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Original Research Article.

Eating Habits Practices and Their Association with Nutritional Status Among Female Students at Secondary School in Riyadh, Saudi Arabia In 2014-2015

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ABSTRACT

Introduction: Eating habits practices are one of the major conditions affecting the world today.

Objectives: This study aims to measure the proportion of the good and bad eating habits relation to their BMI.

Methods: A cross-sectional descriptive study, including (80) Saudi female students, 15-17 years old, were selected from the second grade in secondary schools in Riyadh. Specially constructed questionnaire was used to interview the student.

Results: Fruit and vegetable intake was 75%, 77.5%. Two point five percent of students eat sweets less than six times. The principal daily meal was lunch ninety one percent. About sixty eight percent of the students ate their food while watching television. The most daily drink that used by forty one percent was juice. Ninety four percent consumed snacks during their day. Sixty eight percent had more than 6 members in their families. The higher education of father 91.7% and mother 89.1% is having the higher eating of meat and vice versa.

Conclusion: The normal weight was the main category among adolescents. But bad habits were dominant, like eating while watching TV. This study showed that eating behaviors for secondary schools still require improvement.

Key words: Eating Habits, Nutritional Status.

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INTRODUCTION

Eating habits practices are one of the major conditions affecting the world today, which defined as a routine of behavior that is repeated regularly and tends to occur unconsciously.[1-3] An adequate eating habits practices and good body mass index are essential for health and wellbeing. Together they maintain the delicate balance between energy input and energy output, thus healthy weight maintenance.[4] The eating habit is the way a person or group eats, considered in terms of what types of food are eaten, in what quantities, and when.[5] They could be either a good habit or bad habit. The good habit is a behavior that is beneficial to one's physical or mental health, often linked to a high level of discipline and self-control[6], while the bad habit is known as a patterned behavior regarded as detrimental to physical or mental health, which is often linked to a lack of self-control.[7] The weight status of female students is determined by their body mass index. The body mass index (BMI) is an international classification system which is defined as weight in kilograms divided by height in meters². It gives an indication of whether a student is overweight, underweight or at a healthy weight.

A study Weight status and Eating Habits of Adolescent Nigerian Urban Secondary School Girls in Nigeria 2013. To assess the weight status and eating habits of adolescent girls. The study sample was 2,097, aged 12 - 19 years. The prevalences of both overweight and obesity were higher in girls who skipped meals compared with their peers who did not. Breakfast was the most frequently skipped meal, followed by lunch and then dinner. The consumption of energy-dense fast-food items outside the home is common among adolescent schoolgirl. Of the participants who reported consuming snacks regularly, over half also admitted to skipping meals. Meal skipping was associated with an increased prevalence of overweight and obesity among adolescent schoolgirls.[8]

The study Eating Habits and Factors Affecting Food Choice of Adolescents living in Rural areas that written by Koukoulis, 2001. Amid to establish factors that affect food choices among adolescents in sample size of adolescents (n=382) living in rural areas and to identify their food choices. Body weight concerns, dieting, food knowledge, parental control, maternal education, family meals, eating with peers, age and gender are factors that affect food choices among Greek adolescents. Despite the fact that certain traditions remain strong in rural Greece, globalization seems to be eroding them and to be leading to food modifications

that are not compatible with the traditional Mediterranean diet and healthy eating. Understanding adolescents' perceptions towards food and nutrition along with factors that influence adolescent food behavior might help to promote health among adolescents and improve quality of life.[9]

The study Body Mass Index, family lifestyle, physical activity and eating behavior on a sample of primary school students in a small town of Western Sicily conducted by EnzaSidoti in Italy 2009. Aimed to find a correlation between (BMI), eating behavior, and to identify possible directions for interventions on incorrect nutritional/physical activity in a sample of young adolescents. The research surveyed the entire population of two Primary Schools in a town of western Sicily, (n=294). The result found a significant association between the percentage of students classified as having an elevated BMI and a sedentary habit and/or an incorrect eating behavior. Also, multi linear regression analysis showed the weight of some independent variables which were more strictly correlated with adolescent's BMI. Researchers who conducted the study believe that obesity in adolescent may become chronic disease in adulthood leading to death by cardiovascular disease. On the other hand, increasing the proportion of adolescents meeting recommended dietary and physical activity guidelines has been identified as an important strategy to contrast the epidemic increase in obesity.[10]

