Journal of Advances in Medicine and Medical Research

33(5): 56-66, 2021; Article no.JAMMR.66119
ISSN: 2456-8899
(Past name: British Journal of Medicine and Medical Research, Past ISSN: 2231-0614, NLM ID: 101570965)

Weight Management and Dietary Style Modifications among University Students

Mona Abdelgadir Ahmed[1*]

[1]Faculty of Applied Medical Science/ Albaha University, Saudi Arabia.

Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/JAMMR/2021/v33i530846
Editor(s):
(1) Dr. Mohamed Essa, Sultan Qaboos University, Oman.
Reviewers:
(1) Pedro Henrique Silva de Rossi, Technology of Marilia, Brazil.
(2) M. R.Dhiman, ICAR-Indian Agricultural Research Institute,India.
(3) Marcus Vinicius Sacramento França, Universidade Federal da Bahia Médico , Brazil.
Complete Peer review History: http://www.sdiarticle4.com/review-history/66119

Original Research Article

Received 03 January 2021
Accepted 05 March 2021
Published 17 March 2021

ABSTRACT

Weight management is a long term approach to a healthy life style. It includes a balance of healthy eating and physical exercise to equate energy expenditure and energy intake. Weight management depends on your body need and according to the basal metabolic rate. A descriptive cross- sectional study was conducted based on the questionnaire that were distributed among under graduated students. In a case study group, a total of 200 females aged less than 25 years old were taken into consolidation. All the female participants were from Saudi Arabia Healthy females without any complication who were the students of Albaha University enrolled in 2017, participated in the questionnaire.

The Study Aimed: Is to know the dietary style modification during weight management among female university students.

The Specific Objectives: Is to find out the reasons for body weight management, to evaluate the different methods used in weight management , and also to assess different knowledge of university female students and their body management interesting and also to give them advice about the correct way for body weight management. The data analysis only covers (42). Students who were concerned in weight management (included criteria) and exclude all students who were not concerned in weight management (210) (excluded criteria). The questionnaire variables include demographic (question about age resident and the student knowledge about her

**Corresponding author: E-mail: mabuaqla@bu.edu.sa, monaabdulkader200@hotmail.com;*

weight (According to the body mass index) that represents how many of females are underweight, normal weight and obese. The questionnaire also covered other information about their normal physical activities and dietary modification.

Keywords: Weight management; dietary supplements; several diseases.

1. INTRODUCTION

Dietary supplements is a recent and important issue intended particularly to provide nutritional elements useful for preventing disease, maintaining a good status of health, or for supply ready to use resources for supporting activities [1]. According to United States regulation the terms of dietary supplements refer to a products that contains one or more of the following ingredients (vitamins ,minerals ,herbs, botanicals, and essential-amino acid) to supplement the human diets by increasing total dietary nutrients intake .Dietary habits and choices play a significant role in the quality of life, health and longevity [2]. Food consumption for each country has its own consumption pattern resulting in country-specific foods, recipes and brand-name foods (commercial foods with the same brand-name can have varying composition due to taste or fortification regulations across borders. Food biodiversity highly influences the composition of foods: nutrient values may vary up to 1000 times among different varieties of the same foods. This means that the nutrient content of foods can vary as much among foods as among varieties of the same food [3]. each country has specific data needs as they have different compositions of their foods, even if some people think that foods have similar composition among countries due to globalization [4]. Nutritional value of food can be measured on the basis of quantity, range and calorie requirements. Nutrients having good antioxidant activities include anthocyanin's (E.g red pigments in fruits) and flavone's (like compounds found in cranberries. Dietary supplements must be labeled as such and must not be represented for use as a conventional food or as the sole item of a meal or the diet [5]. One way to distinguish dietary supplements from conventional foods is by looking at the nutrition information on the label of the product. Conventional foods must have a Nutrition Facts panel on their labels, but dietary supplements must have a Supplement Facts panel [6]. Using the information provided on healthy choices will help to maintain a healthy weight. Reaching and maintaining a healthy weight is good for overall health. It also may help to reduce risk for developing several diseases and conditions. Maintaining a healthy weight has many other benefits, including feeling good about yourself and having more energy to enjoy life. A person's weight is the result of many things: height, genes, metabolism, behavior, and environment. Maintaining a healthy weight requires keeping a balance. You must balance the calories you get from food and beverages; with the calories you use to keep your body going and being physically active [7].

The recent increase in obesity is undoubtedly rooted in powerful environmental changes, which exert constant pressure, or at the least that make it increasingly easy for individuals to lead predominantly sedentary lives and eat high-energy dense foods in excess [8] . The increased prevalence of weight concern and weight control practices among teenagers, females are more inclined to perceive themselves as overweight and engage in weight loss practices [9]. Healthy diet is one that helps to maintain or improve overall health and provides the body with essential nutritional fluid, protein, essential fatty acids, vitamins, minerals, and adequate calories [10]. Fad diet usually refers to idiosyncratic diets and eating patterns. There are diets that claim to promote weight loss or treat obesity by various mechanisms, provide little to no scientific reasoning behind their purported health benefits, and have little or no proof to support them [11]. Weight management does not include fad diet that promotes quick temporary weight loose. It focuses on the long term results that are achieved through slow weight loss, followed by retention of an ideal body weight for age, sex, and height. Obesity is a risk FACTORS for many chronic DISEAS such as type 2 diabetes. Hypertension and cardiovascular disease [12]. Body Mass Index is a simple calculation using a person's height(in meters) and weight. (in kilograms) The formula is BMI = kg/m^2 BMI is calculated from individuals weight which include both muscle and FAT As a result , some individuals have high BMI but not have a high percentage of bodyfat [13] . A meta-analysis of six randomized controlled trials found no difference between low- calorie, low-carbohydrate, and low-fat diets, with a 2–4 kilogram weight loss over 12–18 months in all studies. At two years, all

calorie-reduced diet types cause equal weight loss irrespective of the macronutrients emphasized In general, the most effective diet is any which reduces calorie consumption [14].

