UNIVERSITI PUTRA MALAYSIA

FACTORS ASSOCIATED WITH BODY WEIGHT STATUS AMONG IRANIAN ADOLESCENTS STUDING IN KUALA LUMPUR

MARYAM ZAREI

FPSK(m) 2011 13

DEDICATION

To The Lord of Time & Age Imam Zaman

To all adolescents martyr who martyred in the way of protecting & defending of my homeland

To The Soul of My Martyred Father who sacrificed himself to save Islam, my country and people, may his soul rest in peace, who led me on the path to hard work perseverance, optimism, reliance of GOD

To My Most Beloved Mother for all her True love, Favour, Effort Support, Encouragement, Patience from My Childhood

To My Dear Sisters and Brothers who have filled my life with joy and happiness.

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

FACTORS ASSOCIATED WITH BODY WEIGHT STATUS AMONG IRANIAN ADOLESCENTS STUDING IN KUALA LUMPUR

By

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December 2010

Chairman: Assoc. Prof. Mary Huang Soo Lee, PhD

Faculty: Medicine and Health Sciences

A cross-sectional study was conducted to determine factors associated with body weight status among Iranian adolescents in Secondary and High Schools run by the Embassy in Kuala Lumpur. Out of the 296 respondents, 150 (50.3%) were male and 146 (49.3%) were female. Height and weight were taken and body mass index (BMI) was calculated. Results showed that 18.6% and 23.6% of adolescents were severe thin and thin, while 14.5% and 11.1% were overweight and obese respectively. Almost one third (32.1%) of them had normal BMI. Body weight status was found to be significantly associated with age (r=0.23, $p<0.05$), gender ($\chi^2 =11.18$, $p< 0.05$) and grade ($\chi^2=34.172$, $p<0.05$).

Physical Activity Questionnaire for children (PAQ-C) and adolescents (PAQ-A) used to assess physical activity found more than half of the respondents in the low,

14.5% in the moderate and only 4.7% of the respondents were in high physical activity level. Males had significantly higher physically activity scores than females (p<0.05) but there was no significant association between body weight status and physical activity level. Three-quarters 75% of the respondents had breakfast daily while 25% had never had breakfast. The most frequently consumed foods items include cooked oil, rice, white bread, chips, sandwich, tea, meat. Fruits, milk and most of vegetables among the foods less frequently consumed. Because Dietary Reference Intake (DRIs) was different by age groups respondents were separated into two groups (11 to 13 and 14 to 17) by age. In both groups the energy, carbohydrate and protein intakes were lower than DRIs. Intake of all micronutrients among in both age groups and sexes were found to be higher than DRI, except vitamins B1, B2, C, D and E, folate, zinc, magnesium, potassium, calcium and phosphorus.

Only 39.5% of the respondents correctly estimated their own weight status while 9.8% under estimated their weights and 50.7% who overestimated their weights. Significantly more males correctly estimated their weights than females. There was a tendency for the females to overestimate their weight and therefore it was not surprising that 72.6% of them expressed their desire to lose weight while 60% of the males wanted to gain weight. There was significant association between body weight status and perception of ideal body size (r=0.269 and p=0.000) and healthy body size (r=0.250, p=0.000). In this instance more respondents with body weight status in the severe thinness and thinness categories like to have a bigger body size compared to the respondents who were overweight and obese. No significant association was

found between their perception of the current body size and body weight status. In general more females desired a smaller body size than males who more often expressed the desire to have a bigger body size.

Multiple regression analyses showed that age and physical activity contributed significantly to the prediction of 10% of the variance of body weight status among the respondents. This study provides some information for the Iranian Secondary and High School to undertake intervention programs to improve the body weight status of their students. .

Abstrak tesis yang dikemukakan kepoda Senat Universiti Putra Malaysia Sebagi memenuhi keperluan untuk ijazah Master Sains

FAKTOR-FACTOR YANG BERKAITAN DENGAN STATUS BERAT BADAN DI KALANGAN REMAJA IRAN YANG BELAJAR DI KUALA LUMPUR

Oleh

MARYAM ZAREI

Jun 2011

Pengerusi: Professor madya. Mary Huang Soo Lee, PhD

Fakulti: Perubatan dan ains Kesihatan

Satu kajian rentas dijalankan untuk menentukan faktor-faktor yang berkaitan dengan status berat badan di kalangan remaja Iran yang bersekolah di Kuala Lumpur. Daripada 296 responden, 150 (50.3%) adalah pelajar lelaki dan 146 (49.3%) adalah pelajar perempuan. Tinggi dan berat diambil dan index jisim badan (IJT) dihitung berdasarkan panduan. Keputusan kajian menunjukkan bahawa 18.6% dan 23.6% remaja adalah sangat kurus dan kurus, manakala 14.5% dan 11.1% didapati berlebihan berat badan dan kegemukan. Lebih kurang 32.1% remaja didapati mempunyai berat badan normal. Status berat badan adalah berkait secara signifikan dengan umur (r=0.23, p<0.05), jantina (χ^2=11.18, p< 0.05) dan gred (χ^2=34.172, p<0.05).

Bagi mengukur kegiatan aktiviti, soalselidik aktiviti fizikal bagi kanak-kanak dan remaja (*"Physical Activity Questionnaire for children (PAQ-C)" and adolescents*

(PAQ-A)) telah digunakan dan didapati lebih daripada separuh pelajar didapati mempunyai tahap aktiviti fizikal yang rendah, 14.5% mempunyai tahap sederhana dan hanya 4.7% mempunyai tahap aktiviti fizikal yang tinggi. Remaja lelaki mempunyai skor yang lebih tinggi berbanding remaja perempuan dalam aktiviti fizikal ($p<0.05$), namun tiada perkaitan signifikan diantara berat badan dan tahap aktiviti fizikal. 75.0% remaja mengambil sarapan pagi setiap hari manakala 25.0% tidak pernah mengambil sarapan pagi. Makanan yang kerap diambil termasuk minyak masak, nasi, roti putih, kentang goreng, sandwic, teh, dan daging. Buah-buahan, susu dan kebanyakan sayur-sayuran merupakan antara makanan yang kurang diambil remaja..

