ISSN NO: 2770-2936
Date of Publication:04-09-2022

Assessment of Teenagers' Eating Disorders Behaviors on their Body Mass Index

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Abstract
Background: An eating disorder (ED) is a mental health illness characterized by abnormal eating styles and behaviors that can affect all people, no matter of their race, age, or habits. Eating disorders behaviors involve abnormal eating behavior and preoccupation with food, attended in most instances by concerns regarding weight and shape
Aim: The study aims to assess of Teenagers' Eating Disorders Behaviors on their Body Mass Index
Result: The study results indicated that statistically significant between eating disorders behaviors and body mass index among teens especially who age range 13 - 15 years.
Conclusion: The study showed there is a relationship between eating disorders behaviors and body mass index and indicated that eating behaviors are affected by the student's lifestyle and demographic information in a significant relationship

keyword : Teenagers; Eating Disorders Behaviors; Body Mass Index

Introduction

Health is a fundamental and active meaning in all people's habitual lives. It is inspired via way of means of behavior, circumstances, attitudes, believes in addition to social and bodily environment. The industrialization, urbanization, monetary development and marketplace inclusiveness have brought about way of life alternate of the global population. As a result, the nutritional behavior were converting over the last decades, defined via way of means of a boom of fats intake, normally in saturated fats, beside a decline in cereals, fruits, legumes and veggies eating (Mahmoud & Taha, 2017)

Obesity and eating disorders can coexist and teens who have each obesity and disordered eating are possibly to experience exacerbated physical and mental health issues, making this a susceptible population group. Rates of weight issues in teenagers are forecast to growth international via way of means of 2030 (Jebeile et al., 2021)

Teen age is a completely unique and formative time, Physical, emotional and social changes, inclusive of exposure to poverty, abuse, or violence, could make youngsters susceptible to mental health problems. Teen age is an important period for developing social and emotional behavior essential for mental well-being. These consist of adopting healthful sleep patterns, healthy eating habits, exercise regularly, developing coping, problem-solving, and interpersonal skills, and getting to know to control emotions. Protective and supportive environments are important in the family, at school and in the community (WHO, 2021)

An eating disorder (ED) is a mental health illness characterized by abnormal eating styles and behaviors that can affect all people , no matter of their race, age, or habits. Consequences of eating disorder are both catastrophic and widespread, and include altered sleeping patterns, reduced capacity to concentrate, osteoporosis, and diabetes mellitus. In addition, eating disorder have also been linked to psychological issues such as substance abuse, depression, anxiety, and suicidality (Docman, 2019)

There are many factors that play a significant role in the development of eating disorders in teenagers are the socio-cultural factors. Cultures of abundance that place a great emphasis on appearance and idealize slimness provide the context for body image issues and emerge disordered eating (Koushiou et al., 2020)

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Important indicators for eating-disorder-related disturbances are body mass index (BMI; body weight/ body height2), body image, eating disorder and related psychopathology, such as clinically relevant perfectionism (Sarrar et al., 2020).

Methodology

Design of the Study

A descriptive design study that use comparative design was carried throughout the present study .

Ethical consideration

The Ethical Committee of the Faculty of Nursing at the University of Baghdad was grant ethical approval to the researcher

Setting of the Study

The study has been carried out on teenagers in secondary schools at baghdad, in forty schools.

Study Instrument

The researcher constructed a Self-administrative questionnaire to accomplish the objective of the study. The researcher used Child Eating Behavior Questionnaire (CEBQ) and worked on its development and then translated from English to Arabic. The method of forward and backward translation was used to achieve translation validity, after which the translation was sent to experts for analysis. According to the recommendations and notes of experts and the Ministry of Planning/Central Council of Statistics, amendments were made to different words in the questionnaire. The study instrument is divided into threeparts: Students' Demographic Data, Information about the student's lifestyle, and child Eating Behaviour Questionnaire (CEBQ)

Sample size of the Study

The study used a simple random sampling (Comparative Study). The sample size was 500 students male and female from all secondary schools in Baghdad at al-karkh sector.

Methods of Data Collection

After taking approvals from the concerned authorities, including school schoolmasters. The researcher collected data from students in secondary school for the current study by using the designed questionnaire and the self-reported technique used in the Arabic version of the questionnaire for those subjects included in the study. Before distributing the questionnaire, the researcher conducted an interview with the students to provide an introduction and describe the study's purpose in a simple manner and obtain verbal consent from them.

