Evaluation of Nutritional and Health Status of Prepartory School Student in Quisna- Menoufia Nutritional and Food Dept. of Sciences

Fatma El Zahraa Amein El Shrief,[1] Azza Els-Eskafy,[2] Aya Mohamed hassen El Far[3]

ABSTRACT

It is of the at most importance to know much about the nutritional and health status of Egyptian adolescents, since in future they will be working people in all areas. In particular rural adolescents as in Menoufia governorate should have much attention, as the rural was neglected many years ago.

A total numbers of 60 females and 60 males, 11-14 years of age were chosen randomly from the preparatory schools of Qusina city– Menoufia governorarate. Anthropometric measurements were performed. Questionnaire included Socio-economic parameters, Food habits and daily intake of different nutrients was filled via interview. Statistical analysis was carried out by SPSS Statistical Program.

It was found that nutritional awareness was low for both genders in many items especially for boys calling for targeted nutritional awareness program. Daily intakes were low for Energy, Fat, Fibers, Vits. (A, D, C, niacin, Folat), minerals (K, Ca, P, Fe, Zn). Health status was not satisfying for both girls and boys as well.

Key words: nutritional status, health status, food habits, anthropometric measurements, nutrition daily intakes.

INTRODUCTION

Adolescence, the transition from childhood to adulthood is accompanied by series physical, biochemical, hormonal and psychological changes. There is marked variation between sex and individuals in timing, intensity of changes during this period beginning with the appearance of sexual maturity and rapid growth. Girls tend to grow more rapidly between 12-14 years and boys experience this period growth between 14 and 16 years, there are many individual variation to growth pattern (Bendary ,1997).

Kirby and Danner, (2009) reported that pediatric nutritional deficiencies are associated not only with poverty in developing countries, but also in children in developed world who adhere to restricted diet, or taking too much food. In addition some practices were identified which are prevalent in several age groups including adolescents, and have important public health consequence, such as smoking, increased food intake (as fast foods) foods rich in fat, salt and sugar and low in zinc and calcium, besides iron, practicing no hand-washing before food preparation and eating and neglecting weight-monitoring (Usfar and Fahmida, 2011).

Peykari *et al.*, (2011) stated that most of female and male participants said that different factors influenced the girls and boys diet selection. Girls' paid more attention to diet selection and taste and health of foods, whereas boys were careless and gluttony caused more food consumed. They concluded that adolescents' information (both genders) regarding nutritional problems resulting from improper food habits were not satisfactory.

Al Sabbah *et al*., (2004) stated that there are many problems with adolescent eating, dieting and physical activity. Regional, gender and parental socioeconomic status differences should be taken into account in developing interventions. More detailed studies were needed with more elaborate instructions about food habits and physical activity of adolescents.

MATERIALS AND METHODS

Sample:

The total sample of this study composed of 120 students, which were chosen accedently from the preparatory school of Qusina city – Menoufia governorarate. A total numbers of 60 females and 60 males, 11-14 years of age were enrolled in the study.

Period of study:

The present study was carried out in 2013.

Data collection:

The instrument used to collect data of present study consisted of a structured interviewing questionnaire, consisted of several parts. The first part was to obtain the anthropometric measurements, Which included the height (cm), weight (kg), body mass index (weight in kg/ height in m^2), triceps skinfold thickness (TSF in mm), mid upper arm circumference (MAC in cm), mid upper arm muscle circumference (AMC in cm using the formula AMC=AC-3.14(TSF/10) (DRI, 2002).

[1]Prof. of Nutrition & Food Science, Ex – Dean Faculty of Home Economics, Minufiya University
[2] Lecturer of Nutrition & Food Science,.Faculty of Home Economics, Minufiya University
[3]Faculty of Home Economics Menoufia University
Received August 20, 2013, Accepted September 24, 2013

The second part included socio-economic parameters:

Socio-economic status act of questionnaire include the educational level of father and mother, family size, family monthly income and the The third part included studying expenditure on food habits:

Food habits included information collection about number of consumed meals, omitted meals, snacks, opinions of students about variable items of different food groups, as well as 24-hour recal.

