedur mengenai ***data confidentiality*** mesti dipatuhi. Kebenaran daripada Pengarah Hospital di mana kajian akan dijalankan mesti diperolehi terlebih dahulu sebelum kajian dijalankan. Tuan/Puan perlu akur dan mematuhi keputusan tersebut.

4. Adalah dimaklumkan bahawa kelulusan ini adalah sah sehingga **7 Mei 2016**. Tuan/Puan perlu menghantar dokumen-dokumen seperi berikut selepas mendapat kelulusan etika.Borang-borang berkaitan boleh dimuat turun daripada laman web MREC (http://www.nih.gov.my/mrec).

I. *'Continuing Review Form'* selewat-lewatnya 2 bulan sebelum tamat tempoh kelulusan ini bagi memperbaharui kelulusan etika.
II. Laporan tamat kajian pada penghujung kajian.
III. Laporan mengenai *"All adverse events, both serious and unexpected"/Protocol Deviation* atau *Violation* kepada Jawatankuasa Etika & Penyelidikan Perubatan, KKM jika berkenaan.
IV. Memaklumkan jika terdapat pindaan keatas sebarang dokumen kajian

5. Sila ambil maklum bahawa sebarang urusan surat-menyurat berkaitan dengan penyelidikan ini haruslah dinyatakan nombor rujukan surat ini untuk melicinkan urusan yang berkaitan.

Sekian terima kasih.

BERKHIDMAT UNTUK NEGARA

Saya yang menurut perintah,

(DATO' DR CHANG KIAN MENG)
Pengerusi
Jawatankuasa Etika & Penyelidikan Perubatan
Kementerian Kesihatan Malaysia

CC

Pengarah
Hospital Umum Sarawak

Clinical Research Centre
Hospital Umum Sarawak

NO: **ATTACHMENT B**

RESEARCH INFORMATION

Research Title:	***Psychological co-morbidities amongst house officers in Kuching, Sarawak***
Study Code:	***USM/JEPeM/140195***
Researcher's Name:	***YEOH CHIA MINN***
MMC Registration No. :	**44522**

INTRODUCTION

The aim of this study is to evaluate the prevalence and levels of depression, anxiety and stress among house officers undergoing training in a tertiary centre in Kuching, Sarawak. It also looks into the association of these psychological levels and the house officer's socio-demographic background and their coping mechanism to the psychological impact of housemanship.

WHAT WOULD INVOLVE

The study would involve house officers undergoing training in various departments are required to fill up 3 sets of questionnaires including on their sociodemographic profile, and two sets validated questionnaires chosen for the purpose of this study.

THE BENEFITS

The psychosocial associations with housemanship will highlight the need for specific changes in policies which will further improve their wellbeing and hence improve learning.

If you were to take part in this study, there will no rewards/honorarium given.

CONFIDENTIALITY

Participants name remain anonymous. Answers written in the questionnaire are strictly confidential and will be used solely for medical research and educational purposes only. Results obtained from the study will be reported in a collective manner with no reference to any particular patient

DO I HAVE TO TAKE PART

The participation in this study is voluntary. You can withdraw from this study at any time during the duration of this study. The time needed to fill in the questionnaire is approximately 15 minutes.

QUESTIONS

If you have any question about this study or your rights, please contact;

DR. Yeoh Chia Minn (MMC: 44522)
Jabatan Psikiatri
USM Kampus Kesihatan
012-203 0709

DR. MARUZAIRI HUSAIN (MMC: 36246)
Jabatan Psikiatri
USM Kampus Keshatan
013-933 3713

DR Lau Kim Kah (MMC: 24996)
Hospital Sentosa
019 824 5702

If you have any questions regarding the Ethical Approval or any issue / problem related to this study, please contact;

En. Mohd Bazlan Hafidz Mukrim
Setiausaha Jawatankuasa Etika Penyelidikan (Manusia) USM
Pusat Inisiatif Penyelidikan -Sains Klinikal & Kesihatan
USM Kampus Kesihatan.
No. Tel: 09-767 2354 / 09-767 2362
Email : bazlan@usm.my/jepem@usm.my

CONFIDENTIALITY

Your medical information will be kept confidential by the study doctor and staff and will not be made publicly available unless disclosure is required by law.

