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**Assessment of Selected Health Risk Behaviors among
Students of Al-Quds University: Knowledge and
Determinants**

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**Assessment of Selected Health Risk Behaviors among
Students of Al-Quds University: Knowledge and
Determinants**

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Dedication

To spirit of my dear father who I wished to be with me in this special moments of my life.

To my dear mother which helped me in the first steps of science and knowledge.

To my dear wife and my kids who helped me to complete this stage of science and knowledge.

To my brothers and sisters which are they always side by side with me in every way.

To my in-laws for their encouragement and support.

Declaration

I certify that this thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed:

Amer Yousef Mohammad Ayyad

Date: **4.6.2007**

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Conceptual definitions

Current smokers: Those who are smoking at the time of the data collection and are currently smoking cigarettes every day (regular) or some days (occasional).

Non-current smokers: those who are not smoking at the time of the data collecting and that they currently not smoke cigarettes.

Underweight: a person who has a body mass index less than 18.5

Normal weight: a person who has a body mass index from 18.5 to 24.9

Overweight: a person who has a body mass index from 25 to 29.9

Obese: a person who has a body mass index equal or over 30

Physical activity concept: any bodily movement produced by skeletal muscles that result in energy expenditure.

Physical activity duration: the length of time spent participating in physical activity as self reported by the respondent within a reporting period.

Physical activity frequency: the number of times the respondent self-reported participating in physical activity, within a reporting period.

Vigorous physical activity: a person who engaged in vigorous activities such as jogging, swimming, yard work, and bicycling in high speed, 2-3 times per week or more for at least 20 minutes per occasion, that causes large increasing in breathing and heart rate.

moderate physical activity: a person who engaged in moderate activities such as carrying light things, bicycling in normal speed, washing car, and house work, 2-3 times per week or more for at least 20 minutes per occasion, that causes small increasing in breathing and heart rate.

Low physical activity: a person who engaged in very little physical activity, such as walking inside the house or in or to the university, in addition to recreational walking.

Physical inactivity: all time that is a person spends it in sitting such as time in sitting for study, for work on computer, visits of friends, viewing TV, and in home.

Acronyms

ACSM: American College of Sports Medicine

BMI: Body Mass Index

BP: Blood Pressure

CAD: Coronary Artery Disease

CDC: Disease Control & Prevention

CFLRI: Canadian Fitness and Lifestyle Research Institute

CHD: Coronary Heart Disease

CHP: Chronic diseases and Health Promotion

CI: Confidence Interval

COPD: Chronic Obstructive Pulmonary Disease

CVD: Cardiovascular Diseases

DM: Diabetes Mellitus

DNA: Deoxyribonucleic Acid

EU: European Union

HDL-C: High-Density Lipoprotein Cholesterol

LDL-C: Low -Density Lipoprotein Cholesterol

MFMER: Mayo Foundation for Medical Education and Research

MOH: Ministry Of Health

MRL: Merck Research Laboratories

NCD: Non-Communicable Diseases

NCI: National Cancer Institute

NIDDK: National Institute of Diabetes and Digestive and Kidney diseases

NWCR: National Weight Control Registry

PCBS: Palestine Central Bureau of Statistics

PR: prevalence ratio

SD: Standard Deviation

SES: Socio-Economic Status

UNPD: United Nations Population Division

USDHHS: United State Department of Health and Human Services

VLDL: Very Low-Density Lipoprotein

WHO: World Health Organization

Abstract

Background: Chronic non-communicable diseases like cardiovascular diseases, cancer, chronic lung diseases, and diabetes mellitus are considered the major causes of death in the world. Risk factors like smoking, obesity, and physical inactivity, are associated with a variety of chronic diseases. The prevalence of selected risk factors and their determinants have rarely been studied among Palestinian young generation.

Purpose: To estimate the percentage of selected risk factors (obesity) and behaviors (smoking, and physical inactivity), and to investigate some of determinants of these risk factors among students (male, female) aged (18-24) of Al-Quds University.

Methods: A cross-sectional-study design was used. The data were collected by questionnaire and physical examination. Information regarding smoking habits and physical activity in addition to determinants of obesity was collected through questionnaire, whereas both weight and height were measured by physical examination. The total number of undergraduate students which are considered regular students were 6203, 3048 (49%) were males and 3155(51%) were females. A non-random convenience sample was used to select study participants. Between April and July2005, 400 questionnaire were distributed, and the numbers of respondents were 330 students with the response rate of 82.5%.