A study Association of physical activity and dietary behaviors in relation to the BMI in Iranian children and adolescents, conducted by Roya Kelishadi In 2007.Aimed to examine the relation of dietary and physical activity (PA) patterns with the BMI, and the associations between these patterns among children. A representative sample of 21111 school students aged 6–18 years was selected. The type of fat most frequently consumed was hydrogenated solid fat and the frequency of consumption of dairy products and fruits showed a significant inverse association with BMI. The unhealthy dietary habits is a major threat to the present and future health of this vulnerable age group and is likely to make the community prone to an epidemic of chronic disease over the next two decades.[11]

Obesity and Eating Habits among College Students in Saudi Arabia was a study conducted by Abdallah S Al-Rethaiaa in2010.To assess overweight and obesity rates among male college students in KSA and to correlate their body weight status and composition with their eating habits. 357 male students aged 18-24 years were randomly chosen from College of Health Sciences at Rass, Qassim University for the study. He found that the BMI had significant inverse correlation with the frequency of eating with family, similar correlations were also found between BMI and snacks consumption. His findings suggest the need for strategies and coordinated efforts at all levels (family, university, community and government) to reduce the tendency of overweight, obesity and elevated body fat among college students, and to promote healthy eating habits.[12]

A study Adolescents Food Habits and Nutritional Status in Cameroon by Dapi, 2005. This study was carried out to describe and compare the food habits and nutritional status of adolescents in urban and rural areas in Cameroon. It was performed among 52 adolescent of 12-15 years. The study showed the frequencies of consumption of food and the frequency of in between meals was higher in urban than in rural adolescents. It also found that arm muscle area (AMA) and waist/hip ratio were significantly higher in rural than in urban adolescents. The end finding showed that there was a positive significant correlation between BMI and AMA in urban and rural areas. In conclusions Despite a lower frequency of food consumption, rural adolescents had higher AMA and waist/hip ratio than urban adolescents.[13]

A study Association Between BMI and Eating Habits, conducted by Kaur in India 2009. Aimed to find the association between eating pattern and BMI. The result shows the consumption of fast food has increased rapidly among adolescents from all socioeconomic/ethnic groups. Adolescents eat fast food once or more time per week.BMI was increased in those who spent more time with television/video games, taking fast food. Eating pattern of adolescents having working mothers maybe affected because of the negligence as well more influence of peers. In conclusion a positive association between eating pattern and BMI was found.[14]

A study in 2014 Association between Dietary Habits and BMI of Adolescent Females in Intermediate Schools in Riyadh, Saudi Arabia by Al-Muammar. This study measured BMI and determined the eating habits and lifestyle of 107 randomly selected female students (age 12–15 years) at schools in Riyadh. The majority of the students did not have healthy dietary or exercise habits. According to Al-Muammar results there were no significant differences between BMI category and dietary pattern and lifestyle. Concern over adolescent obesity has mounted due to its rapid increase in prevalence, its persistence into adulthood, and its associated morbidity and mortality. Numerous studies have demonstrated an association between body weight and eating behavior, and cultural and socioeconomic factors also play an important role in the development of eating behavior.[15]

Breakfast Eating and Weight Change in a 5-Year Prospective Analysis of Adolescents by Timlin was conducted to examine the association between breakfast frequency and 5-year body weight change in 2216 adolescents. As obesity is one of the more pressing public health problems today. Over the past 2 decades, the prevalence of overweight has doubled in children and nearly tripled in adolescents. One intriguing line of research that may have broad public health application is the role of breakfast consumption on weight control. Surveys were completed in 1998–1999 (time 1) and 2003–2004 (time 2). Multivariable linear regression was used to examine the association between breakfast frequency and change in BMI, with adjustment for age, socioeconomic status, race, physical activity and weight-related variables. The result shows that rates of breakfast consumption decrease throughout adolescence and into adulthood, so the impact of regular breakfast consumption on public health may be significant.[16] Eating Habits and Obesity among Lebanese University Students" conducted by Yahya in 2008. Aimed to assess the prevalence of overweight and obesity in a sample of students to examine their eating habits. A survey of 220 students living in Beirut, Lebanon showed that the majority of the students were of normal weight. The prevalence of overweight and obesity was more common among male students compared to females. Eating habits of the students showed that the majority reported taking meals regularly. Intake of colored vegetables and fruits was common among students. In spite of the overall low prevalence of overweight and obesity in the studied sample, results indicate that students would possibly benefit from a nutrition and health promotion program to reduce the tendency of overweight and obesity, and to improve students' eating habits.[17]