Data obtained from this study that does not identify you individually will be published for knowledge purposes.

Your original medical records may be reviewed by the researcher, the Ethical Review Board for this study, and regulatory authorities for the purpose of verifying clinical trial procedures and/or data. Your medical information may be held and processed on a computer.

By signing this consent form, you authorize the record review, information storage and data transfer described above.

SIGNATURES

ATTACHMENT S

Patient/Subject Information and Consent Form (Signature Page)

Research Title: ***Psychological co-morbidities amongst house officers in Kuching, Sarawak***

Researcher's Name: ***YEOH CHIA MINN***

To become a part this study, you or your legal representative must sign this page. By signing this page, I am confirming the following:

- I have read all of the information in this Patient Information and Consent Form **including any information regarding the risk in this study** and I have had time to think about it.
- All of my questions have been answered to my satisfaction.
- I voluntarily agree to be part of this research study, to follow the study procedures, and to provide necessary information to the doctor, nurses, or other staff members, as requested.
- I may freely choose to stop being a part of this study at anytime.
- I have received a copy of this Patient Information and Consent Form to keep for myself.

Name (Print or type)	**Initials** and **Number**
I.C No. (New)	
Signature of Participant or Legal Representative	**Date** (dd/MM/yy) (Add time if applicable)
Name of Individual Conducting Consent Discussion (Print or Type)	
Signature of Individual Conducting Consent Discussion	**Date** (dd/MM/yy)
Name & Signature of Witness	**Date** (dd/MM/yy)

Note: i) All subject/patients who are involved in this study will not be covered by insurance.

ATTACHMENT G

Patient/ Subject Information and Consent Form (Signature Page)

Research Title: ***Psychological co-morbidities amongst house officers in Kuching, Sarawak***

Researcher's Name: ***YEOH CHIA MINN***

To become a part this study, you or your legal representative must sign this page. By signing this page, I am confirming the following:

- I have read all of the information in this Patient Information and Consent Form **including any information regarding the risk in this study** and I have had time to think about it.
- All of my questions have been answered to my satisfaction.
- I voluntarily agree to be part of this research study, to follow the study procedures, and to provide necessary information to the doctor, nurses, or other staff members, as requested.
- I may freely choose to stop being a part of this study at anytime.
- I have received a copy of this Patient Information and Consent Form to keep for myself.
- I understand and agree that if I were to have a high score, i would be referred for further management.

_____ _____

Name (Print or type) **Initials** and **Number**

_____

I.C No. **(New)**

_____ _____

Signature of participant or Legal Representative **Date** (dd/MM/yy)
(Add time if applicable)

_____

Name of Individual
conducting Consent Discussion (Print or Type)

_____ _____

Signature of Individual **Date** (dd/MM/yy)
Conducting Consent Discussion

_____ _____

Name & Signature of Witness **Date** (dd/MM/yy)

Note: i) All subject/patients who are involved in this study will not be covered by insurance.
ii) Excess samples from this research will not be used for other reasons and will be destroyed with the consent from the Research Ethics Committee (Human), USM.

ATTACHMENT P

Patient's Material Publication Consent Form
Signature Page

Research Title: ***Psychological co-morbidities amongst house officers in Kuching, Sarawak***

Researcher's Name: ***YEOH CHIA MINN***

To become a part this study, you or your legal representative must sign this page.

By signing this page, I am confirming the following:

- I understood that my name will not appear on the materials published and there has been efforts to make sure that the privacy of my name is kept confidential although the confidentiality is not completely guaranteed due to unexpected circumstances.
- I have read the materials or general description of what the material contains and reviewed all photographs and figures in which I am included that could be published.
- I have been offered the opportunity to read the manuscript and to see all materials in which I am included, but have waived my right to do so.
- All the published materials will be shared among the medical practitioners, scientists and journalist world wide.
- The materials will also be used in local publications, book publications and accessed by many local and international doctors world wide.
- I hereby agree and allow the materials to be used in other publications required by other publishers with these conditions:
- The materials will not be used as advertisement purposes nor as packaging materials.
- The materials will not be used out of contex – i.e.: Sample pictures will not be used in an article which is unrelated subject to the picture.

