RESEARCH ARTICLE

Eating Habits Effects on High School Student's Achievement in Rania City

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ABSTRACT

Objective(s): The purpose of this study is to find out the relationship between some of the sociodemographic characteristics with anthropometric (BMI), achievement, and eating habits of high school students.

Methodology: The study applies quantitative design, a Descriptive cross-sectional study. The study was initiated on (November 1st, 2021 – August 9th, 2022). The study was carried out in High School in Rania City. We select a random sample of one class in each high school, and we interviewed (246) students in 11 different high schools.

Results: show near the three-quarters percentage of females (71.1%) is higher than the male percentage (28.9%), while near half of them are 17 years old (43.5), 16 years old (39.4%), 18 years old (13.4%), and a lower percentage is 19 years old (3.7). The economic status of near half of students is barely sufficient (48.4%), sufficient (47.2%), and only (4.5%) students are insufficient. Results show that one-third of the students failed the first round (32.9%), and more than two-thirds passed (67.1%). Near a quarter of the samples are underweight (18.7%), and near a quarter of students are overweight and obese (17.5%). These research findings show no significant correlation between academic achievement and body mass index. Shows a significant relationship between skipping breakfast and gender, and between physical activity levels and students' academic achievement.

Conclusion: The results of the study showed that skipping breakfast affects students' weight, causing weight gains such as overweight and obesity. Also, female students are skipping breakfast more and have better academic achievement than boys. The findings indicate that increasing levels of physical activity of students have a positive effect on their academic achievement.

Keywords: Eating Habits, High School Students, Students Achievement
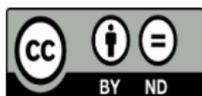
INTRODUCTION

There has been a global awareness about eating habits among the behaviours that identify a population's way of life (Riet et al., 2011; Natanael et al., 2016). Some psychological, physiological, economic and sociocultural indications affect eating habit's constitution (Natanael et al., 2016). Eating habits can be defined as: "conscious, collective, and repetitive behaviours, which lead people to select, consume, and use certain foods or diets, in response to social and cultural influences" (Fen, 2019). Factors which influence eating habits can be summarized as short sleep periods, economic restrictions, stress, limited time, and modifications that are related to the lifestyle (Sogari et al., 2018).

For learners to reach their academic potential, develop physically and intellectually, and experience lifelong satisfaction and strength, they must practice healthy eating habits (Deveci and Ayish, 2017; Ishaq et al., 2020). High consumption of vegetables, fruits, fish, cereals, nuts, and olive oil are indicators of good eating habits. This research has given specific attention to these indicators (Abbasalizad, 2018; Ishaq et al., 2020).

Various aspects play a role in students developing poor eating habits. Among these are past housing arrangements in dorms, skipping meals, dining out frequently, snacking, and fast-food intake (Natanael et al., 2016). Poor eating habits might still be affected by new behaviours and social interactions, which point to indications of eating disorders in some students who, as a result of anxiety, may use the diet as an "escape from reality" for conditions involving mental and physical stress (Natanael et al., 2016). These behaviours may lead to the presence of obesity and overweight, which have reached global alarming levels (Chapman et al., 2012: Ng et al., 2013).

Objectives of the Study

The purpose of this study is to determine the sociodemographic characteristics, assess body mass index, and also, to find out the relationship between some of the sociodemographic characteristics with anthropometric (BMI), achievement, and eating habits of high school students.

Methods

The study applies quantitative design, a Descriptive cross-sectional study. The study was initiated on (November 1st, 2021 – August 9th, 2022). After getting approved by the postgraduate council for the study, and also getting approved by the administering of Rania education, then it would be started to gather data from adolescent students at high school. The study was carried out in High School in Rania City. We select a random sample of one class in each high school, and we interviewed (246) high school students. All students who agreed to participate in the study signed a consent form. The study will use a self-report questionnaire that is divided into three sections: part I will examine the socio-demographic characteristics of high school students, part II will examine the eating habits of high school students, and part III will examine the body mass index of high school students.

Relevancy and adequacy of the questionnaire were done by using panel experts to determine the content validity of the instrument to achieve the present objectives of the study. Statistical analyses were conducted by using the statistical package for social science (SPSS Statistics) version 26.0. Data analysis was employed through the application of descriptive and inferential statistical approaches to achieve the objectives of the study.