Disebabkan *"Dietary Reference Intake (DRIs)"* adalah berbeza mengikut kumpulan umur, responden kajian dibahagi kepada dua kumpulan umur (11 tahun ke 13 tahun dan 14 tahun ke 17 tahun).Dalam kedua-dua kumpulan umur tersebut, pengambilan tenaga, karbohidrat, dan protein adalah lebih rendah berbanding dengan DRIs. Kesemua pengambilan mikronutrien untuk kedua-dua kumpulan umur dan jantina didapati melebihi cadangan DRIs, kecuali vitamin B1, B2, C, D dan E, folat, zink, magnesium, kalium, kalsium dan fosforus.

Seramai 39.5% responden yang menganggar berat badan mereka dengan tepat , manakala 9.8% telah menganggar berat badan lebih rendah dan 50.7% mengangar berat badan mereka lebih tinggi dari berat badan sebenar. Terdapat kecenderungan bagi remaja perempuan untuk mengangar berat badan mereka berlebihan dari berat badan sebenar. Oleh kerana itu, tidak memeranjatkan bahawa 76.2% daripada mereka mempunyai keinginan untuk mengurangkan berat badan manakala 60% remaja lelaki ingin menambah berat badan mereka. Terdapat perkaitan yang

signifikan antara status berat badan dan persepsi saiz badan ideal (r=0.269 and p=0.0001) dan saiz badan sihat (r=0.250, p=0.0001). Dalam kata lain, responden yang sangat kurus dan kurus menginginkan saiz badan yang lebih besar berbanding dengan mereka yang berlebihan berat badan dan kegemukan. Namun demikian, tiada perkaitan yang signifikan didapati antara saiz badan semasa dan status berat badan . Secara amnya, lebih ramai remaja perempuan menginginkan saiz badan yang lebih kecil berbanding remaja lelaki yang menginginkan saiz badan yang lebih besar.

Regresi pelbagai menunjukan bahawa umur dan aktiviti fizikal menyumbang secara signifikan kepada ramalan 10% varians status berat badan dikalanagn responden. Kajian ini memberikan maklumat kepada Sekolah Menengah dan Tinggi Iran untuk mengambil langkah dalam program bagi memingkatkan status berat badan di kalangan pelajar mereka ke tahap yang lebih baik.

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To All of Them: Thank You So Much

Maryam Zarei

Date: June2011

I certify that an Examination Committee has met on 17 of June 2011 to conduct the final examination of Maryam Zarei on her Master thesis entitled "Factors Associated With Body Weight Status Among Iranian Adolescents Studying In Kuala Lumpur" in accordance with Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A)] 15 March 1998. The Committee recommends that the Student be awarded the relevant Master of Science.

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Date: 23 August 2011

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

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DECLARATION

I 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 and currently is not submitted for any other degree at Universiti Putra Malaysia or other institutions.

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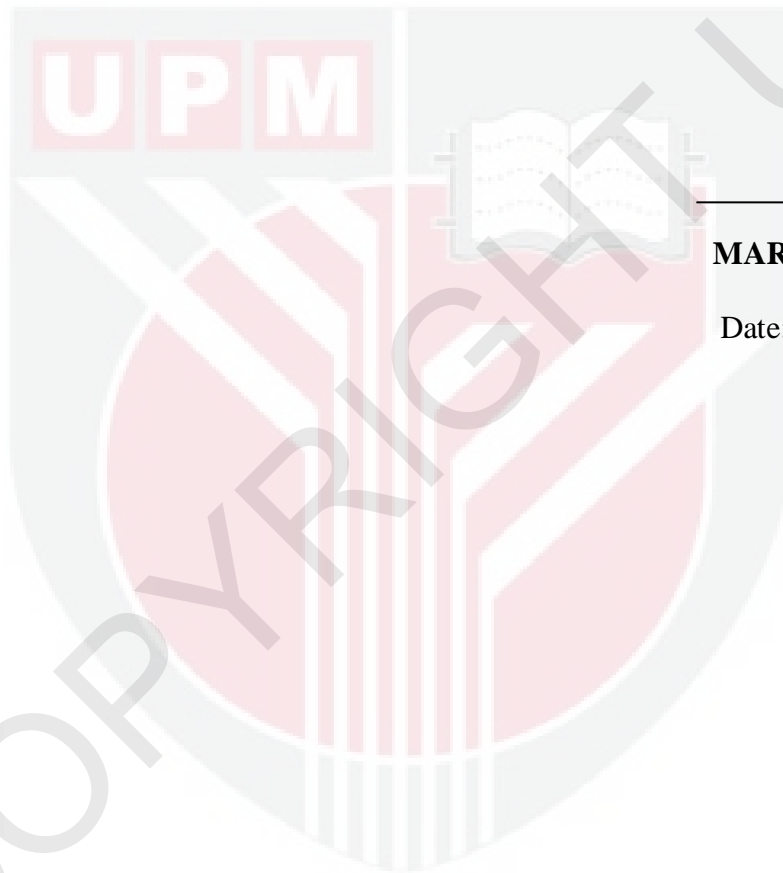
MARYAM ZAREI

Date: 17 June 2011

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