Study of Gender Differences in Health Promoting Behaviors for a Sample of Students Attending Institute of Technology, Baquba

دراسة الاختلافات بين الجنسين في السلوكيات المعززةللصحة لدى عينة من طلبة المعهد التقني- بعقوبة

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المستخلص:

الهدف: ايجاد اي اختلافات بين الجنسين في السلوكيات المعززة للصحة لدى عينة من طلبة المعهد التقني/ بعقوبة.

المنهجية: دراسة مقطعية- تحليلية اجريت لعينة عشوائية من الطلبة في المعهد التقني / بعقوبة، خلال الفترة من 10 تشرين الثاني 2015 ولغاية 10 نيسان 2016. تم استخدم استبيان مكون من محورين حول السلوكيات المعززة للصحة (محور الغذاء و محور الفعاليات اليومية مثل فترة النوم، الوقت المحدد للنهوض من الفراش و الذهاب الى النوم ، و المدة المحددة للمشي لكل اسبوع). تم توزيع الاستبيان على الطلبة عشوائيا و بشكل تطوعي وقت الاستراحة ما بين المحاضرات بعد ذلك ، تم جمع الاستبيانات بعد اكمالها من قبل الطلبة، ثم تم تحليلها بستخدام برنامج الحزم الا حصائية للعلوم الاجتماعية (الاصدار 18) لتمثيل المتغيرات على شكل اعداد، نسب مئوية و متوسطات، استخدم الاختبار التائي (t-test) لقياس مستوى المعنوية بين المتغيرات.

النتائج: تشير نتائج الدراسة ان معدل تناول الفطور يوميا (70.1%) و معدل الانتظام في وجبات الطعام يوميا (52.8%) كان اعلى لدى الطلبة الذكور من الاناث مع ايجاد ارتباط احصائي معنوي ، اظهرت نتائج الدراسة ان نسبة تناول الاغذية المتنوعة كانت اعلى لدى الطلبة الاناث (77.6%) من الذكور (68.7 %) مع ايجاد ارتباط احصائي معنوي ، لقد تبين من الدراسة الحالية ان المتوسط لعدد الساعات اليومية لفترة النوم لكل ليلة كان اطول لدى الطلبة الاناث (7.31) من الذكور (6.92) مع ايجاد ارتباط احصائي معنوي، متوسطات وقت الاستيقاظ من النوم (6:35) ومتوسط وقت الخلود الى النوم (10:35)، كان ابكر لدى الاناث من الذكور مع ايجاد ارتباط احصائي معنوي ، الفترة الزمنية للمشي لكل اسبوع كانت اطول مع ايجاد ارتباط احصائي معنوي لدى الطلبة الاناث ايضا (37:61) دقيقة.

التوصيات: تنفيذ بعض البرامج التثقيفية الهادفة لزيادة معارف الطلبة بالسلوكيات الم عززةللصحة و تشجيعم على تطبيقها في حياتهم اليومية.

Abstract:

Objective: To find out any gender differences in health promoting behaviors for a sample of students attending Institute of Technology/ Baquba.

Methodology: An analytical, cross-sectional study conducted randomly for a sample of students attending Technical Institute/ Baquba, during the period from 10th November 2015 to 10th April 2016. A questionnaire used to collecting data, this questionnaire was consisted from two domains related to health promoting behaviors including (Dietary domain and domain of some daily life activities like sleep duration, rise time, bedtime and walking period per week). The questionnaire distributed randomly on students during break between lectures and then collected from the students after being completed. The data analyzed using SPSS (Version.18). Variables were presented as number, percent and mean. The t-test was used to measure the level of significance.

Results: The results of the study showed that the rates of consuming breakfast daily (70.1%) and regularity in food meals (52.8%) were significantly higher among male students. This study revealed that the rate of students depended on variety of foods was higher among females (77.6%) than males (68.7%). The mean daily number of sleep duration was significantly longer among female students (7.31) than males (6.92), mean daily rise time (6:35) minutes was significantly earlier among female students and mean daily bedtime (10:35) was significantly earlier among female students than males, the period of walking per week was significantly longer among female students (37:61) minutes.