Result:

Table (1). Sociodemographic characteristics of sample 246 students.

	Option	Freq	%
Age(years)	16	97	39.4
	17	107	43.5
	18	33	13.4
	19	9	3.7
Gender	male	71	28.9
	female	175	71.1
Is it your first year or second year in stage 11th?	First years	230	93.5
	second years	16	6.5
Number of family members	< 2	0	0.0
	2 - 3	8	3.3
	4 - 5	72	29.3
	6 - 7	122	49.6
	8+	44	17.9
Economic status	Insufficient	11	4.5
	Barely sufficient	119	48.4
	sufficient	116	47.2
Father educational levels	Illiterate	34	13.8
	primary school level	122	49.6
	Secondary school degree	35	14.2
	Diploma degree	29	11.8
	Undergraduate degree	25	10.2
	Higher educational degree	1	0.4
Mother educational levels	Illiterate	97	39.4
	primary school level	113	45.9
	Secondary school degree	18	7.3
	Diploma degree	14	5.7
	Undergraduate degree	4	1.6
	Higher educational degree	0	0.0

This table shows near the three-quarters percentage of females (71.1%) is higher than the male percentage (28.9%), while near half of them are 17 years old (43.5), 16 years old (39.4%), 18 years old (13.4%), and a lower percentage is 19 years old (3.7). Most of the students are first years in stage 11 (93.5%), and only (6.5%) the percentage of students are second years in stage 11. The highest percentage of number family members between (6-7) person (49.6%) followed by (4-5) person (29.3%), and the lower percentage is (2-3) person (3.3%). The economic status of near half of students is barely sufficient (48.4%), sufficient (47.2%), and only (4.5%) students are insufficient. Father educational levels of students highly percentage

are primary school level (49.6%), secondary school degree (14.2%), illiterate (13.8%), diploma degree (11.8%), undergraduate degree (10.2%), and a lower percentage of father educational levels are higher educational degree (0.4%). While mother educational levels of students highly percentage are primary school level (45.9%), illiterate (39.4%), secondary school degree (7.3%), diploma degree (5.7%), undergraduate degree (1.6%), and a lower percentage of father educational levels are higher educational degree (0.0%).

Table (2). Anthropometric measurement (body mass index) among sample 246 students:

BMI	Freq	%	Cumulative Percent
<=18.5	46	18.7%	18.7
18.6-24.9	157	63.8%	82.5
25-29.9	26	10.6%	93.1
30-34.9	17	6.9%	100.0
Total	246	100.0	

This table shows more than half of the samples had normal body mass index (63.8%), near a quarter of the samples are underweight (18.7%), and near a quarter of students are overweight and obese (17.5%).

Table (3): Relationship between gender and academic achievement (Marks) of High school students:

Gender	Academic achievement (Marks)						Total	Mean
	Fail	Pass	Medium	Good	Very Good	Excellent		
male	33	14	11	4	6	3	71 (29%)	58.06
female	48	35	34	31	19	8	175 (71%)	64.69
Total	81	49	45	35	25	11	246 (100%)	62.78
Chi-Square=11.479, d.f.=5, P-Value=0.043 (S)								

This table reveals that there is a significant association between gender and the academic achievement (marks) of high school students.

Table (4): Relationship between skipping breakfast and gender of high school students:

Skipping breakfast	Gender		Total
	male	female	
No	52	86	138
Yes	19	89	108
Total	71	175	246
Chi-Square=11.908, d.f.=1, P-Value=0.001 (HS)			

This table shows that there is a highly significant association between skipping breakfast and the gender of high school students.

Table (5): Relationship between academic achievement (Marks) and BMI of high school students:

Academic achievement (Marks)	Body Mass Index				Total
	<18.5	18.6-24.9	25-29.9	>30	
Fail	14	52	9	6	81
Pass	8	33	4	4	49
Medium	8	27	7	3	45
Good	5	25	3	2	35
Very Good	10	13	0	2	25
Excellent	1	7	3	0	11
Total	46	157	26	17	246

Likelihood Ratio =17.432, d.f.=15, P-Value=0.294 (NS)

Spearman's rho=-0.059, P-Value=0.360 (NS)

This table reveals that there is no significant correlation between academic achievement (marks) and the body mass index of high school students.