A study Fast Food for Family Meals: Relationships with Parent and Adolescent Food Intake, Home Food Availability and Weight Status ,Boutelle at 2006 in Minnesota. Aimd to examine the prevalence of purchases of fast food for family meals; and its associations with sociodemographic characteristics, dietary intake, home food availability, and weight status in adolescents and their parents. Out of the 4746 adolescents from 31 middle and high schools who completed the school survey ,frequent purchases of fast food for family meals would be associated with higher energy intake, lower fruit and vegetable intake, a less healthful food environment, and higher (BMI) for adolescents.[18]

The aim of this study among female students at secondary school in Riyadh, Saudi Arabia is to measure the proportion of good and bad eating habits practices including types of food, time and frequency of meal. Also to describe the eating habits practices in relation to the body mass index.

OBJECTIVES

1. To measure the proportion of the good and bad eating habits practices. Including (type of food, time and frequency of meal)
2. To describe eating habits practices in relation to BMI.

METHODOLOGY

Study Design

Observational descriptive cross-sectional school based study design

Study Population and Area

This study was conducted in female secondary school in Riyadh, which is the capital of Saudi Arabia. It is located in the center with a population of 5.7 million inhabitants.[19]

Sample Size and Technique

The study comprised 80 girls, 15-17 years old, were selected from the second grade in public and private secondary schools, the schools were randomly selected. The timetable in both private and public schools was from 7.00 to 12.00 h, with one 20 min break at 10.30. So, each school in separate day. All adolescents in the class who were present at the time of the study were included. Absents students of second grade were excluded.

Data needs

A questionnaire was specially constructed. It included personal information and section about food data, meal frequency and anthropometric measurements. The questionnaires were tested among a group of adolescents who were selected from another school. The questions were adjusted according to the experience obtained. Classification of eating habits to bad and good was according to a scale of 0-3. Zero and one was considered bad habit. Two and three were taken to be good habits.

Data Analysis

After gathering the data clearance, coding and entering were done. And data were analyzed using manually. The results were presented in tables. Percentage was calculated on the chi-squared. Test of significance was preformed. A P-value of ≤0.05 was taken to be significant.

Ethical Considerations

Permission to carry out this study was obtained from the schools administration before the study. In addition, verbal consent was obtained from all study participants. Confidentiality of the data was promised and maintained.

Table 1: Personal Data

Personal Data		Frequency	Percentage
Age	**16**	38	47.5
	17	38	47.5
	18	4	5
Family Size	**<3**	1	1.3
	3_6	25	31.3
	>6	54	67.5
Mother Education	**Illiterate**	2	2.5
	Primary	3	3.8
	Intermediate	4	5.0
	Secondary	16	20.0
	University	55	68.8
Father Education	**Illiterate**	0	0
	Primary	2	2.5
	Intermediate	2	2.5
	Secondary	16	20.0
	University	60	75.0

Table 2: Association between type of food and frequency of eating:

	Time each day							
	<2 times		**2-4 times**		**5-6 times**		**>6 times**	
Content of food	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
1-Starches.	2	2.5	39	48.8	0	-	-	-
2-Fruits.	*60*	75	15	18.8	5	6.2	-	-
3-Vegetables.	*62*	77.5	16	20	2	2.5	-	-
4-Dairy.	48	60	23	28.8	8	10	1	1.3
5-Meats.	59	73.8	16	23.8	2	2.5	-	-
6-Fats.	41	57.4	*32*	44	2	2.5	-	-
7-Sweets.	36	47.5	31	38.8	8	10	*2*	2.5