Statistical Analyses:

To assess the results of the study, the statistical package for social science (SPSS) for windows, version (22.0) is used

Result

Table (1): Distribution of socio demographic characteristics for students':

Classes	Groups	Study group	
		Frequency	precent
Classes	first	83	16.6
	second	214	42.8
	third	203	40.6
	Total	500	100.0
Gender	Male	239	47.8
	Female	261	52.2
	Total	500	100.0
Age (Years)	10-less than 13	18	3.6
	13-less than 16	380	76.0
	16-less than 18	100	20.0
	18 or more	2	.4

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	Total	**500**	**100.0**
Years of fail	**.00**	**367**	**73.4**
	1.00	**79**	**15.8**
	2.00	**45**	**9.0**
	3.00	**6**	**1.2**
	4.00	**2**	**.4**
	5.00	**1**	**.2**
	Total	**500**	**100.0**
Residency	**Urban**	**417**	**83.4**
	Rural	**83**	**16.6**
	Total	**500**	**100.0**
Father's Educational Level:	**Can't read and write**	**28**	**5.6**
	Can read and write	**42**	**8.4**
	Elementary school	**98**	**19.6**
	Middle school	**110**	**22.0**
	Secondary school	**62**	**12.4**
	College/ Institute	**101**	**20.2**
	Master or above	**59**	**11.8**
	Total	**500**	**100.0**
Mother's Educational Level:	**Can't read and write**	**23**	**4.6**
	Can read and write	**47**	**9.4**
	Elementary school	**106**	**21.2**
	Middle school	**121**	**24.2**
	Secondary school	**85**	**17.0**
	College /Institute	**87**	**17.4**
	Master or above	**31**	**6.2**
	Total	**500**	**100.0**
Family's monthly income	**Less than 300 thousand Iraqi Dinar**	**111**	**22.2**
	Between 301 thousand and 600 thousand Iraqi Dinar	**132**	**26.4**
	Between 601thousands and 900 thousand Iraqi Dinar	**77**	**15.4**
	Between 901 thousand and more than 1 million Iraqi Dinar	**67**	**13.4**
	Between 1,201,000 and 1,500,000 Iraqi Dinar	**72**	**14.4**
	More than 1,500,000 million Iraqi Dinar	**41**	**8.2**
	Total	**500**	**100.0**
Family's members	**3-5**	**173**	**34.6**

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	6-8	282	56.4
	9-11	39	7.8
	Above 11	6	1.2
	Total	500	100.0
Type of Family	Nuclear Family (father, mother and their children)	377	75.4
	Extended Family (father, mother, children, and grandparents)	96	19.2
	Single Family (child with one parent)	25	5.0
	Grandparent Family (child with their Grandparent)	2	.4
	Total	500	100.0
Birth order	First born	159	31.8
	Middle born	235	47.0
	Last born	101	20.2
	The only child	5	1.0
	Total	500	100.0
Student's BMI	Below18.5 Underweight	146	29.2
	18.5-24.9 Normal weight	245	49.0
	25-29.9 Overweight	83	16.6
	30-34.9 Obesity class I	19	3.8
	35-39.9 Obesity class II	4	.8
	Above 40 Obesity class iii	3	.6
	Total	500	100.0

The above table (1), we found that the highest percent of the total sample were second class by(42.8%), and females by (52.2%), while males were (47.8%). About age, they were (13-less than 16) by (76%). And (73.4%) of students did not fail during their school years. Most of the students reside in urban with a rate of (83.4%). About education level, the highest percent was for (middle school) by (22%) for fathers, and (24.2%) for mothers. About monthly income of a family, the highest percent was for (301- 600) thousand Iraqi Dinar by (26.4%). About family members, the highest percent was for (6-8) member by (56.4%). About the type of family, the highest percent was for (Nuclear Family) by (75.4%). About the birth order, the highest percent was for (Middle born) by (47%). About the Students' BMI, the highest percent was for (Normal weight) by (49%).

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Table (2): Distribution of Information about the student's lifestyle.

Classes	Groups	Study group	
		Frequency	percent
How often do you exercise	1-2 times per week	266	53.2
	3-4 times per week	130	26.0
	5-6 times per week	47	9.4
	7 or more times per week	57	11.4
	Total	500	100.0
Duration of exercise	Less than 1 hour	247	49.4
	1-2 hours	214	42.8
	3-4 hours	32	6.4
	5-6 hours	7	1.4
	Total	500	100.0
Sitting time to watch TV or mobile during the day	1-2 hours	191	38.2
	3-4 hours	157	31.4
	5-6 hours	74	14.8
	Above 6 hours	78	15.6
	Total	500	100.0
hours Number of sleep	1-4 hours	31	6.2
	5-8 hours	295	59.0
	Above 8 hours	174	34.8
	Total	500	100.0
Bedtime	At 7 to 9	17	3.4
	At 10 to 12	309	61.8
	At 1 to 3	174	34.8
	Total	500	100.0
The type of food you eat a lot	sweets	105	21.0
	Healthy food and fruits	140	28.0
	Fast & Ready Food	98	19.6
	citrus (chips, salty fingers, popcorn, etc..)	67	13.4
	Noodles	90	18.0
	Total	500	100.0

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The above table (2), we found that the highest percent of exercise times was (1-2) per week by (53.2%), while the duration of exercise was (Less than one hour) by (49.4%). About the sitting time to watch TV or mobile was (1 -2) hours during the day by (38.2%). About the hours of sleep was (5 -8) hours by (59%), while the bed time was at (10PM – 12AM) by (61.8%). About the type of food they eat a lot, was (Healthy food and fruits) by (28%).