Recommendations: Implantation the educational programs to increase student's knowledge toward health promoting behaviors and encouraging them to application these behaviors in their daily life.

Keywords: Gender difference, Health behaviors, Breakfast, Walk, Bedtime

Introduction:

Health promotion is an important determinant of health status of the individual which held that, this individual is responsible for his own health. Therefore, health promoting behaviors are directed toward achieving a higher level of wellness, personal fulfillment, and self-actualization as well as to prevent diseases, decrease morbidities and mortalities, improve the quality of life, and the health care costs will be decreased [1, 2]. Healthy lifestyle and health-promoting activities should be regarded as a major strategy to facilitate and preserve health of the human population [3]. To facilitate the adoption of these health-promoting lifestyle behaviors, it should be emphasized that person can exercise autonomy and independence in his/her decision-making, thereby; instilling a sense of self-efficacy which is the expectation that person has successfully performing a certain behavior and exerting their personal intentions on changing that behavior [4]. A good health-promoting behavior depends on the living habits adopted during early years of the life [5]. Adolescents are at a dynamic transition period bridging childhood to adulthood, and this period is characterized by rapid, interrelated changes in body, also obvious changes in the mind and social relationships [5]. Because majority of university students are minimally engaged in health-promoting behaviors and exhibit many of behavioral health risk factors [6], such as smoking, unhealthy diet, as well as, low physical inactivity level, these are the leading causes of the occurrence of morbidity and mortality due to chronic health conditions and injuries in the human world. Many of these risk factors can be modifiable, that is why an increased emphasis on behavior changes as an important part of primary prevention strategies which were suggested by the WHO Regional Committee for Europe [7]. One of the most important ways to promote health in the community is to improve the agency of an individual self-care and this may be achieved through application of health education and encourage people to practicing health promoting behaviors in the daily life [8]. So this study aimed to find out any gender differences in selected health promoting behaviors (eating, sleeping and activity practice behaviors) among a sample of students.

Methodology:

The population of the study was comprised of undergraduate students at the Technical Institute/ Baquba. The study design was an analytical cross-sectional survey conducted at the campus of institute during the first

semester, in the period from 10th November 2015 to 10th April 2016. The students were selected randomly from the medical, technological and administrative departments, and the sample size was 500 undergraduate students (214) males and (286) females, their ages were ranging from 18 to 24 years including students living in dormitories (total mean age was 20.73 years). The researcher used a randomly administered questionnaire, which adopted reviewing the relevant literatures. The questionnaire was pre-tested among ten students who were not included in the study population to check the possible errors. The questionnaire consisted of different sections about student's age, gender, and questions about student's health promoting behaviors which included two domains (dietary domain and domain related to some daily activities). The domains of diet can be answered by "yes" or "No". While the second domain was contain open question items including sleep duration per night, walk period per week, time of rise and bedtime per day, the answer of these items was determined by the student in the form of number. The questionnaire was distributed during break between lectures and student asked to participate voluntarily and then the questionnaire collected immediately after being completed by the students. At the end of the research, data analyzed using SPSS, version 18. Variables were presented as number, percent and mean. The t-test was used to measure of the strength of a linear relationship between paired data. $P \leq 0.05$ was considered significant in the present study.

Results:

