



UNIVERSITI PUTRA MALAYSIA

**ACADEMIC PERFORMANCE AND ITS ASSOCIATED FACTORS
AMONG DEGREE STUDENTS OF FACULTY OF SPORTS
SCIENCES AND RECREATIONS, UiTM, SHAH ALAM**

EMAD MAGHSOUDI

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By

EMAD MAGHSUDI

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfilment of the Requirement for the Degree of Master of Science**

March 2013

DEDICATION

I would like to dedicate this thesis to

All students who had contributed to this study

For their great assistance and support for this research throughout the course of this
study

**Associate professor Dr. Lim Wai Kong, my supervisor, who greatly assisted and
guided me through the research and in writing this thesis**

**My beloved parents, Mohammad Hossein and Tahereh; my lovely siblings
especially Amin**

For their endless support, encouragement and great inspiration all the way since the
beginning of my research. I love you.

**Finally, I need to thank Professor Mirnalini Kandiah who constantly motivated
and supported me like a mother.**

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment
of the requirement for the degree of Master of Science

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Chairman: Associate Professor Lim Wai Kong, PhD

Faculty: Medicine and Health Sciences

As career competition grows more, the importance of students' academic performance at university has caught the attention of parents, policy makers and Ministry of Education as well. Since academic performance is one of the key paths to success in the working world, much effort is made to identify, evaluate, track and encourage the progress of students at university.

The relationship between personal attributes, health behaviours, health-related components of physical fitness and academic performance have not been thoroughly investigated simultaneously especially among Malaysian university students. The main objective of this study was to investigate the relationship between these factors and Cumulative Grade Point Average (CGPA), as an indicator of academic performance, among degree students. A total of 324 undergraduate students were

randomly selected from the Faculty of Sports Sciences and Recreations of University Teknologi MARA (UiTM) in 2011.

A pre-tested self-administered questionnaire was used to determine personal attributes (socio-demographic, health status and psychosocial factors) and health behaviours (smoking and alcohol consumption, diet, physical activity and sleep quality) of the subjects. Academic performance was measured by students' current CGPA. Anthropometric measurements were used to measure body fat percentage by using BIA, height, weight and waist circumference. In addition, physical fitness tests (VO_{2max} by using queen step box test, muscle strength and endurance using Camry Electronic Handgrip Dynamometer) and finger prick blood test (to measure random blood glucose, blood lipids and hemoglobin) by Reflotron® Plus instrument were used to determine health-related physical fitness of the subjects.

The mean (S.D) age of subjects was 21.77 ± 1.1 with almost half of them (50.1%) the age of 22 years old. Most of the students (49.5%) obtained second (upper) class followed by second (lower) (41.4%). Around 10.5% of the subjects were current smokers. Almost 92.3% of the subjects did not adhere to low fat eating. 67.9% of the subjects had high following by 23.1% moderate and 9.0% low physical activity level. Majority of (63.0%) the participants had normal body mass index.

One-way ANOVA showed a significant difference in the mean CGPA between different entry levels ($F(3, 316) = 33.56, p = 0.001$). Independent sample t-test demonstrated that the mean CGPA of those who were living on-campus was significantly higher than those who were living off-campus ($t(316) = 2.000, p =$

0.046). In addition, the mean CGPA of those who had sufficient allowance was significantly higher than those who had insufficient allowance ($t(317) = -2.062, p = 0.040$). The mean CGPA of those whose fathers had higher education level was significantly higher than those whose fathers had lower ($t(317) = -2.671, p = 0.008$). There was a significant difference in the mean CGPA between different household income levels ($F(3, 315) = 3.737, p = 0.012$).

The mean CGPA of current smokers was significantly lower than non-smokers ($t(317) = -3.302, p = 0.001$). The mean CGPA of supplement users was significantly higher than non-users ($t(322) = 2.200, p = 0.029$). There was a weak positive statistically significant relationship between low fat eating and CGPA ($r = 0.162, p = 0.004$).

There was also a weak positive statistically significant relationship between total physical activity MET-minutes/week ($r = 0.223, p = 0.003$) and moderate MET-minutes/week ($r = 0.120, p = 0.019$) with CGPA. The mean CGPA of those who had never experienced sleep disturbance during the past month was significantly higher than those who had sometimes experienced sleep disturbance ($p = 0.003$).

There was no significant relationship between body fat and academic performance ($r = -0.041, p = 0.481$). There was no significant relationship between BMI and academic performance ($r = -0.092, p = 0.103$). There was a weak, negative significant relationship between waist circumference and CGPA ($r = -0.120, p =$

0.034). There was a weak negative significant relationship between VO_{2max} and CGPA ($r = -0.128$, $p = 0.029$). There was no statistically significant relationship between blood glucose, serum total cholesterol, HDL-cholesterol triglyceride, hemoglobin and academic performance. However, there was a negative medium significant relationship between LDL-cholesterol and CGPA ($r = -0.505$, $p = 0.017$). There was a weak negative significant relationship between muscle strength and CGPA ($r = -0.143$, $p = 0.018$).

Overall, multivariate linear regression analysis showed that entry level, smoking, living, household income and sleep disturbance during the past year explained 22.8% of the variation in academic performance. Entry level contributed 16.0% of the variation in academic performance. Smoking contributed 3.2% of the variation in academic performance. Living contributed 1.5% of the variation in academic performance. Household income contributed 1.3% of the variation in academic performance. Finally, sleep disturbance during the past year contributed 0.8% of the variation in academic performance.