Table (3): Descriptive Statistics for Child Eating Behavior Questionnaire (CEBQ).

No.	Questions	Descriptive Statistics								
		Frequency					MS	SD	RII	Ass.
		Never	Some times	Often	Very Often	Always				
1	I love and care about food.	31	142	105	69	153	3.3420	1.33439	0.67	Moderate
		6.2	28.4	21.0	13.8	30.6				
2	I eat more when I'm anxious.	228	115	59	27	71	2.1960	1.42606	0.43	Low
		45.6	23.0	11.8	5.4	14.2				
3	I have a big appetite.	109	152	115	46	78	2.6640	1.33517	0.53	Moderate
		21.8	30.4	23.0	9.2	15.6				
4	I finish my meal quickly.	96	164	98	50	92	2.7560	1.36975	0.55	Moderate
		19.2	32.8	19.6	10.0	18.4				
5	I like to drink water all the time constantly	57	123	98	72	150	3.2700	1.40608	0.65	Moderate
		11.4	24.6	19.6	14.4	30.0				
6	I refuse new foods at first	168	172	74	32	53	2.3420	2.26170	0.47	Moderate
		33.6	34.4	14.8	6.6	10.6				
7	I eat less when I'm angry	173	101	73	40	113	2.6380	1.56328	0.53	Moderate
		34.6	20.2	14.6	8.0	22.6				
8	I enjoy tasting new foods.	45	125	83	67	180	3.4240	1.41712	0.68	Moderate
		9.0	25.0	16.6	13.4	36.0				
9	I eat less when I am upset.	250	115	44	28	63	2.0780	1.39420	0.42	Low
		50.0	23.0	8.8	5.6	12.6				
1o	I enjoy a wide variety of foods (sweets, healthy food, citrus fruits, fast food, etc.)	34	62	81	69	254	3.8940	1.33053	0.78	High
		6.8	12.4	16.2	13.8	50.8				
11	I leave some food on my plate at the end of the meal	100	132	82	54	132	2.9720	1.49388	0.59	Moderate
		20.0	26.4	16.4	10.8	26.4				
12	I take over 30 minutes to finish my meal	175	146	71	43	65	2.3540	1.37275	0.47	Moderate
		35.0	29.2	14.2	8.6	13.0				
13	I feel full quickly even before I finish my meal	94	133	81	66	126	2.9940	1.47047	0.60	Moderate
		18.8	26.6	16.2	13.2	25.2				

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14	I enjoy eating	36	87	80	93	204	3.6840	1.34751	0.74	High
		7.2	17.4	16.0	18.6	40.8				
15	I eat more when I'm happy	105	107	81	67	140	3.0600	1.51955	0.61	Moderate
		21.0	21.4	16.2	13.4	28.0				
16	I eat more when I have nothing else to do.	146	127	68	61	98	2.6760	1.49247	0.54	Moderate
		29.2	25.4	13.6	12.2	19.6				
17	Even if I feel full, I find space to eat my favorite food	205	99	72	37	87	2.4040	1.50243	0.48	Moderate
		41.0	19.8	14.4	7.4	17.4				
18	I eat less when I'm tired	149	120	60	50	121	2.7480	1.56249	0.55	Moderate
		29.8	24.0	12.0	10.0	24.2				
19	I eat more when I'm anxious.	251	102	67	24	56	2.0640	1.35483	0.41	Low
		50.2	20.4	13.4	4.8	11.2				
20	I eat less when I'm upset (annoyed)	158	122	69	49	102	2.6300	1.51317	0.53	Moderate
		31.6	24.4	13.8	9.8	20.4				
21	I can't eat a meal if I've eaten a snack before	136	128	83	70	83	2.6720	1.42986	0.53	Moderate
		27.2	25.6	16.6	14.0	16.6				
22	I'm interested in tasting food I've never tasted before	82	109	78	79	152	3.2200	1.48459	0.64	Moderate
		16.4	21.8	15.6	15.8	30.4				
23	I eat more slowly during a meal	115	122	82	61	120	2.8980	1.49669	0.58	Moderate
		23.0	24.4	16.4	12.2	24.0				
Weighted mean= 2.8252 Std. Deviation= .55420										

MS.: Mean of Scores (weighted mean); Sd: Standard Deviation, RII.: Relative Importance Index, Ass.: Assessment, Low: (1.0-2.33), Moderate (2.34-3.66), High (3.67-5.0).