Analysis of nutrients of 24-hour food intake:

The daily food intake had been assessed from the data collected using the 24-hour recall method. This included consumed foods in breakfast, lunch, dinner and snacks between meals or after dinner. Then data were analysed using Diet Analysis Program, (1995); the Consumer Program for Ready to Eat Egyptians Foods, Version 1, Food Analysis and Statistical Analysis Unit, Faculty of Home Economics, Menoufia University. Nutrients intakes were evaluated using DRI, (2002). According to DRI, energy requirements of boys and girls calculated as follows:

Girls: 135.3-(30.8 age)+PA(10wt+934ht)+25

Boys: 88.5-(61.9 age)+PA(26.7wt+903ht)+25

PA: factor for physical activity, being 1.31 and 1.26 for very and moderate activity girls and boys respectively.

Statistical analysis:

Statistical analysis was carried out in the Statistical Analysis Unit, Faculty of Home Economics, Menoufyia University by SPSS Statistical Program (SPSS, 1995).

RESULTS AND DISCUSSION

A- Age and anthropometric measurements:

Data presented in table (1) indicated no significant differences revealed between girls and boys in concern to height, age, TSF and AMC, although numerically girls showed higher values for height, age, TSF and less AMC. According to RDA (1989), the weight of boys and girls at mentioned age is 45 and 46 kg, respectively. This indicated that the weight of all studied sample was much greater than RDA. According to Filer (1993), obesity is a significant risk when it appears early in life, and it is estimated that 70% of obese adolescents will become obese adults.

B-Socio-economic characteristics:

Results of table (2) indicated that father's education levels of boys group was higher than girls group, this because (illiterate + read and write 20.00%) was lower than for girls (33.30%).

Data presented in table (2) showed that mother's education levels of boys group were better than girls group, this because (illiterate + read and write) 31.66% was lower than girls 43.33%, and for group (higher education of girls) 5.00% compared with boys group (1.67%).

Results of table (2) showed that the family size (6-10 members) for girls (73.34%) was higher than the boys (65.00%). Moreover family size of 10 members recorded only for boys.

Data of table (2) revealed that family income level (400-900L.E and >900L.E) was 91.67% for girls but for boys was 88.33%.

Data presented in table (2) indicated that for food expenditure, (60-66.67%) of total sample belong to food expenditure (50-75%) group rich indicates the higher price of food in Menoufia Governerate.(Unicef, 2010).

C- Food habits:

Results of table (3) indicate the fact that about 26.67 of boys and 16.67 of girls healthy omit breakfast, being undesirable food habit, which may affect the health of adolescents and productivity. As for kind of snacks taking between meals, it is obvious that soft drinks, called the follow food were more consumed by girls (8.32) than boys (6.67%). As for sugar spoon number, it could be observed that the lowest number of girls consumption of sugar (three spoon) was by 27 (45%) comparing to boys 30 (50%). Moreover both percentage of girls and boys who certainly take milk were low being 31.67% and 16.67, respectively, calling for nutritional programs to enhance taking milk in particular for the boys group.(Croll *et al.,* 2001).

D- Nutrition awareness:

Data presented in table (4) illustrate the opinions of adolescents (girls and boys) about the bread, seeds and cereal groups. It is clear that 98.33% of girls believe that balady bread is better than fino bread. Boys who stated wrong answers amounted to 8.33% in contrast to only 1.67% of girls. More boys (91.67%) than girls (86.67%) believed that horse bean is a main source of proteins in Egypt. More girls (81.67%) than boys (78.33%) indicated that bread is a rich source of carbohydrates.

Data presented in table (4) indicated that most of boys and girls 58%:72% respectively believed that fruits and vegetables proteins are not equivalent to that of meat protein, meanwhile mistaken girls (28.33%) were more than those of boys (25%). More boys (85%) than girls (73.33%) believed right that fish is more useful than meat concerning the nutritional value. More girls (75%) than boys 66.67% indicated that liver is a rich source of iron. Unfortunately, 25%:33% of total sample did not know this fact. Data of table (4) showed that girls (81.67%) and boys (58.33%) believed right that milk is not rich in irons in this connection more boys (41.47%) than girls.(18.33%) were mistaken.