Results: 33.3% of the students studied were smokers, whereas 66.7% where non smokers. Smoking was significantly higher in males than females ($P=0.00$). In addition, having family smoking members ($P=0.01$), having friends smoking ($P=0.00$) were the only significant determinants of smoking among these students. Logistic regression analysis revealed that the same factors significantly contributed to smoking after adjusting for potential confounding factors. Most of the smokers (98.2%) thought cigarettes were bad for health, and more than one third (46.36%) thought the most probable health problem caused by smoking was different types of cancer.

The results showed that 25.5% of the students studied were overweight (BMI 25-29.9 Kg/ m²) and 2.4% were obese (BMI \geq 30 Kg/ m²). Eating snacks ($P=0.01$), and eating breakfast ($P=0.03$) were both significantly associated with high BMI. The results of logistic regression analysis showed that eating snacks between meals was the only significant factor that was associated with high BMI .Eating snacks increased the risk of high BMI by 2 folds.

There was no compatibility between the perception of weight problem and actual body mass index. Most of the participants (96.4%) thought that overweight and obesity were bad for their health, and 70.9% thought that overweight and obesity cause chronic diseases.

The results indicate that most of the students (63%) were physically active and 37% were inactive. Engaging in vigorous physical activity was significantly higher in males than females ($P=0.001$), while engaging in moderate physical activity was statistically significantly higher in females than males ($P=0.001$). Gender ($P=0.03$), time constraints ($P=0.00$), unavailability of place ($P=0.00$), lack of skills ($P=0.01$), lack of money ($P=0.00$), and the belief that physical activity is not important ($P=0.00$), were the main reasons for not engaging in physical activity. Logistic regression analysis revealed that the same factors were significant determinants of not engaging in physical activity. After adjusting for all factors, gender and unavailability of place were no longer statistically significant determinants of physical inactivity. However, the Odds ratios for the other factors were altered slightly, but this did not affect the statistical significance. Most of the participants (97.9%) thought that physical activity were good for their health, while 47.9% thought that chronic diseases were the most probable consequences of physical inactivity.

Conclusion: Smoking was highly prevalent among students, especially males. Peers and family had the strongest influence on smoking behavior. More than one quarter of students were considered overweight and more than one third of the students were not engaging in any physical activity. The results indicate that unhealthy behaviors are prevalent. Therefore there is a need to intervene in order to promote healthy behaviors among the university students.

الخلاصة

خلفية عن البحث: الأمراض المزمنة غير المعدية مثل أمراض القلب، السرطان، أمراض الرئة المزمنة، وداء السكري تعتبر من الأسباب الرئيسية التي تؤدي إلى الموت في العالم. من العوامل التي تؤثر على الصحة سلباً و قد تؤدي إلى الإصابة بمختلف الأمراض المزمنة التدخين، السمنة، وحمول النشاط البدني. إن نسبة إنتشار هذه العوامل وبعض محدداتها نادراً ما درست بين جيل الشباب الفلسطيني.

الغرض من البحث: لتقدير نسبة إنتشار عوامل الخطر (سمنة) وسلوك الخطر (تدخين، وحمول طبيعي) المختارة، وللتحري عن بعض من محددات هذه العوامل بين الطلاب (ذكر، أنثى) بعمر (18-24) في جامعة القدس.

طرق البحث: نمط إجراء الدراسة كان وصفيًا. البيانات جُمعت عن طريق الاستبيان والفحص الفسيولوجي. اشتمل الاستبيان على معلومات بخصوص سلوك التدخين والنشاط الطبيعي بالإضافة إلى محددات السمنة، بينما كل من الوزن والطول أخذت بالفحص الفسيولوجي. كان العدد الكلي لطلاب الجامعة 6203 طالب و هذا العدد يمثل عدد الطلاب المنتظمين في الدراسة، 3048 (49%) كانوا ذكور و 3155 (51%) كانوا اناث. استخدمت طريقة العينة السهلة الغير عشوائية لاختيار الطلبة المشاركين في الدراسة. بين أبريل/نيسان و يوليو/تموز 2005، 400 استبيان قد وزعت، و عدد المستجيبين كان 330 طالب بنسبة الرد 82.5%.