From above table (4-3), shows (Descriptive statistics for Child Eating Behavior Questionnaire), from which we find that the highest Relative Importance Index (= 0.78) was awarded to the question 10: (**I enjoy a wide variety of foods (sweets, healthy food, citrus fruits, fast food, etc.))** with mean (=3.8940) and std. deviation (=1.33053), followed by the questions Q14: (**I enjoy eating**) with mean (=3.6840) and std. deviation (=1.34751), and their values shown in the above table. while the lowest Relative Importance Index (= 0.41) was awarded to the question 19

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Table (4) Chi-Square test results for the relationship between student's BMI and Child Eating Behavior Questionnaire.

Eating Behaviour Questionnaire		Student's BMI						Total	Computed value c.v	Sig. d. f=20 (Table value=31.416)
		Below 18.5 Underweight	18.5-24.9 Normal weight	25-29.9 Overweight	30-34.9 Obesity class I	35-39.9 Obesity class II	Above 40 Obesity class iii			
I love and care about food.	Never	9.1	15.2	5.1	1.2	.2	.2	31.0	23.416	.269 N/S
	Sometime	41.5	69.6	23.6	5.4	1.1	.9	142.0		
	Often	30.7	51.4	17.4	4.0	.8	.6	105.0		
	Very often	20.1	33.8	11.5	2.6	.6	.4	69.0		
	Always	44.7	75.0	25.4	5.8	1.2	.9	153.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat more when I'm anxious.	Never	66.6	111.7	37.8	8.7	1.8	1.4	228.0	12.933	.880 N/S
	Sometime	33.6	56.4	19.1	4.4	.9	.7	115.0		
	Often	17.2	28.9	9.8	2.2	.5	.4	59.0		
	Very often	7.9	13.2	4.5	1.0	.2	.2	27.0		
	Always	20.7	34.8	11.8	2.7	.6	.4	71.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I have a big appetite.	Never	31.8	53.4	18.1	4.1	.9	.7	109.0	20.497	.427 N/S
	Sometime	44.4	74.5	25.2	5.8	1.2	.9	152.0		
	Often	33.6	56.4	19.1	4.4	.9	.7	115.0		
	Very often	13.4	22.5	7.6	1.7	.4	.3	46.0		
	Always	22.8	38.2	12.9	3.0	.6	.5	78.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I finish my meal quickly	Never	28.0	47.0	15.9	3.6	.8	.6	96.0	31.287	.052 N/S
	Sometime	47.9	80.4	27.2	6.2	1.3	1.0	164.0		
	Often	28.6	48.0	16.3	3.7	.8	.6	98.0		
	Very often	14.6	24.5	8.3	1.9	.4	.3	50.0		

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	Always	26.9	45.1	15.3	3.5	.7	.6	92.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I like to drink water all the time constantly	Never	16.6	27.9	9.5	2.2	.5	.3	57.0	13.011	.877 N/S
	Sometime	35.9	60.3	20.4	4.7	1.0	.7	123.0		
	Often	28.6	48.0	16.3	3.7	.8	.6	98.0		
	Very often	21.0	35.3	12.0	2.7	.6	.4	72.0		
	Always	43.8	73.5	24.9	5.7	1.2	.9	150.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I refuse new foods at first	Never	49.1	82.3	27.9	6.4	1.3	1.0	168.0	21.487	.369 N/S
	Sometime	50.2	84.3	28.6	6.5	1.4	1.0	172.0		
	Often	21.6	36.3	12.3	2.8	.6	.4	74.0		
	Very often	9.6	16.2	5.5	1.3	.3	.2	33.0		
	Always	15.5	26.0	8.8	2.0	.4	.3	53.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat less when I'm angry	Never	50.5	84.8	28.7	6.6	1.4	1.0	173.0	20.886	.404 N/S
	Sometime	29.5	49.5	16.8	3.8	.8	.6	101.0		
	Often	21.3	35.8	12.1	2.8	.6	.4	73.0		
	Very often	11.7	19.6	6.6	1.5	.3	.2	40.0		
	Always	33.0	55.4	18.8	4.3	.9	.7	113.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I am enjoys tasting new foods.	Never	31.8	53.4	18.1	4.1	.9	.7	109.0	23.407	.269 N/S
	Sometime	44.4	74.5	25.2	5.8	1.2	.9	152.0		
	Often	33.6	56.4	19.1	4.4	.9	.7	115.0		
	Very often	13.4	22.5	7.6	1.7	.4	.3	46.0		
	Always	22.8	38.2	12.9	3.0	.6	.5	78.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		