Table 1. Mean and standard devian on of age and Anthropometric measurements among the sample

Variable	Girls N=60	Boys N=60	sig
	Mean ± SD	Mean ± SD	
Age	13.45±1.11	13.07±0.99	
Height(CM)	156.92±8.32	154.63±6.27	
Weight(KG)	52.89±8.31	49.45±8.86	*
TSF(cm)	3.02±0.44	2.75±0.45	
AMC(cm)	12.41±1.81	13.07±0.99	
BMI(kg/m²)	21.38±2.78	20.53±3.15	*
AC(cm)	21.94±2.02	22.35±2.53	*

Table 2. Socio-economic characteristics

Groups	Girls		Boys	
	Frequency	% of total	Frequency	% of total
Father Education Level:				
Illiterate	4	6.7	2	3.33
Read and Write	16	26.6	10	16.67
Secondary	4	6.7	15	25
Intermediate	21	35.0	22	36.67
Education	13	21.7	10	16.67
Higher Education	2	3.3	1	1.67
Total	60	100	60	100
Mother Education Level:				
Illiterate	6	10	5	8.33
Read And Write	20	33.33	14	23.33
Secondary	5	8.33	9	15
Intermediate	17	28.34	19	31.67
Education	9	15	12	20
Higher Education	3	5	1	1.67
Total	60	100	60	100
Family Size (Member):				
4 members	1	1.67	1	1.67
5 members	15	25	20	33.33
6 members	25	41.67	23	38.33
7 members	13	21.67	10	16.67
8 members	5	8.33	3	5
9 members	1	1.67	2	3.33
10 members	0	0	1	1.67
Total	60	100	60	100
Family Income (L.E):				
< 400	5	8.33	7	11.67
400-900	36	60	38	63.33
> 900	19	31.67	15	25
Total	60	100	60	100
(2-e):Food Expenditure on food				
25 %	11	18.33	14	23.33
50 %	25	41.67	13	21.67
75 %	15	25	23	38.33
No answer	9	15	10	16.67
Total	60	100	60	100

Taple 3. food habits

Variable	Girls		Boys		Variable	Girls		Boys	
	Frequency	%	Frequency	%		Frequency	%	Frequency	%
1. Meals number					**5. Eating pickles**				
One	1	1.67	3	5	Yes	29	48.33	19	31.67
Two	21	35	16	26.67	No	15	25	24	40
Three	36	60	35	58.33	Sometimes	16	26.67	17	28.33
More than 3	2	3.33	6	10	**6. Quantity of salt in food**				
2. Omitted meal					Slight Slat	8	13.33	3	5
None	38	63.33	41	68.33	Moderate salt	49	81.67	45	75
Break fast	10	16.67	16	26.67	Heavy Salt	3	5	12	20
Lunch	11	18.33	0	0	**7. Do you drink tea directly after meals?**				
Dinner	1	1.67	3	5	No	14	23.33	16	26.67
3. Cause of not eating breakfast					Sometimes	18	30	12	20
No time	6	60	11	68.75	Yes	28	46.67	32	53.33
No Appetite	2	20	0	0	**8. number of Sugar spoon**				
Non-Habitual	1	10	4	25.00	One	6	10	6	10
Don't His	1	10	1	6.25	Two	15	25	16	26.67
4. Kind of food snacking between meals					Three	27	45	30	50
No	4	6.67	6	10	More than 3	12	20	8	13.33
Sometimes	3	5	7	11.67	**9. Do you have soft drink?**				
Always	53	88.33	47	78.33	Yes	22	36.67	14	23.33
Sweets	8	15.09	1	2.13	No	25	41.66	13	21.67
Juice	11	18.33	9	15	Sometimes	13	21.67	33	55
Soft Drink	5	8.33	4	6.67	**10. Do you drink milk?**				
Sandwich	2	3.33	4	6.67	Yes	19	31.67	10	16.67
Fruit	22	36.67	8	13.33	No	11	18.33	26	43.33
					Sometimes	30	50	24	40

Table 4. Nutrition awareness

Statement	Girls (N = 60)				Boys (N = 60)			
	Yes		No		Yes		No	
	N	%	N	%	N	%	N	%
Cereals, bread and seeds group								
The balady bread is better than of fino bread.	59	98.33	1	1.67	55	91.67	5	8.33
The rear surface of balady bread has more vitamins than the fore surface.	49	81.67	11	18.33	41	68.33	19	31.66
Wheat has more vitamins than the corn.	47	78.33	13	21.67	37	61.67	23	38.33
Lentil has a high nutritional value which would to equivalent to those in meat.	45	75	15	25	51	85	9	15
Dry beans contain protein which is useful for health.	50	83.33	10	16.67	53	88.33	7	11.67