Fig 1: BMI category

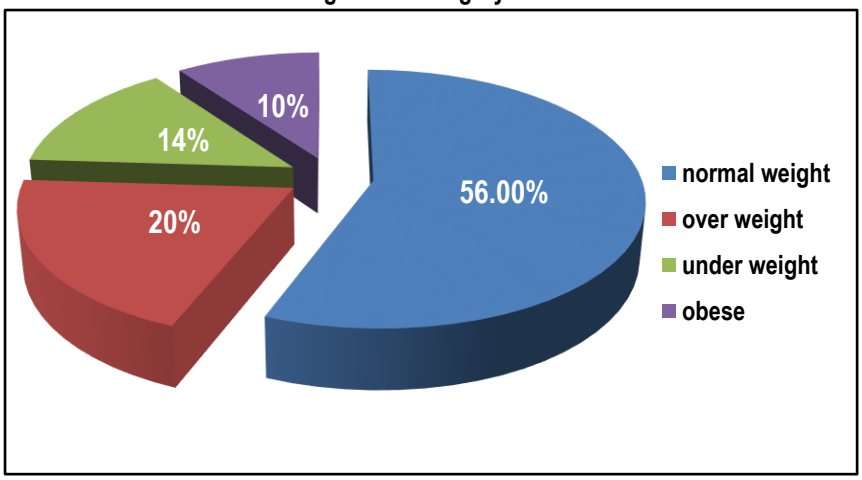

Table 3: Association between time of food and frequency of eating

	(Total N=80)			
Time of Food	**Always/Usually**		**Rarely/Never**	
	F	**%**	**F**	**%**
1. Breakfast	63	78.8	17	21.3
2. Lunch	73	91.3	7	8.8
3. Dinner	54	67.5	26	32.5
4. Eating while watching T.V	54	67.5	26	32.5
5. Eating much under stress	37	46.3	43	53.8

Table 4: Association between type of beverages and frequency of drinking

	Beverages									
Questions	**Juice**		**Soda**		**Tea**		**Coffee**		**Milk**	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Drink a lot	7	8.8	12	15	5	6.3	15	18.8	7	8.8
Drink after meal	14	17.5	9	11.3	1	1.3	0	0	2	2.5
First drink at the day	1	1.3	1	1.3	3	3.8	7	8.8	25	31.3
Daily drink	33	41.4	7	8.8	2	2.5	14	17.5	8	10

Table 5: following up the height, weight and diet

	(Total N=80)			
Yes or No Questions	**Yes**		**No**	
	F	**%**	**F**	**%**
1. Diet counseling before	31	38.8	49	**61.3**
2. Measuring height and weight as part of health screening	19	23.8	61	**76.3**
3. Eat snacks	75	**93.8**	5	6.3

Table 6: Association between good and bad habits with BMI category

	BMI Category									
	Underweight		**Normal**		**Overweight**		**Obese**		**Total**	
Good Habits (healthy)	3	14.3%	11	**52.4%**	6	28.6%	1	4.8%	21	100%
Bad Habits (unhealthy)	8	13.5%	34	**57.6%**	10	16.9%	7	11.9%	59	100%

Table 7: Association between father and mother education with type of beverage drinking

Personal data		**Beverage**					
		Milk		**Coffee**		**Juice**	
		F	**%**	**F**	**%**	**F**	**%**
Father	**Higher**	22	36.7	25	41.7	32	53.3
Education	**Lower**	8	40	8	40	12	60
Mother	**Higher**	21	38.2	19	34.5	31	56.4
Education	**Lower**	11	44	23	**92**	19	76

RESULTS

Eating habits practices and their effect on nutritional status among adolescence study involving the ages 16-18. 95% of them are of age 16, 17. 67.5% have more than 6 members in their families. 68% of students their mothers have university certificate and 75% of students their fathers have university certificate.(Table 1)

As shown by the Fig 1, the normal weight is the main category of weight for the age 16-18 years old and then overweight and underweight, then the least is obese category.

Table 2 demonstrates the content of food and how many times the students eat them. The most frequently items that eaten <2 times are fruits and vegetables (75%, 77.5%). And the most frequently items which eaten 2-4 times are starch and fats (48.8%, 44%). 10% of students eat dairy and sweets equally 5-6 times. 1.2% of students eat dairy and 2.5% of them eat sweets >6 times.

Table 3 shows that more students most likely take the principal daily meal while always having lunch at a percentage of 91.3%. It also demonstrates that about 67.5% of the students ate their food while watching television and only 53.8% eat more under stress. Preponderance lunch on the rest of the meals.

Table 4, the most daily drink that used by 41.4% is juice. On other side, milk is first drink at day by31.3%. After meal the main drink is juice by17.5%. Also the study shows the coffee is taken a lot by 18.8%.

Table 5 shows that 76.3% of students didn't measure height and weight before, and 61.3% have never taken diet counseling before, also table indicates that approximately 93.8% consume snacks during their day.