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I eats less when I am upset.	Never	73.0	122.5	41.5	9.5	2.0	1.5	250.0		.955 N/S
	Sometime	33.6	56.4	19.1	4.4	.9	.7	115.0		
	Often	12.8	21.6	7.3	1.7	.4	.3	44.0		
	Very often	8.2	13.7	4.6	1.1	.2	.2	28.0		
	Always	18.4	30.9	10.5	2.4	.5	.4	63.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I enjoy a wide variety of foods (sweets, healthy food, citrus fruits, fast food, etc.)	Never	9.9	16.7	5.6	1.3	.3	.2	34.0	46.426	.001 HS
	Sometime	18.1	30.4	10.3	2.4	.5	.4	62.0		
	Often	23.7	39.7	13.4	3.1	.6	.5	81.0		
	Very often	20.1	33.8	11.5	2.6	.6	.4	69.0		
	Always	74.2	124.5	42.2	9.7	2.0	1.5	254.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I leave some food on my plate at the end of the meal	Never	29.2	49.0	16.6	3.8	.8	.6	100.0	18.175	0.576 N/S
	Sometime	38.5	64.7	21.9	5.0	1.1	.8	132.0		
	Often	23.9	40.2	13.6	3.1	.7	.5	82.0		
	Very often	15.8	26.5	9.0	2.1	.4	.3	54.0		
	Always	38.5	64.7	21.9	5.0	1.1	.8	132.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I took over 30 minutes to finish my meal	Never	51.1	85.8	29.0	6.6	1.4	1.0	175.0	12.213	.909 N/S
	Sometime	42.6	71.5	24.2	5.5	1.2	.9	146.0		
	Often	20.7	34.8	11.8	2.7	.6	.4	71.0		
	Very often	12.6	21.1	7.1	1.6	.3	.3	43.0		
	Always	19.0	31.9	10.8	2.5	.5	.4	65.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		

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I feel full quickly even before I finish my meal	Never	27.4	46.1	15.6	3.6	.8	.6	94.0	12.744	.888 N/S
	Sometime	38.8	65.2	22.1	5.1	1.1	.8	133.0		
	Often	23.7	39.7	13.4	3.1	.6	.5	81.0		
	Very often	19.3	32.3	11.0	2.5	.5	.4	66.0		
	Always	36.8	61.7	20.9	4.8	1.0	.8	126.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I enjoy eating.	Never	10.5	17.6	6.0	1.4	.3	.2	36.0	15.335	.757 N/S
	Sometime	25.4	42.6	14.4	3.3	.7	.5	87.0		
	Often	23.4	39.2	13.3	3.0	.6	.5	80.0		
	Very often	27.2	45.6	15.4	3.5	.7	.6	93.0		
	Always	59.6	100.0	33.9	7.8	1.6	1.2	204.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat more when I'm happy	Never	30.7	51.4	17.4	4.0	.8	.6	105.0	23.750	.253 N/S
	Sometime	31.2	52.4	17.8	4.1	.9	.6	107.0		
	Often	23.7	39.7	13.4	3.1	.6	.5	81.0		
	Very often	19.6	32.8	11.1	2.5	.5	.4	67.0		
	Always	40.9	68.6	23.2	5.3	1.1	.8	140.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat more when I have nothing else to do.	Never	42.6	71.5	24.2	5.5	1.2	.9	146.0	15.146	.768 N/S
	Sometime	37.1	62.2	21.1	4.8	1.0	.8	127.0		
	Often	19.9	33.3	11.3	2.6	.5	.4	68.0		
	Very often	17.8	29.9	10.1	2.3	.5	.4	61.0		
	Always	28.6	48.0	16.3	3.7	.8	.6	98.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
Even if I feel full, I find space to eat my	Never	59.9	100.4	34.0	7.8	1.6	1.2	205.0	17.620	.612 N/S
	Sometime	28.9	48.5	16.4	3.8	.8	.6	99.0		
	Often	21.0	35.3	12.0	2.7	.6	.4	72.0		