Table 4. Continue

Statement	Girls (N = 60)				Boys (N = 60)			
	Yes		No		Yes		No	
	N	%	N	%	N	%	N	%
Horse bean is a main source of protein in Egypt.	52	86.67	8	13.33	55	91.67	5	8.33
The bread is a rich source of carbohydrates.	49	81.67	11	18.33	47	78.33	13	21.67
Meat, fish and egg								
Meat protein is equivalent to fruits and vegetables protein nutritional value.	17	28.33	43	71.67	25	41.67	35	58.33
Boiled meat has a higher nutritional value than grilled or cooked meat by frying.	33	55	27	45	27	45	33	55
Fish is more useful than meat concerning the nutritional value.	44	73.33	16	26.67	51	85	9	15
Eating fish and drinking milk causes mental retardation	23	38.33	37	61.67	26	43.33	34	56.67
Eggs substitute meat	48	80	12	20	42	70	18	30
Egg yolk has a higher nutritional value than egg albumin	43	71.67	17	28.33	37	61.67	23	38.33
White chicken meat is more healthy than red meat	50	83.33	10	16.67	42	70	18	30
The liver is a rich source of iron	45	75	15	25	40	66.67	20	33.33
Fish is rich of vitamins	28	46.67	32	53.33	32	53.33	28	46.67
Uncooked eggs are better than boiled and fried ones	38	63.33	22	36.67	30	50	30	50
Milk and dairy products group								
Pasteurized milk contains more vitamins than boiled milk.	41	68.33	19	31.67	47	78.33	13	21.67
Milk is rich of iron.	11	18.33	49	81.67	25	41.67	35	58.33
Cottage cheese has more nutritional value than Roumi cheese.	15	25	45	75	18	30	48	60
Milk is a rich source of calcium.	59	98.33	1	1.67	47	78.33	13	21.67
Yoghurt is more digestible than fresh milk.	25	41.67	35	58.33	40	66.67	20	33.33
Drinking enough milk in the morning substitutes breakfast.	36	60	24	40	38	63.33	28	46.63
Margarine may lead to heart diseases	42	70	18	30	46	76.67	14	23.33
Margarine is always healthy compared to oils.	40	66.67	20	33.33	33	55	27	45
Fruits and vegetables groups and tea drinking								
Peeled potatoes lose some of it's nutritional value	26	43.33	34	56.67	28	46.67	32	53.33
Boiled vegetables for salads is better than fresh vegetables	16	26.67	44	73.33	20	33.33	40	66.67
Carrot contains nutrients nutritional which strengthen eye-vision which strengthen eye-vision	48	80	12	20	41	68.33	19	31.67
Pears are rich of iron	41	68.33	19	31.67	33	55	27	45
Mango is rich of iron	33	55	27	45	35	58.33	25	41.67
Spinach is rich of iron	40	66.67	20	33.33	33	55	27	45
Excess intakes of potatoes and sweet potatoes may be a cause of a gaining weight.	55	91.67	5	8.33	34	56.67	23	38
Vegetables and fruits are main source of vitamins	35	58.33	25	41.67	37	61.67	23	38.33
Tomatoes are poor source of vitamins	22	36.67	38	63.33	25	41.67	35	58.33
Drinking tea after meals may lead to anemia	51	85	9	15	49	81.67	11	18.33
Fats and sugar group								
Simple sugar is better than complex sugar (starch sources)	10	16.67	50	83.33	25	41.67	35	58.33

Table 4. Continue

Statement	Girls (N = 60)				Boys (N = 60)			
	Yes		No		Yes		No	
	N	%	N	%	N	%	N	%
The nutritional value for sweets comes mostly from sugar	33	55	27	45	30	50	30	50
Fats provide bodies with the required energy	40	66.67	20	33.33	32	53.33	28	46.67
The more the muscle exercises (effort) the more sugar and fats are needed	52	86.67	8	33.33	45	57	15	25
The more weight gain for individual required for more sugar and fats intakes with less movement	37	61.67	23	38.33	27	45	33	55
High fat intake may cause heart diseases and hypertension	4.9	81.67	11	18.33	39	65	21	35
Vegetable oil is better for health than animal fat .	14	23.33	46	76.67	22	36.67	38	63.33
Vitamins and minerals group:								
Cutting then washing fresh vegetables several times cause a great loss in vitamins	10	16.67	50	83.33	9	15	51	85
Vitamins are essential to protect the body against disease	44	73.33	16	26.67	41	68.33	19	31.67
The vitamins are essential to protect the adolescents from catching cold.	47	78.33	13	21..67	43	71.63	17	28.33
Salts are important for building body	43	71.67	17	28.33	39	65	21	35
Honey is essential to protect the body against disease.	52	86.67	8	13.33	48	80	12	20
Cane syrup (black honey) is rich in iron	53	88.33	7	11.67	50	83.33	10	16.67
Iron mineral intake from food protects the body against anemia	41	68.33	19	31.67	50	83.33	10	16.67

Both groups however lack for more nutritional awareness. More boys (76.67%) than girls (70%) reported right that margarine may lead to heart attack, which is possibly due to much free radical.(Robert,E *et al.*, 2006).