_____ _____

Name (Print or type) **Initials** or **Number**

_____ _____ _____

I.C No. Signature **Date** (dd/MM/yy)

_____ _____

Name and Signature of Individual **Date** (dd/MM/yy)
Conducting Consent Discussion

Note: i) All subject/patients who are involved in this study will not be covered by insurance.

APPENDIX V

Sociodemographic Data

1) No:
2) Age:
3) Sex:
    - Male
    - Female
4) Race:
    - Malay
    - Chinese
    - Indian
    - Bumiputera Sarawak
    - Bumiputera Sabah
    - Others (please specify):
5) Marital Status:
    - Single
    - Married
6) Current Posting:
    - Medical
    - Surgical
    - Obstetrics and gynaecology
    - Paediatrics
    - Accident and Emergency
    - Orthopedics
    - Anesthesiology
    - Others (Please Specify)
7) Duration of posting (in months):
8) Graduating Medical Schools:
    - Local
    - Foreign
9) State of origin:

DASS

No: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Reminder of rating scale:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

22	I found it hard to wind down	0	1	2	3
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

CISS – Adult

by Norman S. Endler, Ph.D., F.R.S.C. & James D.A. Parker, Ph.D.

No:_____ Date:_____/_____/_____

Instructions: The following are ways people react to various difficult, stressful, or upsetting situations. Please circle a number from 1 to 5 for each item. Indicate how much you engage in these types of activities when you encounter a difficult, stressful, or upsetting situation.

Not at All				Very Much	
1	2	3	4	5	1. Schedule my time better.
1	2	3	4	5	2. Focus on the problem and see how I can solve it.
1	2	3	4	5	3. Think about the good times I've had.
1	2	3	4	5	4. Try to be with other people.
1	2	3	4	5	5. Blame myself for procrastinating.
1	2	3	4	5	6. Do what I think is best.
1	2	3	4	5	7. Become preoccupied with aches and pains.
1	2	3	4	5	8. Blame myself for having gotten into this situation.
1	2	3	4	5	9. Window shop.
1	2	3	4	5	10. Outline my priorities.
1	2	3	4	5	11. Try to go to sleep.
1	2	3	4	5	12. Treat myself to a favorite food or snack.
1	2	3	4	5	13. Feel anxious about not being able to cope.
1	2	3	4	5	14. Become very tense.
1	2	3	4	5	15. Think about how I solved similar problems.
1	2	3	4	5	16. Tell myself that it is really not happening to me.
1	2	3	4	5	17. Blame myself for being too emotional about the situation.
1	2	3	4	5	18. Go out for a snack or meal.
1	2	3	4	5	19. Become very upset.
1	2	3	4	5	20. Buy myself something.
1	2	3	4	5	21. Determine a course of action and follow it.
1	2	3	4	5	22. Blame myself for not knowing what to do.
1	2	3	4	5	23. Go to a party.
1	2	3	4	5	24. Work to understand the situation.
1	2	3	4	5	25. "Freeze" and not know what to do.
1	2	3	4	5	26. Take corrective action immediately.
1	2	3	4	5	27. Think about the event and learn from my mistakes.
1	2	3	4	5	28. Wish that I could change what had happened or how I felt.
1	2	3	4	5	29. Visit a friend.
1	2	3	4	5	30. Worry about what I am going to do.
1	2	3	4	5	31. Spend time with a special person.
1	2	3	4	5	32. Go for a walk.
1	2	3	4	5	33. Tell myself that it will never happen again.
1	2	3	4	5	34. Focus on my general inadequacies.
1	2	3	4	5	35. Talk to someone whose advice I value.
1	2	3	4	5	36. Analyze the problem before reacting.
1	2	3	4	5	37. Phone a friend.
1	2	3	4	5	38. Get angry.
1	2	3	4	5	39. Adjust my priorities.
1	2	3	4	5	40. See a movie.
1	2	3	4	5	41. Get control of the situation.
1	2	3	4	5	42. Make an extra effort to get things done.
1	2	3	4	5	43 Come up with several different solutions to the problem.
1	2	3	4	5	44. Take some time off and get away from the situation.
1	2	3	4	5	45. Take it out on other people.
1	2	3	4	5	46. Use the situation to prove that I can do it.
1	2	3	4	5	47. Try to be organized so I can be on top of the situation.
1	2	3	4	5	48. Watch TV.
Not At All				**Very Much**	