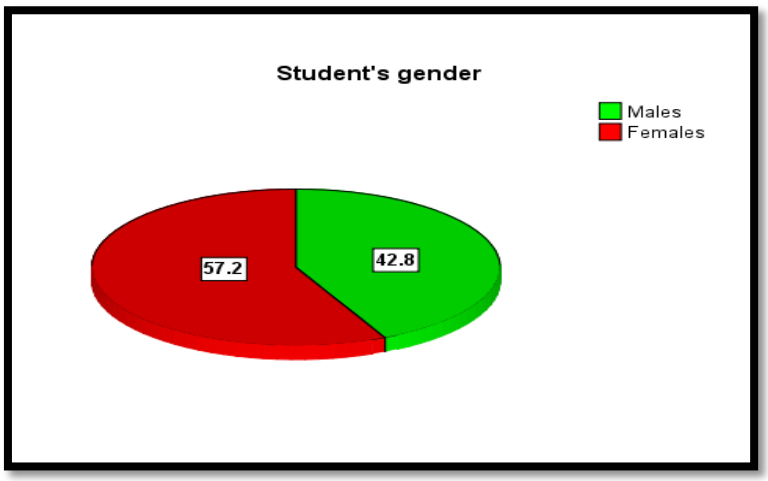

Figure (1): Distribution of the percent students by gender

Figure (1) shows that female students comprised the higher proportion of the study sample and they accounted for (57.2%).

The current study indicates that the mean score of age per year is more among males (21.43) than females (20.21), as shown in table (1).

Table (1): Distribution of mean age relative to gender

Student's gender	F	Mean of Scores	SD
Males	214	21.43	1.726
Females	286	20.21	1.626
Total	500	20.73	1.774

F= Frequency, SD= Standard Deviation

Table (2) revealed that percentage of students reports taking breakfast daily is significantly higher among males (70.1%) than females (54.2%), the percentage of students reported eating meals regularly is significantly more among males (52.8%) than females (43.4%), most of male and female students (62.9%) and (61.1%) respectively reported eating vegetables daily with no significant difference ($p \geq 0.05$), the percentage of students reported eating fruits daily is higher among females (57.5%) than males (53.8) with no significant difference ($p \geq 0.05$). Table (2) shows that the higher rate of students reports consuming various foods is significantly higher among female students (77.6%).

Table (2): Gender differences in relation to dietary health promoting behaviors

Variables	Males N=214	Females N=286	Statistical test
Consuming breakfast daily			
Yes	70.1	54.2	t-test = -3.647
No	29.9	45.8	p-value =0.000 (HS)
Taking meals regularly			
Yes	52.8	43.4	t-test = -2.195
No	47.2	56.6	p-value =0.029 (S)
Consuming vegetables daily			
Yes	62.9	61.9	t-test= -.807
No	37.1	38.1	p-value =0.420 (NS)
Consuming fruits daily			
Yes	53.8	57.5	t-test= -0.233
No	46.2	42.5	p-value =0.816 (NS)
Food preference			
Plant products	10.3	7.3	t-test = -2.194
Animal products	21	15	P-value =0.029 (S)
Various foods	68.7	77.6	

N= Number, HS= Highly Significant, S= Significant, NS= Non Significant, t-test: t-test, P- value: Probability value

Table (3) shows that the mean daily number of sleep duration is significantly higher among females (7.31) than males (6.92). Regarding the rise time per day, the mean daily rise time is slightly earlier among females (6.35) than males (6:47), with no significant difference ($p \geq 0.05$). Currently, this study proved that the mean daily bedtime was significantly earlier among females (10.35) than males (11.19). Finally this study revealed that the mean weekly duration of walking practice was significantly higher among females (37.61) minutes than males (32.78) minutes, as shown in table (3).

Table (3): Mean hours of sleep, rise time, bedtime and walking in relation to gender

Variables	Gender	F	Mean	SD	Statistics
Duration of Sleep per night/ hours	**Males**	214	6.92 (415.2) min.	1.897	t-test= -2.370 P-value= 0.018 (S)
	Females	286	7.31 (438.6) min.	1.775	
	Total	500	7:15	1.836	
Rise time per morning (hh:mm)	**Males**	214	6:47	1.032	t-test= -1.427 P-value= 0.154 (NS)
	Females	286	6:35	.829	
	Total	500	6:42	.952	
Bedtime per night (hh:mm)	**Males**	214	11:19	0.971	t-test= 7.263 P-value= 0.000 (HS)
	Females	286	10:35	1.464	
	Total	500	10:71	1.341	
hours of walking per week/ minutes	**Males**	214	32:78 min.	20.993	t-test= -2.318 p-value= 0.021 (S)
	Females	286	37:61 min.	24.469	
	Total	500	35:54 min.	23.147	