Results presented in table (4) show the frequency distribution of adolescents concerning to their opinion about the fruits and vegetables group. It is obvious that both boys (53.33%) and girls (56.67%) reported wrongly that peeled potatoes do not lose some of its nutritional value. Unfortunately, more than half the answers were wrong regardless of gender. Boys (61.67%) and girls (58.33%) believed right that vegetables and fruits are main sources of vitamins (Lytle, L 2002)

Results presented in table (4) show more girls (83.33%) than boys (58%) were right when they said that simple sugar is not better than the complex sugar sources. But unfortunately, tangible proportions of girls (16.67%) and boys 41.67% were wrong. About half the total sample (55% of girls, 50% of boys) was wrong. Showing that nutritional value of sweets comes from sugar, neglecting, for instance, milk and nuts. The results however, were in behalf of girls.

From the results in table (4), it is evident that both girls (83.33%) and boys (85%) were mistaken when saying that cutting then washing cut fresh vegetables several times do not cause a great loss in vitamins. Most of girls (78.33%) and boys (71.67%) knew that vitamins are essential to protect adolescents from catching cold.

E- Daily intake of nutrients:

The results of table (5) show the macronutrients intake by adolescents of both genders. It is obvious that both girls (88.53%) of DRI and boys (74.09%) were low in total calories intake, provided that total, however calories intake by girls was higher than for the boys. Total fat intake for girls (90.12% of DRI) and boys (75.20% of DRI) was less than DRI in particular for boys. The low fat than DRI mean possibly less intakes of vitamins such as Vits. A and D.

From results of table (5), it could be noticed that the intakes of vitamins A, D and B1 were higher for boys than girls, while the intakes of vitamins E, B2 and B12 were higher for girls than boys. The intakes of vitamins C, niacin and folate were similar for both genders. Nevertheless, a high significant difference was recorded for vitamins D, B1 and B2 and very high significant difference recorded Vits. B12.

The results of table (5) show the daily intake of adolescents from diet minerals. It was found that sodium intake was evidently higher than the DRI, being 175.57% of DRI in girls and 179.10% of DRI for boys.

Table 5. Daily Intake of macronutrition, vitamin and miner

Nutrient	Girls			Boys			sig
	Mean ±SD	DRI	٪ of DRI	Mean ±SD	DRI	٪ of DRI	
Macronutrients							
Energy(kcal)	2077.87 ±53	2347.08	88.53	2020.49±41	2727.02	74.09	**
Animal protein(g)	27.02±1.3			30.49±1.74			
Plant protein(g)	40.63±2.9	34	198.97	42.26±2.76	34	213.97	
Total protein (g)	67.65±0.3			72.75±1.99			
Animal fat (g)	30.71±14.59			23.44±2.06			
Plant fat (g)	39.8±2.3	78.24	90.12	44.92±14.67	90.90	75.20	
Total fat (g)	70.51±3.5			68.36			
Carbohydrate(g)	293.17±7.9	376.73	77.82	280.81±40.63	25	443.23	*
Fiber (g)	7.9±2.0	31	25.48	6.5±1.99	25	26	
Cholesterol(g)	12.79±3.4	200	63.95	11.71±2.96	25	200	
Vitamins							
Vitamin A(µg)	1360±1.86	600	80	1420±1.78	600	83.53	
Vitamin D(µg)	1.97±0.80	5	39.4	2.43±0.84	5	48.6	*
Vitamin E(µg)	11.9±0.29	11	108.18	11.2±0.31	11	101.82	
Vitamin C(mg)	12.3±0.26	45	27.33	12.3±0.28	45	27.33	
Vitamin B□(mg)	2.40±1.2	0.9	266.67	2.49±1.32	0.9	276.67	*
Vitamin B2 (mg)	1.51±0.4	0.9	167.78	1.37±0.55	0.9	152.22	*
Vitamin B12 (mg)	2.69±0.62	1.8	149.44	2.27±0.11	1.8	126.11	**
Niacin (mg)	8.9±0.72	12	74.75	8.6±0.08	12	72.17	
Folate (mg)	269.42±89.42	300	89.81	268.43±88.16	300	89.48	
Mineral							
Sodium (mg)	2633.60±413.0	1500	175.57	2686.48±361.11	1500	179.1	*
Potassium(mg)	1141±11.09	4500	25.33	1109±3.55	4500	42.64	
Calcium (mg)	506.26±76.34	130	38.94	477.05±93.09	1300	36.69	**
Magnesium (mg)	115.58±23.60	240	481.16	68.31±8.26	240	28.39	*
Phosphorus (mg)	1165.68±56.86	1250	93.35	1122.61±17.92	1250	89.81	**
Animal Iron (mg)	3.16±0.82			2.5±0.32			
Plant Iron (mg)	2.97±0.29	8	76.63	3.06±0.21	8	69.5	*
Total Iron (mg)	6.13±0.5			5.56±0.3			
Zinc (mg)	2.4±0.17	8	30.13	2.22±0.53	8	27.75	*