Table 6, obviously there is a relation between good, bad habits and BMI category. The higher percentage of students that practice good habits have normal BMI (52.4%) , as well as students practicing bad habits have normal BMI (57.6%). So this relationship statically not significant.

Table 7 shows that milk and juice drinking with mother and father education is not significant statically. On other hand coffee drinking is significantly high when mother education is low by 92% (P<0.0001)

Table 8 shows the higher education of father (91.7) and mother (89.1) is having the higher eating of meats and vice versa.

As the Fig 2 shows the higher education degree for parents the greater consumption of vegetables, Fruits and diary per day.

Table 9 shows that having a dinner is significantly with higher father education and lower mother education (P=0.0368)

Table 10 shows that by decreasing the number of members in a family increases eating lunch (61.5%) and dinner (57.7%). Also decreasing the number of members related with decreasing eating much under stress.

Table 8: Association between father and mother education and type of food

Personal data		Content of food					
		Sweet		Starch		Meat	
		F	%	F	%	F	%
Father Education	Higher	60	100	58	96.7	55	**91.7**
	Lower	20	100	20	100	13	65
Mother Education	Higher	55	100	55	100	49	**89.1**
	Lower	25	100	23	92	19	76

Table 9: Association between father and mother education and time of eating

Personal data		Time of food									
		Breakfast		Lunch		Dinner		Stress		TV	
		F	%	F	%	F	%	F	%	F	%
Father Education	Higher	50	83.3	52	86.7	44	73.3	27	45	39	65
	Lower	16	80	20	100	11	55	8	40	13	65
Mother Education	Higher	47	85.5	50	90.9	36	65.5	23	41.8	34	69.1
	Lower	19	76	23	92	19	76	11	44	18	72

Table 10: Association between time of eating and family size

Family Size	≤ 6		>6	
	F	%	F	%
Eating Lunch	16	**61.5**	25	**46.3**
Eating Fast food	15	57.7	27	50
Eating much under stress	5	**19.2**	19	**35.2**
Eating while watching T.V	9	34.6	21	38.9
breakfast	15	57.7	32	59.3
Eating dinner	15	**57.7**	26	**48.1**
Eating quickly	10	38.5	21	38.9

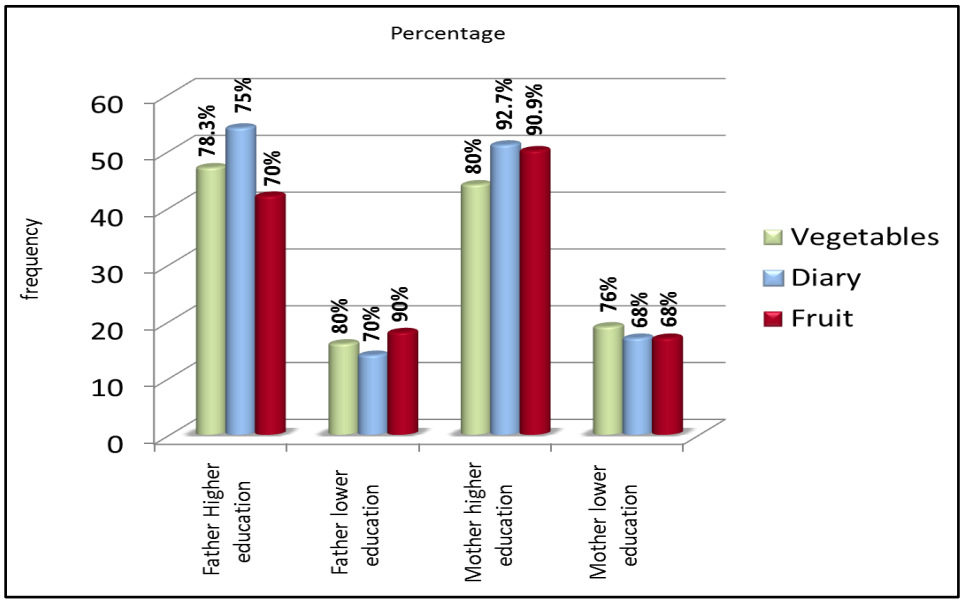

Fig 2: Association between father and mother education and type of food

DISCUSSION

According to this research, the majority of adolescents are older than adolescents in the research were conducted in Jeddah and the majority of the sample family sizes were similar to each other. In this research Mothers' and father's university education was higher in this research; opposite to other research was lower educated.[20] In accordance to the study, the majority of adolescents from higher educated parents more likely to have breakfast, similarly to the results a study in Sweden found that adolescents from areas with high socioeconomic status more often ate breakfast and lunch compared to adolescents from areas with low socioeconomic status.[21]

