



**PREVALENCE AND SOURCES OF STRESS AMONG MEDICAL
STUDENTS IN UNIVERSITI SAINS MALAYSIA (USM).**

(USM short-term grant no: 304/PPSP/6139002)

BY

DR MUHAMAD SAIFUL BAHRI BIN YUSOFF

DR AHMAD FUAD ABDUL RAHIM

ASSOCIATE PROFESSOR DR MOHD JAMIL YAACOB

**MEDICAL EDUCATION DEPARTMENT
SCHOOL OF MEDICAL SCIENCES
UNIVERSITI SAINS MALAYSIA**

JUN 2010





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SENARAI SEMAKAN UNTUK BUKU LAPORAN AKHIR GERAN USM JANGKA PENDEK

| NAMA PENYELIDIK UTAMA : Dr. Muhamad Saiful Bahri Yusoff | | | |
|--|--|-----|-------|
| NAMA CO-RESEARCHER : 1. Dr. Ahmad Fuad Abd. Rahim 2. AP Dr Jamil Yaacob | | | |
| TAJUK GERAN : Prevalence and sources of stress among medical students in USM | | | |
| NO.AKAUN : 304/PPSP/6139002 | | | |
| SENARAI SEMAKAN SEMASA PENYERAHAN BUKU LAPORAN AKHIR (Sila Tandakan (4) Pada Kotak Yang Berkenaan) | | | |
| No | Berkas | ADA | TIDAK |
| 1. | Borang Laporan Akhir Projek Penyelidikan USM Jangka Pendek | ✓ | |
| 2. | Borang Laporan Hasil Penyelidikan, PPSP | ✓ | |
| 3. | i) Salinan Menuskrip | ✓ | |
| | ii) Salinan surat/email bukti penghantaran kepada mana-mana journal | ✓ | |
| 4. | Penyata Perbelanjaan (Financial Statement) (Sila dapatkan daripada Jabatan Bendahari) | ✓ | |
| 5. | Laporan Komprehensif (termasuk kertas persidangan atau seminar dan penerbitan saintifik hasil daripada projek ini) | ✓ | |
| 6. | Surat pemakluman penghantaran Laporan Akhir ke Bhg. Penyelidikan | ✓ | |

Nota:

- * Sila buat 3 salinan buku laporan Akhir
- * No. 1-5 - Perlu dimasukkan dalam Buku Laporan Akhir
- * No.6 - Hantar terus Kepada Pn. Che Merah Ismail (RCMO) hanya salinan kepada Bhg. R&D, PPSP

LAPORAN AKHIR PROJEK PENYELIDIKAN JANGKA PENDEK
FINAL REPORT OF SHORT TERM RESEARCH PROJECT

Sila kemukakan laporan akhir ini melalui Jawatankuasa Penyelidikan di Pusat Pengajian dan Dekan/Pengarah/Ketua Jabatan kepada Pejabat Pelantar Penyelidikan

| | | | | | | | |
|--|--|---|--------------------------|--|-------------------------------------|---------------------------------|--|
| 1. Nama Ketua Penyelidik: <i>Name of Research Leader</i> Dr Muhamad Saiful Bahri Yusoff | | | | | | | |
| <input type="checkbox"/> Profesor Madya/ <i>Assoc. Prof.</i> | | <input checked="" type="checkbox"/> Dr./ <i>Dr.</i> | | <input type="checkbox"/> Encik/Puan/Cik <i>Mr/Mrs/Ms</i> | | | |
| 2. Pusat Tanggungjawab (PTJ): <i>School/Department</i> Pusat Pengajian Pusat Perubatan | | | | | | | |
| 3. Nama Penyelidik Bersama: <i>Name of Co-Researcher</i> Dr Ahmad Fuad Abdul Rahim AP Dr Mohd Jamil Yaacob | | | | | | | |
| 4. Tajuk Projek: <i>Title of Project</i> Prevalence and sources of stress among medical students in Universiti Sains Malaysia | | | | | | | |
| 5. Ringkasan Penilaian/Summary of Assessment: | | | | | | | |
| | | Tidak Mencukupi <i>Inadequate</i> | | Boleh Diterima <i>Acceptable</i> | | Sangat Baik <i>Very Good</i> | |
| | | 1 | 2 | 3 | 4 | 5 | |
| i) Pencapaian objektif projek: | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| <i>Achievement of project objectives</i> | | | | | | | |
| ii) Kualiti output: | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| <i>Quality of outputs</i> | | | | | | | |
| iii) Kualiti impak: | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| <i>Quality of impacts</i> | | | | | | | |
| iv) Pemindahan teknologi/potensi pengkomersialan: | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| <i>Technology transfer/commercialization potential</i> | | | | | | | |
| v) Kualiti dan usahasama : | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| <i>Quality and intensity of collaboration</i> | | | | | | | |
| vi) Penilaian kepentingan secara keseluruhan: | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| <i>Overall assessment of benefits</i> | | | | | | | |

6. Abstrak Penyelidikan

(Perlu disediakan di antara 100 - 200 perkataan di dalam Bahasa Malaysia dan juga Bahasa Inggeris. Abstrak ini akan dimuatkan dalam Laporan Tahunan Bahagian Penyelidikan & Inovasi sebagai satu cara untuk menyampaikan dapatan projek tuan/puan kepada pihak Universiti & masyarakat luar).