Differences between girls and boys were significant; high intakes of sodium lead to hypertension. The low intakes of total iron (76.63 and 69.50 % of DRI in girls and boys respectively) is a threaten of anemia, which is a dangerous disease for adolescents.

Data of table (6) show the number of girls and boys inflicted with some diseases or not. It is clear that 8.33 % of girls and 13.33% of boys were suffering of anemia. This went parallel with the results of table (5-c) here the daily intake of adolescents were less than DRI, in particular the boys. Boys and girls reported that they suffer of hair fall (15 and 38.33%) of total sample). This coincided with the results of Tables (5-b and 5-c) where both groups showed low intakes of Fe and some B vitamins. (Michael, J. G. *et al.*, 2004).

Finally, it could be concluded that the knowledge of students regardless on their gender showed in complete awareness considering their health and nutritional status.

It may be recommended that nutritional educational programs should be directed both adolescent girls and boys.

Evaluation of nutritional and health status of adolescents in preparatory schools should carried out periodically because the prices of foods are changed rapidly.

Table 6. Healths status

Variable	Girls		Boys	
	Frequency	% of total	Frequency	% of total
1. Suffer of hypertension:				
Yes	9	15	16	26.67
No	34	56.67	25	41.66
Sometimes	17	28.33	19	31.67
2. Suffer from troubles and digestion:				
Yes	8	13.33	10	16.67
No	37	61.67	34	56.66
Sometimes	15	25	16	26.67
3. Suffer from hair loss:				
Yes	23	38.33	9	15
No	28	46.67	34	56.67
Sometimes	9	15	17	28.33
4. Suffer from anemia:				
Yes	5	8.33	8	13.33
No	48	80	36	60
Sometimes	7	11.67	16	26.67
5. Suffer from teeth decay:				
Yes	22	36.67	11	18.33
No	30	50	40	66.67
Sometimes	8	13.33	9	15
6. Suffer from canker of teeth gum:				
Yes	19	31.67	15	25
No	26	43.33	34	56.67
Sometimes	15	25	11	18.33
7. Feel with tiredness and lazyness:				
Yes	15	25	15	25
No	17	28.33	15	25
Sometimes	28	46.67	30	50
8.Suffer from angular stomatits:				
Yes	11	18.33	16	26.67
No	33	55	27	45
Sometimes	16	26.67	17	28.33
9. Take any medicine :				
Yes	11	18.33	8	13.33
No	30	50	37	61.67
Sometimes	19	31.67	15	25
10.Knd of medicine N=30		N=23		
Vitamins	5	16.67	6	26.08
Obtundent	9	30	6	26.08
sedatives	8	26.66	5	21.74
Antibiotic	5	16.67	4	17.4
Other	3	10	2	8.4
11.Do you wash your teeth with toothbrush:				
Yes	22	36.67	30	50
No	18	30	10	16.67
Sometimes	20	33.33	20	33.33
12.Do you play sport :				
Yes	20	33.33	28	46.67
No	25	41.67	14	23.33
Some times	15	25	18	30

REFERENCES

Al Sabbah, H. ; Vereecken, C.; Kolsteren, P; Abdeen, Z. and Maes, L.(2004): Food habits and physical activity patterns among Palestinian adolescents: Findings from the national study of Palestinian schoolchildren (HBSC-WBG2004). Public Health Nutr. 10(7):739-46.

