

Evaluation of a Nutrition Educational Intervention Program of the Dietary Habits for Medical Students in a Private University in Egypt

Thesis

Submitted For Partial Fulfillment of Master
Degree in Public Health

By □

Basma Emad Ahmed

M.B.B.Ch

Demonstrator of Public Health-
Misr University for Science and Technology

Under Supervision of

Prof. Dr. Samia Ismael El Damaty

Professor of Public Health – Department of Community,
Environmental and Occupational Medicine
Faculty of Medicine-Ain Shams University

Assis. Prof. Dr. Sahar Ahmed Dewedar

Assistant Professor of Public Health – Department of Community,
Environmental and Occupational
Medicine Faculty of Medicine-Ain Shams University

Dr. Aya Mostafa Kamal El-Din

Lecturer of Public Health – Department of Community,
Environmental and Occupational Medicine
Faculty of Medicine-Ain Shams University

**Faculty of Medicine
Ain Shams University**

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تقييم برنامج تداخلى تعليمى تغذوى عن العادات الغذائية مقدم لطلبة الطب في إحدى الجامعات الخاصة بمصر

رسالة

توطئة للحصول على درجة الماجستير في الصحة العامة

مقدمة من

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بكالوريوس الطب و الجراحة

معيدة بقسم الصحة العامة- جامعة مصر للعلوم و التكنولوجيا

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أستاذ الصحة العامة بقسم طب المجتمع

والبيئة وطب الصناعات- كلية الطب جامعة عين شمس

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أستاذ مساعد الصحة العامة بقسم طب المجتمع

والبيئة وطب الصناعات - كلية الطب جامعة عين شمس

الدكتورة/ آية مصطفى كمال الدين

مدرس الصحة العامة بقسم طب المجتمع

والبيئة وطب الصناعات- كلية الطب جامعة عين شمس

كلية الطب

جامعة عين شمس

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قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

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DR. Aya Mostafa Kamal El-Din

Lecturer of Public Health – Department of Community, Environmental
and Occupational Medicine, Ain Shams University

**Faculty of Medicine
Ain Shams University**

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Introduction

A healthy lifestyle, proper nutrition and physical activity have been found to be protective factors against many diseases, including cardiovascular diseases, hypertension, various cancers, obesity and related diseases ^[1]. During recent decades, almost all the Arab countries have witnessed dramatic lifestyle changes including meal pattern ^[2, 3]. Egypt has been experiencing a nutrition transition in the context of abundant dietary energy availability, and moderate fat intakes ^[4]. College students between the ages of 18 and 24 years gain new experiences and personal freedom as well as develop a sense of identity as they ascend from adolescence to adulthood. Unfortunately, during this phase, the tendency to engage in unhealthy dieting, meal skipping, fast food consumption and minimal physical activity is rather common ^[5].

The prevalence of obesity is increasing worldwide at an alarming rate in both developing and developed countries. It has become a serious epidemic health problem, estimated to be the fifth leading cause of mortality at global level ^[6]. According to WHO about 35% of adults aged 20 years and older are overweight ($BMI \geq 25 \text{ kg/m}^2$) and about 10% of men and 14% of women in the world are obese ($BMI \geq 30 \text{ kg/m}^2$). The worldwide prevalence of obesity has nearly doubled between 1980 and 2008 ^[7]. Approximately two thirds of the Egyptian populations (62.2%) are overweight and one third (31.3%) is obese. About 40% of Egyptian population suffers from raised blood pressure and 37% has raised cholesterol level ^[8]. According to previous study have been conducted on 1st and 2nd year students of university Malaysia Sarawak indicate that Knowledge on healthy eating of the students was not satisfactory. Only one third of the students knew the recommended daily serving size of fruits, six basic nutrients could be listed by 16.8% and only 2.2% could mention food groups to be taken as per Food Guide Pyramid [9]. Another study have been conducted on female students from Cairo Faculty of Education and El-Mania Faculty of Education mentioned that overweight

and obese students got total protein, carbohydrate and energy intake more than recommended dietary allowance while consume less calcium, zinc and vitamins ^[10].

Nutrition education is any combination of educational strategies designed to facilitate voluntary adoption of food choices and other food- and nutrition- related behaviors conducive to health and well-being, it is delivered through multiple venues and involves activities at the individual, community and policy levels ^[11]. It is widely used for a range of population groups as a medium to deliver healthy diet and nutrition information; however, this type of intervention is still rarely implemented for college students especially privates universities. That's why there are many reasons for nutritional education to be a part of the curriculum in medical universities as early intervention may have enormous impact in disease prevention also medical students at least must have the basic knowledge of nutrition for themselves and as they will be future doctors. For that we need to have some studies investigating how deep is the problem, what the medical student's attitude towards this issue is and why they didn't use healthy dietary habits among their life and to measure if they are satisfied with their nutritional knowledge.