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favorite food.	Very often	10.8	18.1	6.1	1.4	.3	.2	37.0		
	Always	25.4	42.6	14.4	3.3	.7	.5	87.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat less when I'm tired	Never	43.5	73.0	24.7	5.7	1.2	.9	149.0	13.318	.863 N/S
	Sometime	35.0	58.8	19.9	4.6	1.0	.7	120.0		
	Often	17.5	29.4	10.0	2.3	.5	.4	60.0		
	Very often	14.6	24.5	8.3	1.9	.4	.3	50.0		
	Always	35.3	59.3	20.1	4.6	1.0	.7	121.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat more when I'm anxious	Never	73.3	123.0	41.7	9.5	2.0	1.5	251.0	11.076	.944 N/S
	Sometime	29.8	50.0	16.9	3.9	.8	.6	102.0		
	Often	19.6	32.8	11.1	2.5	.5	.4	67.0		
	Very often	7.0	11.8	4.0	.9	.2	.1	24.0		
	Always	16.4	27.4	9.3	2.1	.4	.3	56.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I eat less when I'm upset (annoyed)	Never	46.1	77.4	26.2	6.0	1.3	.9	158.0	27.559	.120 N/S
	Sometime	35.6	59.8	20.3	4.6	1.0	.7	122.0		
	Often	20.1	33.8	11.5	2.6	.6	.4	69.0		
	Very often	14.3	24.0	8.1	1.9	.4	.3	49.0		
	Always	29.8	50.0	16.9	3.9	.8	.6	102.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		
I can't eat a meal if I've eaten a snack before	Never	39.7	66.6	22.6	5.2	1.1	.8	136.0	25.951	.167 N/S
	Sometime	37.4	62.7	21.2	4.9	1.0	.8	128.0		
	Often	24.2	40.7	13.8	3.2	.7	.5	83.0		
	Very often	20.4	34.3	11.6	2.7	.6	.4	70.0		
	Always	24.2	40.7	13.8	3.2	.7	.5	83.0		
Total		146.0	245.0	83.0	19.0	4.0	3.0	500.0		

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I'm interested in tasting food I've never tasted before	**Never**	**23.9**	**40.2**	**13.6**	**3.1**	**.7**	**.5**	**82.0**	**19.983**	**.459 N/S**
	Sometime	**31.8**	**53.4**	**18.1**	**4.1**	**.9**	**.7**	**109.0**		
	Often	**22.8**	**38.2**	**12.9**	**3.0**	**.6**	**.5**	**78.0**		
	Very often	**23.1**	**38.7**	**13.1**	**3.0**	**.6**	**.5**	**79.0**		
	Always	**44.4**	**74.5**	**25.2**	**5.8**	**1.2**	**.9**	**152.0**		
Total		**146.0**	**245.0**	**83.0**	**19.0**	**4.0**	**3.0**	**500.0**		
I eat more slowly during a meal	**Never**	**33.6**	**56.4**	**19.1**	**4.4**	**.9**	**.7**	**115.0**	**15.333**	**.757 N/S**
	Sometime	**35.6**	**59.8**	**20.3**	**4.6**	**1.0**	**.7**	**122.0**		
	Often	**23.9**	**40.2**	**13.6**	**3.1**	**.7**	**.5**	**82.0**		
	Very often	**17.8**	**29.9**	**10.1**	**2.3**	**.5**	**.4**	**61.0**		
	Always	**35.0**	**58.8**	**19.9**	**4.6**	**1.0**	**.7**	**120.0**		
Total		**146.0**	**245.0**	**83.0**	**19.0**	**4.0**	**3.0**	**500.0**		

From the above table (4-5), results of Chi-Square test showed that there is a statistically significant association between **student's BMI and Child Eating Behavior Questionnaire (Q10);** Since sig. (0.001) <0.05, and the computed value(**46.426**)greater than the table value(**31.410**) then we reject H_0 the null hypotheses (no relation) and excepted H_1 the alternative hypotheses (there's a relation between them). The students' whose **(enjoy a wide variety of foods (sweets, healthy food, citrus fruits, fast food, etc.)**, have a normal Body Mass Index (BMI), and they have the highest (MS= **3.8940**) with (RII=**0.78**).

Discussion

Discussion of socio demographic characteristics for students

The percentage of female students is almost equal to that of males, were in grade second, and their failure rate was zero, which means that the majority of the sample did not fail in their grade, and were most of them resid in an urban area. The highest sample age students was between 13 and less than 16 years. Findings are consistent with findings of Saleh and Ma´ala, (2015), in a research to determine the influence of fast meals and snacks on adolescents' BMI at secondary schools in Baghdad city, their findings indicate that more than half of the teenagers were female, and half of them were under the age of 16.

Regarding the educational level of fathers, the educational level of mothers, the highest rate were have middle school. In addition, the study results indicated that the majority of students within poor family's economic status, due to the highest rate of family monthly income was between 301-600 thousand Iraqi dinar. This finding supported with Iraqi study conducted by Kareem and Ali, (2017), To determine the influence of social media use on the mental health of adolescent students at preparatory schools in Al-Diwanyah city, their findings revealed that the research sample came from families with a moderate economic position. Throughout the course of the present study in the table (1), indicates that three quarters of the adolescent living with their parents included nuclear family type were accounted three hundred and seventy seven (75.4%). Findings supported with Habsi and Ahjil, (2021), to compare the self-esteem of children who living with their parents in secondary

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schools in al-Rusafa to children living in orphanages in Rusafa, Baghdad, indicates that (85.5%)of the children living within nuclear family type.