Bendary, S. A. (1997): Food consumption Pattern and Food Preference among Preparatory School Public in Al-Sharkia Governorate and their Correlation with their Families Social Variables. M.Sc. Thesis, Faculty of Home Economics, Menoufia University.

Croll, J.; Newmark-sztainer, D. and Story,M. (2001):Health eating. What does it mean to adolescent? Journal of Nutrition Esucation, 33(4); 193-198.

Diet Analysis Program (1995): Computer Program Ready to Eat Egyptian Foods, Version 1. Food Analysis and Statistical analysis Unit Faculty of Home Economics, Menoufia University

DRI (2002): Dietary Reference intake for Energy, Carbohydrate, Fiber, Fatty acids, Cholesterol. Institute Medicine, I. O. .N.

Filer, L. J. (1993): A summary of the workshop on child adolescent obesity: What, How and Who? Critical Reviews of Food Science and Nutrition ,33 (4/5): 287–305.

Kirby, M. and Danner, E.(2009): Nutritional deficiencies in children on restricted diets., Pediatr Clin North Am; 56(5):1085-103.

Lytle, L. A. (2002): Nutritional issues for adolescents. J. Am. Diet Assoc; 102 (3):S8-12.

Michael, J.; Barrie, M.; John, M. and Lenore, A.(2004): Public Health Nutrition.ISBN 0-632-05627-4.

Peykari, N.; Tehrani, F.R.; Eftekhari, M. B.; Malekafzali, H. Dejman, M. Neot, R. and Djalalinia, S .(2011): A peer-based study on adolescence nutritional health: Alesson learned from Iran. J Pak Med Assoc.; 61(6):549-54.

RDA(1989): Recommended Dietary Allowance .10th Edition The national academy of Science, National Academy Press, Washington ,D.c.

Robert, E. ; Wildman, D. and Medeiros, (2006): Advanced Human Nutrition. Crc press, Bocca Roton London New York Washington, D.C.

Spss(1998): Statistical Package for Social Science .Computer Software, Ver.10.spss Company, Lodon .

Unicef, (2010): Child Poverty and Disparities in Egypt. www.unicef.org/Egypt.

Usfar, A. A. and Fahmida, U. (2011): Evidence related to food consumption, healthy lifestyle, and nutritional status within the period 2000-2010, Asia Pac J Clin Nutr.; 20(3):484-94.

الملخص العربي

تقييم الحالة الغذائية والصحية لطلبة المدارس الاعدادية قويسنا– المنوفية

فاطمة الزهراء أمين الشريف، عزة الإسكافى، آية مُحَّد حسن الفار

يعتبر فى الحد الأقصى من الأهمية أن نتعرف على الحالة التغذوية والصحية للمراهقين، حيث أنهم سيكونون هم العمالة فى هذه المنطقة المستقبلية. وعلى الأخص فإن المراهقين الريفيون مثلما فى محافظة المنوفية يجب ان يحصلوا على الاهتمام الكبير حيث أهمل الريف لسنوات طويلة.

ولقد تم الاختيار عشوائيا لـ 60 من الأناث و60 من الذكور بعمر 11- 14سنة من المدارس الاعدادية لشبين الكوم– محافظة المنوفية وتم الحصول على مقاييسهم الجسمية. كما استخدم استبيان يتضمن العوامل الاقتصادية والاجتماعية، العادات الغذائية، المأخوذ اليومى من العناصر الغذائية وجمعت المعلومات من خلال مقابلات مع الباحثين كما أجرى التحليل الاحصائى باستخدام برنامج SPSS للاحصاء.

ولقد وجد ان الوعى الغذائى كان منخفضا لكلا الجنسين بالنسبة لكثير من نقاط البحث خاصة للأولاد مما يستدعى إلى استهدافهم ببرامج توعية غذائية كما إتضح أن المأخوذ اليومى كان منخفضا فيما يخص الطاقة والدهن والألياف وبعض الفيتامينات (C, D, A) النياسين، الفولات، وبعض المعادن (Zn, Fe, P, Ca, K) ولم تكن الحالة الصحية مرضية بالنسبة للأولاد والبنات على السواء.

الكلمات المفتاحية:

(الحالة التغذوية، الحالة الصحية، العادات الغذائية، المقاييس الجسمية، المأخوذ اليومى للعناصر الغذائية).