Abstract of Research

(An abstract of between 100 and 200 words must be prepared in Bahasa Malaysia and in English).

This abstract will be included in the Annual Report of the Research and Innovation Section at a later date as a means of presenting the project findings of the researcher/s to the University and the community at large)

Sila rujuk lampiran yang disediakan

7. Sila sediakan laporan teknikal lengkap yang menerangkan keseluruhan projek ini.

[Sila gunakan kertas berasingan]

Applicant are required to prepare a Comprehensive Technical Report explaining the project.

(This report must be appended separately)

Sila rujuk lampiran yang disediakan

Senaraikan kata kunci yang mencerminkan penyelidikan anda:

List the key words that reflects your research:

Bahasa Malaysia

Stres
Punca Tekanan
Pelajar Perubatan

Bahasa Inggeris

Stress
Stressor
Medical Students

8. Output dan Faedah Projek

Output and Benefits of Project

(a) * Penerbitan Jurnal

Publication of Journals

(Sila nyatakan jenis, tajuk, pengarang/editor, tahun terbitan dan di mana telah diterbitkan/diserahkan)
(State type, title, author/editor, publication year and where it has been published/submitted)

1. Yusoff MSB, Rahim AFA and Yaacob MJ (2010). Prevalence and sources of stress among Unviersiti Sains Malaysia medical students, Malaysian Journal of Medical Sciences, 17 (1). Available from <http://www.usm.my/mjms/default.asp?tag=12>
2. Yusoff MSB, Rahim AFA and Yaacob MJ (2010). The development and validity of the Medical Student Stressor Questionnaire, ASEAN Journal of Psychiatry, 11 (1). Available from <http://www.aseanjournalofpsychiatry.org/oe11105.htm>

- (b) **Faedah-faedah lain seperti perkembangan produk, pengkomersialan produk/pendaftaran paten atau impak kepada dasar dan masyarakat.**
State other benefits such as product development, product commercialisation/patent registration or impact on source and society.

Not applicable

* Sila berikan salinan/Kindly provide copies

- (c) **Latihan Sumber Manusia**
Training in Human Resources

- i) **Pelajar Sarjana:**
Graduates Students
(Perincikan nama, ijazah dan status)
(Provide names, degrees and status)

Muhamad Saiful Bahri Yusoff, MSc Medical Education, Graduated on 12 August 2009

- ii) **Lain-lain:**
Others

9. **Peralatan yang Telah Dibeli:**
Equipment that has been purchased

Not applicable


Tandatangan Penyelidik
Signature of Researcher

28/6/2010
Tarikh
Date

Komen Jawatankuasa Penyelidikan Pusat Pengajian/Pusat
Comments by the Research Committees of Schools/Centres

This project has been completed successfully and all objectives achieved,

The output of the research project (include a MSc C Medical Education) graduated in August 2009 and two publications namely in the JAMS and ASEAN Journal of Psychiatry.

The report has been assessed by an independent assessor and approved by the PPPP research committee

PROFESSOR AHMAD SUKARI HALIM
Chairman of Research Committee
School of Medical Sciences
Health Campus
Universiti Sains Malaysia
16150 Kubang Kerian, Kelantan

TANDATANGAN PENYELIDIKAN
JAWATANKUASA PENYELIDIKAN
PUSAT PENGAJIAN/PUSAT
Signature of Chairman
[Research Committee of School/Centre]

28/2/10
Tarikh
Date

BORANG LAPORAN HASIL PENYELIDIKAN PPSP

Tajuk geran: **Prevalence and sources of stress among medical students in Universiti Sains Malaysia**

Penyelidik: **Dr Muhamad Saiful Bahri Yusoff**

Jenis geran: **Short-term**

Tempoh geran: **1 Feb 2009 – 31 Jan 2011**

Jenis laporan: Laporan Kemajuan
(setiap 6 bulan)

Alatan di beli

Ya : nyatakan.....