The Study showed that lunch was the most taken meal, which the same to a study in Gaza[22] was showed that lunch was the meal most eaten; majority of the adolescents had lunch daily and dinner was eaten less often. Contrary to the results a study in china shows the opposite were adolescents of high socioeconomic status were more likely than those of low socioeconomic status to skip breakfast, although this difference was not statistically significant.[23] In this research it was found that eating under stress was less among adolescents, similarly to study in Turkey showed more positive attitude towards themselves and their emotions influenced less their eating behaviors.[24] According to this research it was found that higher proportion of adolescent sate while watching T.V where a study in Bahrain reported the same that the proportion of adolescents who eat while watching TV was high.[25]

According to this research, it was found that BMI was not different between those good or bad practices. Which is the same to another research in Riyadh, where majority of the students did not have healthy dietary habits but also having normal BMI, There were no significant differences between BMI category and dietary pattern or life style in both researches.[26] However, another research in Kentucky showed that the majority of normal BMI was associated with practicing healthy habits including consumption of fruit and vegetables. While overweight students associated with lower consumption of healthy eating and practicing bad habits. Which was the opposite of the findings of this research.[27]

This study showed that the majority of the students drinking coffee is significantly high when the mother education is low (P>0.0001); because of drinking coffee habits in Saudi Arabia culture. There is no similar study to this study.

The present study showed similar frequency of consumption of starches comparing with Turkish university students which may be because of Eastern countries rely fed on starches .On the other hand there is difference in frequency of consumption of fats which is less than university student because they are often unable to maintain their previous healthy eating habits and adopt a diet low in fruits/vegetables and high in fat content and that because of new living arrangements, costs, and economic constraints may all account for new food choices which is different from high school students where they have a stable lifestyle and the same routine.[28] Concerning having breakfast, results showed higher compliance by adolescent of parent higher education level, than lower. One reason maybe awareness difference.[29]

Concerning having lunch, surprisingly results showed slightly higher compliance by adolescent of parent lower education level, than higher. Reason must be considered, that parents with higher education often have lunch time while they are still in their jobs, while housewives spend more time at home which may allow them for preparation of the lunch and supervision of their children's meal. On the other hand, having dinner is significantly more with higher father education and lower mother education. Strange disparities with unknown reasons that leave us wonder if skipping dinner unhealthy behavior or as the saying goes "Eat breakfast like a king, lunch like a prince, and dinner like a pauper" which indicates that is healthy.

Study showed that stress eating is less in adolescents of parent with lower education level, than higher. In general it's natural to feel stress at this age; whether because of school or daily life at home, but many studies have demonstrated a relationship between the high standard of living and eating disorders. Adolescents in such an environment seem to be increasingly stressed about school, appears to be achieving perfection, and drawn to becomes unduly frustrated with even the slightest setbacks, failures, or personal shortcomings.

Study showed adolescents having their meals while watching TV; no difference in either higher or lower father's education, nevertheless upmost with lower mother education, and lowest with

higher level of education, This might be due to how close children are to their mothers in comparison to their fathers, so due to this closeness the mother could be more assiduous to guide and alerts them from improper habit.

CONCLUSION

The normal weight was the main category among adolescents. Good habits were eating with family, drinking juice along the day, eating fruits and vegetables more than fats and starch. Lunch was the most taken meal. Higher parent education was association with having breakfast. But bad habits were dominant, like eating while watching TV.

RECOMMENDATIONS

1. Maintain healthy BMI by promotion of healthy habits and eating pattern.
2. Promote the idea of eating breakfast before going to school.