However, the study results are similar to a study in Gonabad (Iran), a cross-sectional research was performed on high school students, done by Alami, Khosravan, Moghadam, Pakravan, and Hosseni (2014), to assessed self-esteem of adolescents in single-parent and nuclear families. They reported that the majority of study sample within family type is two-parent nuclear families. The results also agree with Banstola, Ogino, and Inoue, (2020). In their study, the effect of parents' knowledge of their adolescent self-Esteem development and practice in parenting on adolescent self-esteem. Indicated that more than half participants from nuclear family living together that consist of parents and their children. Concerning the birth order for students, the highest percentage of student who born in middle sequence and were their families members at the category (6-8) persons. This finding was inconsistant with Habsi and Ahjil, (2021) study to compare the self-esteem of children who living with their parents in secondary schools in al-Rusafa to children living in orphanages in Rusafa, Baghdad. The study results indicated that the majority of the studied sample assigned at the first sequence and according to number of family members are focusing at the class (5 – 6) persons. In my point of view, families give the first-born and the last child more attention than the rest of the children, and this neglect or lack of attention to middle-born children has a significant impact on their lifestyle such as eating behavior, sleep pattren and psychological state.

The study showed the students' BMI ranged within normal weight are the highest percent, followed by underweight. The study results agree with the study of Al-Muammar, El-Shafie and Feroze (2014), for researching the relationship between eating habits and body mass index
of teenage females in intermediate schools in Riyadh, Saudi Arabia, since half of the students were normal weight and followed of them within underweight.

Discussion The Information about Students' Lifestyle

The study findings indicated that more than half of students are doing exercise about 1-2 times per week, while the duration of exercise is less than one hour. These results supported with study done by Hassan and Ma'ala, (2012), to assess adolescents' daily physical activity and it's relationship to obesity in secondary schools At AL-Najaf AL- Ashraf city, their results show that the majority of study participants have low daily physical activity.

According to the sitting time to watch TV or mobile, the study result showed the highest rate of time to use mobile or watch TV was 1 – 2 hours during the day in rate 38.2% and followed by 3-4 houres with rate 31%. Findings were supported by a study conducted by Kareem and ali, (2017), daily to determine the influence of using social media on the mental health of teenage students of preparatory schools in Al-Diwanyah city. The study results show that the majority of the study participants use the mobile and network for enjoyment for 1-4 hours.

The present study showed that the highest range in the hours number of sleep between 5 to 8 hours and bedtime from 10 pm to 12 am, we considered this percentage among healthy sleep habits. Findings were inconsistant with Singh and Misra, (2012), their research of teenages' lifestyle in India to identify the incidence of risk and promoter factors of health, revealed irregular sleep habits and the prevalence of unhealthy behaviors.

The result about the type of food they eat a lot, was healthy food and fruits by (28%), and The percentage of unhealthy foods that eaten by teens such as (sweets, fast and ready foods, and citrus like a chips and noodles) combined together was not small, an estimated 72%. The study results were supported with Singh and Misra, (2012), In a study of Indian teenagers lifestyle to identify the incidence of risk and promotive factors of health, their study revealed a conspicuous prevalence of unhealthy habits and a lesser prevalence of healthy lifestyle-related factors such as consuming healthy food items such as fruits, vegetables, milk, and daily routine practices such as Yoga and physical exercise. In my opinion, the students have neutral eating habits, which indicates they practiced healthy eating behaviors alongside unhealthy eating behaviors.

Discussion Descriptive Statistics for Child Eating Behavior Questionnaire (CEBQ)

The study results showed that the highest Relative Importance Index was awarded to the item 10 and followed by the item 14 while the lowest Relative Importance Index was awarded to the item 2. These are results supported with a study done by Saleh and Ma´ala, (2015), in order to test adolescents' fast foods and snacks, as well as the relationship between fast food, snacks, and adolescents' demographic information

ISSN NO: 2770-2936
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(gender and BMI) at secondary schools in Baghdad City, their findings revealed that nearly half to more than one-third of the participants consume a variety of snacks.

Discussion The Results for The Relationship Between Student's BMI and Child Eating Behavior Questionnaire

The study results showed that there is a statistically significant association between student's BMI and Child Eating Behavior Questionnaire. The students who enjoy a wide variety of foods such as sweets, healthy food, citrus fruits and fast food have a normal Body Mass Index (BMI). This finding is inconsistant with Mahmoud and Taha, (2017), to explore the relationship between eating habits and Body Mass Index (BMI) among nursing students, the findings of their study revealed that there is no significant statistical relationship between eating habits and BMI among nursing students. These findings might be attributed to an increase in the number of teenagers following recommended nutrition and physical activity guidelines, as well as nursing students being more aware of the necessity of weight control.