In conclusion, entry level, smoking, living, household income and sleep disturbance during the past year contributed significantly towards academic performance. Results should be interpreted with caution. It cannot be inferred from these data that health behaviours and health-related components of physical fitness cause academic performance to improve. It is more likely that physical and mental processes influence each other in ways that are still being understood.

Abstrak tesis yang dikemukakan kepada senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

Title malay

Oleh

EMAD MAGHSOUDI

March 2013

Pengerusi: Profesor Madya Lim Wai Kong, PhD

Fakulti: Perubatan dan Sains Kesihatan

Seiring dengan peningkatan persaingan kerjaya, kepentingan pencapaian akademik pelajar di university telah menarik perhatian ibubapa, penggubal dasar dan termasuk Kementerian Pelajaran. Berikutan prestasi akademik adalah salah satu laluan utama untuk kejayaan di duniakerja, pelbagai usaha telah dibuat untuk mengenalpasti, menilai, memantau dan menggalakkan kemajuan pelajar-pelajar di universiti.

Hubungan antara sifat-sifat peribadi, perilaku kesihatan, komponen-komponen yang berkaitan dengan kesihatan kecergasan fizikal dan prestasi akademik, tidak pernah dikaji dengan teliti pada masa yang sama terutama di kalangan pelajar-pelajar university di Malaysia. Objektif utama kajian ini adalah untuk mengkaji hubungan antara faktor-faktor ini dan Purata Nilai Gred Kumulatif (PNGK), sebagai petunjuk prestasi akademik di kalangan pelajar ijazah. Prestasi akademik telah dinilai dengan PNGK semasa pelajar. Satu soal selidik sendiri yang diprauji telah digunakan untuk menentukan sifat-sifat peribadi (sosio-demografi, status kesihatan dan faktor-faktor psikososial) dan tingkah laku kesihatan (merokok dan pengambilan alkohol,

pemakanan, aktiviti fizikal dan kualiti tidur) responden. Ukuran antropometri telah digunakan untuk mengukur peratusan lemak badan dengan menggunakan BIA, tinggi, berat dan lilitan pinggang. Di samping itu, ujian kecergasan fizikal (VO₂max dengan menggunakan langkah ujian kotak langkah queen, kekuatan otot dan daya tahan menggunakan Dynamometer Genggaman Elektronik Camry) dan ujian darah tusukan jari (untuk mengukur tahap glukosa dalam darah, lipid darah dan hemoglobin)



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Beyond Nutrition (which sometimes seemed to be nothing more than a distant dream) Amin has been a companionable brother for many years as well as a friend and possesses the greatest quality in brotherhood.

Finally, I thank my parents for supporting me throughout all my studies during these years for supporting me financially and mentally to complete my writing up.

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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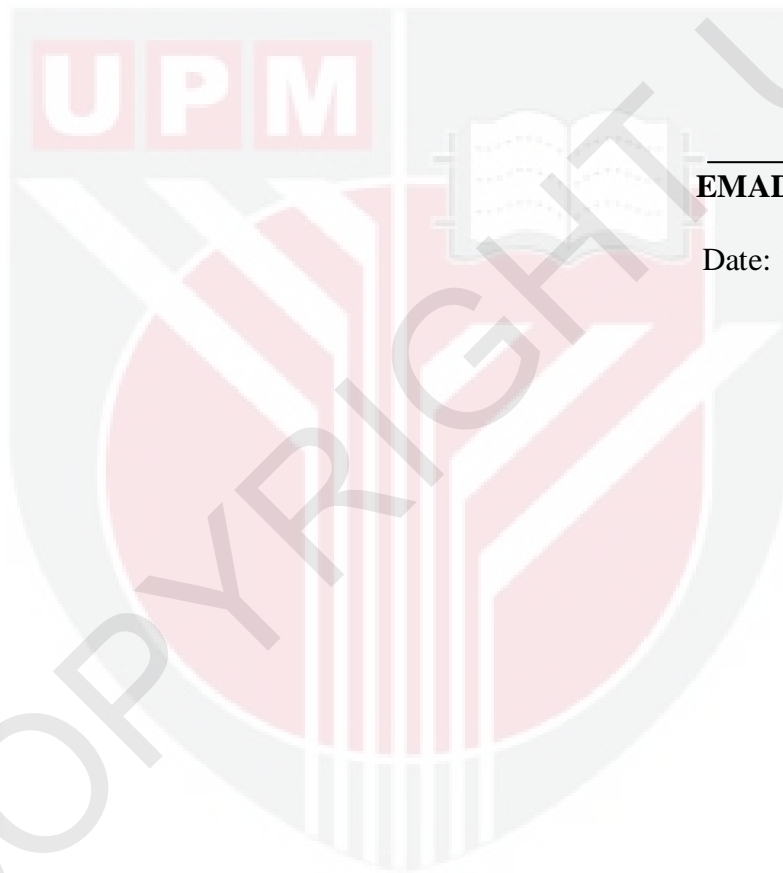
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DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Putra Malaysia or other institutions.



EMAD MAGHSOUDI

Date: 15 March 2013

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