Laporan Akhir*:

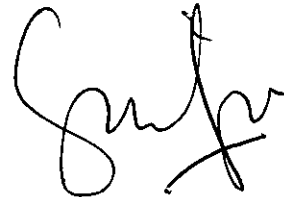
Tidak

| OBJEKTIF SPESIFIK KAJIAN (sama spt dalam proposal asal) | SECARA RINGKAS TERANGKAN PENCAPAIAN/HASIL | SEBAB-SEBAB JIKA TAK TERCAPAI |
|--|--|--------------------------------------|
| 1. To determine the prevalence of stress among medical students. | Percentage of medical students who are distressed. | Achieved |
| 2. To determine the stressors among medical students. | Sources of stress among medical students were identified and mostly related to academic. | Achieved |
| 3. To identify the pattern of stress among medical students. | There was a bimodal pattern on stress throughout the years of study | Achieved |
| 4. To determine the determinant factors for susceptibility to stress among medical students. | Year of study was the major factor that influenced stress among medical students in USM | Achieved |

* Laporan Akhir perlu disertakan salinan manuskrip dan surat yang dihantar kepada mana-mana jurnal untuk penerbitan.

Nama Penyelidik Utama (PI): Muhamad Saiful Bahri Yusoff

t.t.:



Tarikh:

26/1/2010

Malaysian Journal of Medical Sciences - Decision on Manuscript
ID 08-2009-034-OA.R2

1 Messages

Malaysian Journal of Medical Sciences - Decision on
Manuscript ID 08-2009-034-OA.R2

Friday, 9 October, 2009
6:48:20 PM

From: mjms.usm@gmail.com

To: msaiful@kb.usm.my

Sender: onbehalfof@scholarone.com

9th Oct 2009

Dear Dr. Yusoff:

It is a pleasure to accept your manuscript entitled "Prevalence and sources of stress among medical students in Universiti Sains Malaysia" for publication in the Malaysian Journal of Medical Sciences. We will need to sent your manuscript for heavy English editing and certain papaerwork will need to be filled in.

Thank you for your fine contribution. On behalf of the Editors of the Malaysian Journal of Medical Sciences, we look forward to your continued contributions to the Journal.

Sincerely,
Prof. Jafri Abdullah
Editor, Malaysian Journal of Medical Sciences
mjms.usm@gmail.com

Prevalence and Sources of Stress among Universiti Sains Malaysia Medical Students

Muhamad Saiful Bahri Yusoff¹, Ahmad Fuad Abdul Rahim¹,
Mohd Jamil Yaacob²

Submitted: 23 Aug 2009
Accepted: 9 Oct 2009

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² Department of Psychiatry, School of Medical Sciences, Universiti Sains Malaysia Health Campus, Jalan Raja Perempuan Zainab II, 16150 Kubang Kerian, Kelantan, Malaysia

Abstract

Background: Being in medical school has always been regarded as highly stressful. Excessive stress causes physical and mental health problems. Persistent stress can impair students' academic achievement and personal or professional development. The aim of this study is to explore the nature of stress among medical students by determining the prevalence, sources and pattern of stress and the factors affecting it.

Methods: We chose a cross-sectional study design utilizing validated questionnaires, the 12 items General Health Questionnaire (GHQ-12) and Medical Student Stressor Questionnaire (MSSQ), to evaluate stress levels and stressors. School and ethical committee clearance were obtained prior to the study. Data were analysed using SPSS version 12.

Results: Of the medical students who were administered the questionnaire, 761 (72%) respondents participated in this study. The prevalence of stress among the medical students was 29.6%. The top 10 stressors were academic-related. Prevalence of stress for the first, second, third, fourth and fifth year students was 26.3%, 36.5%, 31.4%, 35.3% and 21.9%, respectively. Year of study was the only significant factor affecting stress among medical students (P -value < 0.05).

Conclusions: The prevalence of stress among medical students in USM is high. Academic-related problems were the major stressor among medical students. Year of study was the factor most significantly associated with medical students' stress. There was a bimodal pattern of the stress level throughout the year of study.

Keywords: medical students, mental health, stress, medical sciences

Introduction

Tertiary medical training has always been regarded as being highly stressful. Many studies have described the stressors of medical training and the associated negative consequences on the mental and physical health of medical students (1-10).

Stress is defined as the body's non-specific response to demands made upon it, or to disturbing events in the environment (11-12). It is not just a stimulus or a response but rather, it is a process by which we perceive and cope with environmental threats and challenges (13). Personal and environmental events that cause stress are referred to as stressors (14). In short, stress includes the emotional disturbances or changes caused by stressors. Linn & Zeppa (15)

have suggested that some stress in medical school training is needed for learning. Stress that facilitates learning is called 'favourable stress' and stress that suppresses learning is called 'unfavourable stress'. Depending upon their cultural backgrounds, personal traits, experience and coping skills, medical students may perceive the same stressors differently.

An optimal level of stress, referred to earlier as 'favourable stress', can enhance learning (16). However, excessive stress can lead to physical and mental health problems (17). It can reduce students' self-esteem (16,18) and may affect academic achievement and personal or professional development. Studies in the United States have suggested that the practice of medicine entails certain risks to the mental health of qualified medical students (19), and numerous studies have revealed high rates of psychological