This finding is supported by a study conducted by Panichsillaphakit, et al, (2021), to assess the relationship between children's' eating behaviors questionnaire and body composition has in thai children and adolescents with obesity. They found that there is no sigificant relationship between eating behaviors and BMI. In point of my view, this study is consistant with my study results due to the BMI of my study sample within normal weight but this study was the majority of participant from obesity adolescents.

Conclusion

The eating disorders behaviors was statistically significant among females students than male. The study indicate that the majority of BMI percentile values were within normal weight ranges.

According to the study, the majority of teenagers in secondary schools have in low physical activities and exercise.

The study showed there is a relationship between eating disorders behaviors and body mass index and indicated that eating behaviors are affected by the student's lifestyle and demographic information in a significant relationship

Recommendations:

Educational programs should be designed to increase parents knowledge and teenagers' awareness about etiology, types, signs and symptom, treatment of eating disorders and encourging them to practice healthy eating behaviors by providing scientific booklet, publication and journal about eating disorders.

We recommend school administrations, especially girls' schools, to allocate a certain time every day to exercise appropriate for them.

Referances

1. Al Muammar, M. N., El Shafie, M., & Feroze, A. (2014). Association between dietary habits and body mass index of adolescent females in intermediate schools in Riyadh, Saudi Arabia. Eastern Mediterranean Health Journal, 20(1), 39–45. Retro from: https://doi.org/10.26719/2014.20.1.39
2. Docman, K. (2019). Screening for adolescent eating disorders in a school-based health center using the Scoff Questionnaire.
3. Habsi, R., & Ahjil, Z. (2021). Self-esteem of Children Living with their Parents for Secondary Schools in AL-Rusafa: Comparative Study to the Children Living in Orphanage (p. 117).
4. Hassan, M. B., & Ma'ala, E. G. (2012). Assessment Of Adolescents' Daily Physical Activity & It's Relation To Obesity In Secondary Schools At AL-Najaf AL-Ashraf City.
5. Jebeile, H., Lister, N. B., Baur, L. A., Garnett, S. P., & Paxton, S. J. (2021). Eating disorder risk in adolescents with obesity. Obesity Reviews, 22(5), 1–10. Retro from: https://doi.org/10.1111/obr.13173
6. Kareem, H. N., & Ali, E. G. (2017). Impact of Using Social Media upon the Mental Health of Adolescent Students of preparatory Schools in Al-Diwanyah City. 27(1), 23–31.
7. Kareem, H. N., & Ali, E. G. (2017). Impact of Using Social Media upon the Mental Health of Adolescent Students of preparatory Schools in Al-Diwanyah City. 27(1), 23–31.

ISSN NO: 2770-2936
Date of Publication:04-09-2022

8. Koushiou, M., Nikolaou, P., & Karekla, M. (2020). Prevalence and correlates of eating disorders in greek-cypriot adolescents and young adults. The European Journal of Counselling Psychology, 8(1), 3–18. Retro from: https://doi.org/10.5964/ejcop.v8i1.170
9. Mahmoud, M. H., & Taha, A. S. (2017). The Association between Eating Habits and Body Mass Index among Nursing Students. IOSR Journal of Nursing and Health Science, 06(03), 14–26. Retro from: https://doi.org/10.9790/1959-0603061426
10. Panichsillaphakit, E., Chongpison, Y., Saengpanit, P., Kwanbunbumpen, T., Uaariyapanichkul, J., Chomtho, S., Pancharoen, C., & Visuthranukul, C. (2021). Children's Eating Behavior Questionnaire Correlated with Body Compositions of Thai Children and Adolescents with Obesity: A Pilot Study. Journal of Nutrition and Metabolism, 2021. Retro from: https://doi.org/10.1155/2021/6496134
11. Saleh, B. B., & Ma´ala, E. G. (2015a). Impact of Adolescents' Family Meal Eating Patterns upon their Weight Control Behaviors at Secondary Schools in Baghdad City. 28(2), 1–7.
12. Sarrar, L., Vilalta, M., Schneider, N., & Correll, C. U. (2020). Body mass index and self-reported body image in German adolescents. Journal of Eating Disorders, 8(1), 1–10. Retro from: https://doi.org/10.1186/s40337-020-00330-3
13. Singh, A. P., & Misra, G. (2012). Adolescent Lifestyle in India: Prevalence of Risk and Promotive Factors of Health. Psychology and Developing Societies, 24(2), 145–160. Retro from: https://doi.org/10.1177/097133361202400203
14. World Health Organization. (2021). Adolescent mental health: Retro from: https://www.eatingrecoverycenter.com/blog/eating-disorders-history