Aim of the Work

Goal:

- Improvement of dietary habits among medical university students.

Specific Objectives:

1. To determine the knowledge, attitude and practice of Misr University medical students towards healthy dietary habits.
2. To identify prevalence of obesity of the participating students by measuring weight, height and calculating body mass index.
3. To implement nutrition educational intervention program on medical students to increase their awareness on the importance of healthy dietary habits.
4. To evaluate the impact of the implemented nutrition educational intervention program:
 - By reassessing knowledge, attitude and practice of same students post-implementation of the program towards healthy dietary habits.
 - By remeasuring weight, height and calculating body mass index of the participating student's post-implementation of the program.

Subjects and Methods

- Will be carried out during academic year 2013/2014.

A. Study Setting:

- Misr University for Sciences and Technology (MUST), 6th of October City.

B. Subjects:

- Target population: include medical students between ages 18-24.

C. Study design:

- KAP study (Knowledge, attitude and practice) before and after nutritional educational intervention program.

Methods:

Preliminary step (Pre intervention):

- A redesigned self-administered questionnaire will be filled by the students after their agreement to participate in the study to evaluate their baseline knowledge, attitude and practice towards healthy dietary habits. Prior to filling out questionnaire, the students will be informed about the study and will be given instruction on how to fill out the questionnaire completely and truthfully.
- The questionnaire will be in English language.
- The study questionnaire will collect data covering the following items:
 - Sociodemographic characteristics of the students:
- Gender, age, marital status, nationality and smoking.
 - Nutritional screening:
 - Knowledge:
- Questions about health, healthy diet and lifestyle.

- Questions about effect of good nutrition on health.
- Sources of knowledge about healthy diet; T.V, internet, friends; relatives.
- Knowledge about places providing information about healthy dietary habits.
 - Attitude:
- Student's attitude about health, healthy nutrition, healthy weight and effect of over weight on health.
- Satisfaction with their health and nutritional level.
- Thinking to change their nutritional pattern to improve their health.
- Acceptance to attend health education program.
 - Practice:
- Questions on frequency of their meals and snacks.
- Questions on their consumption of vegetables and fruits.
- Questions on their consumption of fatty foods, fast foods, sugars and salty foods.
- Questions on their consumption of dairy products, meats and fishes.
- Questions related to their lifestyle practice such as physical activities and exercises and smoking

Anthropometric measurements:

- Including weight, height, waist circumference and body mass index to measure prevalence of obesity among the participating students.

Investigation:

- Blood pressure.

Intervention Nutritional Educational Program:

- **Schedule:**

- All students will be asked to share in the study and who will agree will fill the pre intervention questionnaire and undergo anthropometric measurements. The students that will attend all the sessions will be able to fill the post intervention questionnaire.
- Health education sessions will be applied in the free time between the lectures during which handout of healthy dietary habits will be distributed to students. The program will be in form lectures in small classes. The schedule of the program will be three lectures per week 30 minutes for each lecture for one week and will include about 20 to 30 students. The program will be continued for three months.

- **Content:**

- The contents of the sessions will be delivered to the students by using presentation and handouts contain information about healthy diet.
- The information will be given to students through these sessions focus mainly on;
- Definition of nutrition and healthy diet.
- Identify reasons to adopt healthy eating pattern.
- Use food guide pyramid to assess diet for variety, proportion and moderation.
- Make healthy food choices.
- List of alternatives food types that are good sources of fiber, complex carbohydrate, protein, calcium, iron and vitamins.
- Importance of physical exercise and effect of practicing healthy lifestyle on health

Evaluation of the program (post intervention):

- Evaluation of student's knowledge, attitude and practice towards healthy dietary habits will be performed by using the same questionnaire.
- Remeasure weight, height, waist circumference and calculating BMI for participating students.
- Remeasure blood pressure for participating students.

Study Sample:

A) Sample size:

- Assuming that the level of knowledge among medical students in MUST will increase to 30% post intervention, sample size is 211, at confidence level 95% and a 5% significance level. To cover a dropout rate of 20%, sample size is increased to 253 students.

B) Sampling Method:

- A stratified random sample: will be applied to select the students between ages 18-24.

A Pilot study:

- Will be performed as an initial step for this study to test reliability of the questionnaire and to detect the time needed for the field work.

Statistical analysis:

- Data will be revised, entered on personal computer, analyzed using SPSS program and suitable statistical tests will be applied.

Ethical consideration:

- Approval from faculty of medicine at Misr University for Science and Technology.
- Approval from Ethical Committee at Faculty of Medicine Ain Shams University will be obtained.
- Oral informed consent will be obtained from the students before filling of the questionnaire.
- Confidentiality of obtained information will be kept.

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