النتائج: 33.3% من الطلاب المشاركين في الدراسة كانوا مدخنين، بينما 66.7% غير مدخنين. التدخين كان أعلى جداً في الذكور من الإناث ($P=0.00$). بالإضافة إلى، وجود افراد من العائلة مدخنين ($P=0.01$)، أصدقاء مدخنون ($P=0.00$) كانوا المحددين الهامين الوحيدين للتدخين بين هؤلاء الطلاب. كشف تحليل الإنحدار اللوجستيكي بأن نفس هذه العوامل ساهمت في التدخين بشكل ملحوظ بعد التعديل لبعض العوامل. أغلب المدخنين (98.2%) اعتقدوا بان السجائر سيئة للصحة، وأكثر من ثلث (46.36%) المدخنين اعتقدوا بان المشكلة الصحية الأكثر احتمالاً ان تنتج من التدخين كانت أنواع مختلفة من السرطان.

اظهرت النتائج بأن 25.5% من الطلاب المشاركين في الدراسة كان عندهم زيادة وزن، و 2.4% كان عندهم سمنة. أكل الوجبات الخفيفة ($P=0.01$)، و تناول الفطور كل يوم ($P=0.03$) ارتبطت بشكل ملحوظ بدليل كتلة الجسم الفعلي العالي. أظهرت نتائج تحليل الإنحدار اللوجستيكي بان أكل وجبات خفيفة بين وجبات الطعام كانت العامل الهام الوحيد الذي يرتبط بزيادة خطر دليل كتلة الجسم الفعلي العالي، حيث ان اكل وجبات خفيفة يزيد الخطر بضعفين عن الذين لا ياكلون وجبات خفيفة. لم يكن هناك توافق بين فهم الوزن ودليل كتلة الجسم الفعلي. أغلب المشاركين في الدراسة (96.4%) اعتقدوا بان زيادة الوزن و السمنة سيئة لصحتهم، و 70.9% من المشاركين اعتقدوا بأن زيادة الوزن و السمنة تسبب الأمراض المزمنة.

تُشير النتائج بأن أغلب الطلاب (63%) كانوا نشيطون جسدياً و (37%) كانوا خاملون. النشاط الطبيعي النشط كان أعلى جداً في الذكور من الإناث ($P=0.001$)، بينما النشاط الطبيعي المعتدل كان أعلى جداً بشكل إحصائي في الإناث من الذكور ($P=0.001$). الجنس ($P=0.03$)، قيود الوقت ($P=0.00$)، عدم توفر المكان ($P=0.00$)، قلة المهارات ($P=0.01$)، قلة المال ($P=0.00$)، و الاعتقاد بان النشاط الطبيعي ليس مهم ($P=0.00$)، كانت الأسباب الرئيسية لعدم ممارسة النشاط الطبيعي.

كشفت تحليل الانحدار اللوجستيكي بأن نفس هذه العوامل كانت محدّدت هامة في عدم ممارسة النشاط الطبيعي. بعد التعديل لكل العوامل، الجنس وعدم توفر المكان لم يعودا محددين هامتين بشكل إحصائي من الخمول الطبيعي. على أية حال، نسب الإحتمالات للعوامل الأخرى عدلت بعض الشيء، لكن هذه لم تؤثر على الأهمية الإحصائية. أغلب المشاركين (97.9%) إعتقدوا بأن النشاط الطبيعي جيد لصحتهم، بينما 47.9% إعتقد بأن الأمراض المزمنة كانت النتائج الأكثر إحتمالاً من الخمول الطبيعي.

الخاتمة: ساد التدخين بين الطلاب و خصوصاً الذكور منهم، كما ان للعائلة و النظراء الاثر الاقوى في انخراط المبحوثين في سلوك التدخين. اعتبر أكثر من ربع الطلاب من ذوي زائدي الوزن فيما لم ينخرط ما يزيد عن الثلث في أي نشاط جسدي. تشير النتائج الى سيادة السلوك غيرالصحي، الامر الذي يدعو الى التدخلات الهادفة الى الترويج للسلوك الصحي بين صفوف طلاب الجامعة.

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