Table (6): Relationship between skipping Breakfast and BMI of high school students:

Skipping Breakfast	Body Mass Index				Total
	<18.5	18.6-24.9	25-29.9	>30	
No	28	89	17	4	138
Yes	18	68	9	13	108
Total	46	157	26	17	246

Chi-Square=8.680, d.f.=3, P-Value=0.034 (S)

This table reveals that there is a significant association between skipping breakfast and the body mass index of high school students.

Table (7): Relationship between levels of physical activity and academic achievement (Marks) of high school students:

physical activity	Academic achievement (Marks)						Total
	Fail	Pass	Medium	Good	Very Good	Excellent	
Low (Light)	19	11	9	3	2	1	45
Moderate	48	23	25	14	13	5	128
Heavy	14	15	11	18	10	5	73
Total	81	49	45	35	25	11	246

Chi-Square =19.733, d.f.=10, P-Value=0.032 (S)

This table reveals that there is a significant association between levels of physical activity and academic achievement (marks) of high school students.

Discussion

The results of the study in the table (1) showed that the majority of the sample is 17 years old because the normal age for grade 11 is 17 years old, and 16 years old is high because the sample was taken at the beginning of the year. The 19-year-olds are those who have fallen out of school and the 16-year-olds are those who have entered school earlier than their age. In general, the proportion of women is higher than that of boys, and because of the 11 schools I sampled, 2 were for girls and 1 was for boys. Another major reason is the high number of immigrants in the region in recent years, mostly young boys. The number of families among Muslims in general, and Kurds in particular, is large, which has increased in the past but will decrease in the future due to the economic crisis in Kurdistan. In general, the economic level of the Kurdistan Region is better than that of the Arab regions, so the majority of the sample is good and very good. The level of education in the Kurdistan Region was generally good after the fall of Ba'athist Iraq, the Kurdish people have resumed their education. The Kurdish people have resumed their education. Most of the parents of this generation are illiterate or have completed primary education due to Ba'athist Iraq and the displacement.

Also, table 2 shows that the terms of economy, Kurdistan is not very high or very low compared to other countries, but at the middle level, Therefore, body mass index levels in Kurdistan are mostly normal, while each overweight or obese and underweight levels are less than one-fourth of the sample. Study results in table (3), Females are typically more successful and have better academic achievement than males. Other factors may contribute to male underachievement. females became mature at a younger age (Lim et al., 2015), Additionally, as previously noted, boys tend to receive poorer teacher evaluations than girls for any similar level of aptitude, likely as a result of poorer classroom behaviour, and this can reduce their chances of succeeding in the educational system (Delaney and Devereux., 2021).

Table (4) shows that according to a previous study, girls were in a higher proportion than boys skipping breakfast among adolescents (Matsumoto et al., 2020). Dissatisfaction with one's appearance and the desire to lose weight caused to media pressure and the desire for thinness may be one explanation for this relationship (FIUZA et al., 2017). Table (5) shows that studies involving Asian populations almost reported no relationship between body mass index and student achievement (Jinbo et al., 2018).

Table (6) shows this comprehensive review and meta-analysis of studies that looked at weight change by eating or missing breakfast and

concluded that skipping breakfast increases the chance of becoming overweight or obese (Xiumei et al., 2020). These findings indicate that there is a global relationship between overweight and obesity with skipping breakfast (Xiumei et al., 2020). Table (7) shows that academic achievement and physical exercise have a positive relationship, according to several earlier cross-sectional research (Jose et al., 2011).

Conclusion:

In conclusion, from this research findings, it was revealed that there is no statistically significant correlation between the body mass index of high school students and their academic achievement. The findings indicate that increasing levels of physical activity of students have a positive effect on their academic achievement. The results of the study showed that skipping breakfast affects students' weight, causing weight gains such as overweight and obesity. Also, female students are skipping breakfast more and have better academic achievement than boys.

Recommendation:

High school students should eat breakfast regularly and not skip it, to avoid weight gain. Students should pay more attention to physical activity and sports at this age. By nutritional and special unit for observing and monitoring eating habits and physical activity in the high schools.

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