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REFERENCES

1. Butler, Gillian; Hope. et al. Managing Your Mind: The mental fitness guide. Oxford Paperbacks, 1995
2. Merriam Webster Dictionary. Definition of Habit. Retrieved in 2008.
3. Merriam Webster Dictionary. Definition of Habituation. 2008
4. Lawlis T, Mikhailovich K, Morrison P.Healthy eating and physical activity programs,resources and staff training in long day care and family day care settings.A literature review 2006.
5. The Collins English Dictionary English Dictionary, Pioneers in dictionary publishing since 1819
6. Segen's Medical Dictionary. 2012 Farlex,
7. McGraw-Hill Concise Dictionary of Modern Medicine 2002 by The McGraw-Hill Companies, Inc.
8. Onyiriuka A N, Umoru D D, Ibeawuchi A N. Weight status and eating habits of adolescent Nigerian urban secondary school girls. The South African Journal of Child Health 2013;7(3):108-112.
9. Koukoulis GN, Pelekanou M, Tsitouras A, et al. Eating habits and factors affecting food choice of adolescents living in rural areas. Hormones (Athens) 2013; 12(2), pp: 246-53.
10. Sidoti E, Mangiaracina P, Paolini G. et al. Body Mass Index, family lifestyle, physical activity and eating behavior on a sample of primary school students in a small town of Western Sicily. Italian Journal of Public Health 2009;6(3):205-17.
11. Kelishadi R, Ardalan G, Gheiratmand R. et al. Association of physical activity and dietary behaviours in relation to the body mass index in a national sample of Iranian children and adolescents: CASPIAN Study. Bull World Health Organ2007; 85(1):19-26.
12. Al- Rethaiaa A, Fahmy A, Al-Shwaiyat N. Obesity and eating habits among college students in Saudi Arabia: a cross sectional study. Nutrition Journal 2010; 9:39.
13. Dapi L, Nouedoui C, Janlert U, et al. Adolescents' food habits and nutritional status in urban and rural areas in Cameroon: Scandinavian Journal of Nutrition 2005; 49 (4): 151-58.
14. Kaur L, Kaur G, Mala D et al. Association between BMI & eating pattern: Study among adolescents. Nursing and Midwifery Research Journal 2009;5(1):39-43.
15. Al-Muammar M, El-Shafie M, Feroze S. Association between dietary habits and body mass index of adolescent females in intermediate schools in Riyadh, Saudi Arabia. Eastern Mediterranean Health 2014; 20(1): 39-45.
16. Timlin M et al. Pediatrics 2008; 121(3):e638-45
17. Yahia N, Achkar A, Abdallah A. et al. Eating Habits and Obesity among Lebanese University Students.Nutrition Journal2008;32(7):1-2.
18. Kerri N .et al. Fast food for family meals: relationship with parent and adolescent food intake, home food availability and weight status. Puplic Health Nutrition journal 2006;10(1):16-23.
19. Statistical Yearbook 47 (2011). Central Department of Statistics & Information. Retrieved 15 November 2013.
20. Alkoly T et al. Nutritional Status and Eating Behaviors among Adolescents of Some Intermediate Schools in Jeddah. Journal of King Abdulaziz University Medical Sciences. 2011;18(2):18.
21. Hoglund D. Food habits in Swedish adolescents in relation to socioeconomic conditions. Eur J ClinNutr 1998 Nov;52(11):784-9.
22. Abudayya A, Stigum H. Sociodemographic correlates of food habits among school adolescents. BMC Public Health 2009, 9:185
23. Shi Z, Lien N, Kumar BN. Socio-demographic differences in food habits and preferences of school adolescents in Jiangsu Province, China. Eur J ClinNutr 2005 Dec;59(12):1439-48
24. Nevin S. The Relationship Between Stress and Eating Behaviors among Turkish Adolescence. World Applied Sciences Journal 4 (2): 233-237, 2008
25. Musaiger A, Bader Z. Dietary and lifestyle habits amongst adolescents in Bahrain. Food Nutr Res. 2011; 55: 10.3402
26. Al-Muammar, El-Shafie, Feroz. Association between Dietary Habits and Body Mass Index of Adolescents Females in Intermediate School in Riyadh. East Mediterr Health 2014; 20(1):39-45
27. Mary G. Examination of Weight Status and Dietary Behaviors of Middle School Students in Kentucky. Journal of the Academy of Nutrition and Dietetics 2015; 115(5).75-77
28. Gunes F, Bekiroglu N, Agirbasli M. et al. Relation between Eating Habits and a High Body Mass Index among Freshman Students in Istanbul, Turkey .The American College of Nutrition. 2012; 31 (3):5
29. vanAnsem WJ et al. Maternal educational level and children's healthy eating behaviour: role of the home food environment (cross-sectional results from the INPACT study). International Journal of Behavioral Nutrition and Physical Activity2014;11(1):113

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