F= Frequency, HS= Highly Significant, S= Significant, NS= Non Significant, SD= Standard Deviation, Min= Minute, t-test= t-test, P-value: Probability value

Discussion:

The current study proved that higher percentage of the study sample was among female students, this was consistent with several studies [1, 2, 3, 7, and 9]. The mean age of students was more among males than females in present study; this was in agreement with study of Suraj and Amarjeet, in India (2008) [10].

Breakfast consumption is important for nutritional balance in all age groups, because of skipping breakfast can lead to fatigue, headache, and deficit in attention and perception of the student [11]. Accordingly, this study revealed that males reported consuming breakfast daily more than females; these findings were consistent with other Iraqi and Arabic studies [12, 13, 14]; they found that male

students reported consuming breakfast daily more than females.

Currently this study indicated a significant difference between consuming breakfast daily and gender, this finding was found in 10 European cities [15]. One reason for the sex differences in breakfast consumption could be that girls skip breakfast to control their weight [15].

In the present study, male students were taking meals regularly better than females and there was a statistical significant difference, these findings were found among Lebanese students [13].

Most fruits and vegetables are low in calories and fat; provide fibers and a range of vitamins which are implicated in beneficial health effects, the reasons that these vegetables and fruits help protecting against a number of chronic diseases such as coronary heart diseases, hypertension and cancers as result to presence of bio-actives [16]. Slight differences were observed between males and females in daily consumption of vegetables in the present study, and these variations were not statistically significant. These findings were in agreement with several studies [17, 18, and 19].

This study revealed that female students were consuming fruits daily more than males, this was similar to several studies [13, 17, and 20]; they observed that Percentage of eating fresh fruits daily was more among female students. However, the current study did not indicate a significant difference between consumption of fruits and student's gender, this absent difference was found in other studies [17, 18, and 19].

Analyzing the preferred foods eaten by these college students, it was found that (77.6%) of female students vs. 68.7% of males reported preferring a variety of foods per day, it's explained that females are more mindful about food related decisions and nutrition trend than males [21]. In this study, the proportion of males who prefer animal food sources was more among males than females and the difference was statistically significant ($p<0.05$), these findings were consistent among Saudi male students [14].

Sleep is part of a daily biological rhythm that is indispensable for promoting individual health and increases the optimal functions of the body [22]. Adults should sleep 7 or more hours per night on a regular basis to promote optimal health, while sleeping less than 7 hours per night on a regular basis is associated with adverse health outcomes [23]. Currently, females students had longer sleep duration (mean = 7.30 hours) than males, these results were comparable to study conducted in several Arabic and Western studies [12, 24, 25]. This study indicated a

positive significant difference between sleep duration and female students, this difference was found among female students in other Arabic studies [22, 26].

The current study showed that female students were rise earlier than males; these findings were found among Lebanese [26] and Chinese female students [27]; they found that females had earlier rise time. The reason is that, most of female students going bed early.

In this study, males had significantly later bedtimes than females on weekdays, this negative behavior was found among Lebanese [26] and Chinese male students [27]. This could be explained that the sleep/wake rhythm appeared to vary between males and females, with earlier timings (earlier bedtimes and rise times) in young adult females [26].

Walking is an important form of physical activity, and it has been shown to improve physical and mental well-being of persons who perform it on a regular basis [28]. Therefore, this study detected that females showed significantly higher hours in performing walking exercise per week compared to males, these findings were found among Turkish females [29], this may be due to that walking is easy to perform, more safe, an effective, and does not require any training or equipment and less chance of injuries. Additionally, walking is the economic exercise which increases interaction and community cohesion [29].

Recommendations:

Implantation the educational programs to increase student's knowledge towards health promoting behaviors and encouraging them to application these behaviors in their daily life.

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