2. METHODOLOGY

The study is a questionnaire-based study conducted among a sample of (210) University Female Students. The questionnaire continues and analysis only 42 Students. Students that have an age less than 25 years. Participants were all healthy Saudi nationals. The questionnaires were distributed during the teaching day for undergraduate students who agreed to participate, and they were requested to fill in the questionnaire. Body mass was assessed by the relationship of height to weight (weight/height^2). Using a weight scale and length to check the current weight. The questionnaire only covered 42 students who were interested in managing their weight ,(included criteria) and exclude 158 students who were not interested in weight management (excluded criteria). The questionnaire variables include demographic (question about age residents) and the student knowledge about her weight (how she describe her body weight according to the following response that includes “underweight,” “normal weight,” “overweight,” and “obese.)”. Different methods were used about weight management and to check the food habits. For this purpose information, resources and questions were collected to check the physical activity which can be exercised alongside the diet.

3. RESULTS

The following tables represent the appropriate data collected from 42 students who were interested in weight management and attended the college of Applied Medical Science in the year 2017. were all healthy Saudi nationals, and 93% of them were unmarried. The values were reported in percentages with numbers.

Table 1. Below shows that most of the participants in the questionnaire did not pay attention to following their weights.

Table 2. The below table represent the average age of the participant in years 21-24 (47.6%) while (45.2%) in age groups (17-20), and only (7.1%) in >24 years of age.

Table 3. Below Represents weight according to Body mass index Using the ratio of weight and height (weight / height cm ^{2}) which revealed that(64.3%) of students participated in this study were in the range of overweight and (23.8%) , were in range obesity while only (9.5%) in normal weight whereas (2.4%) students were in underweight.

Table 1. Participant concerned in weight management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	20	20	20
	No	158	80	80	100.0
	Total	42	100.0	100.0	

Table 2. Participant age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17------20	19	45.2	45.2	45.2
	21-----24	20	47.6	47.6	92.9
	more than 24	3	7.1	7.1	100.0
	Total	42	100.0	100.0	

Table 3. Participants weight

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Over weight	27	64.3	64.3	64.3
	Obese	10	23.8	23.8	88.1
	normal WT	4	9.5	9.5	97.6
	UNDER wT	1	2.4	2.4	100.0
	Total	42	100.0	100.0	

Table 4. Table 4. below shows that most of the participants (73.8%) follow a weight loss regimen and only (4.8%) track weight gain while (21.4%) of the participants follow a weight maintenance regimen.

The Table 5. below describes the participating students who follow a weight maintenance regime where the number of those who gained weight at this time was (14.3%), while those who lost weight were (7.1).

Table 6. shows the weight lost for students who were following the weight loss regime, and the weight lost between 1- 3 kilograms was (59.5%) , and from 4-6 kilograms (11.9) while only (2.4%) lost more than 6 kilograms.

Table 7. Shows the weight gain of the participants who were following a weight gain system, and the increase was only from 1 to 3 kilograms (4.8%).

Table 8. below shows the time periods that the participants used to manage their weight, and most of them used only from 1-3 months (54.8%) , and (35.7%) used from 4-6 months, while they used a period of more than 6 months, they were only (9.5%).

Table 4. Participants action tracing

		Frequency	Percent	Valid percent	Cumulative percent
Valid	to loose Weight	31	73.8	73.8	73.8
	to gain weight	2	4.8	4.8	78.6
	To maintain Weight	9	21.4	21.4	100.0
	Total	42	100.0	100.0	

Table 5. Participants maintain weight

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gain wt	6	14.3	14.3	14.3
	Lose wt	3	7.1	7.1	21.4
	No	33	78.6	78.6	100.0
	Total	42	100.0	100.0	

Table 6. Weight loosed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1---3	25	59.5	59.5	59.5
	4---6	5	11.9	11.9	71.4
	more than 6	1	2.4	2.4	76.2
	No	11	26.2	26.2	100.0
	Total	42	100.0	100.0	

Table 7. Gaining weight

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1---3 KG	2	4.8%	4.8%	4.3
	4---6 kg	0	0	0	0
	More than 6	0	0	0	0
	No	40	95.2%	95.2%	100.0
	Total	42	100.0	100.0	

Table 8. Participants weight control duration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 month	23	54.8	54.8	54.8
	4-6 month	15	35.7	35.7	90.5
	> 6 month	4	9.5	9.5	100.0
	Total	42	100.0	100.0	

Table 9. Below shows that most of the participants (81%) use nutritional supplements while not using them during their period of weight management were (19%).

Table 10. Shows the types of nutritional supplements that the participants were using, and it was indicated that most of them (47.6%) use proteins, while (11.9%) used the vitamins and (4.8%) used Herbs, (7.1%) used laxatives, while (9.5%) used different types.

Table 11. Below shows the source from which the nutritional supplements are taken, and it shows that most of the participants bring the supplements from the internet, while (11.9%) takes them from the pharmacy and (11.9%) takes from their relatives .

Table 12. Shows the number of the participants who are now in the weight management system (83%) and others who are now not practicing it (16.7%) .

Table 13. Below describes the types of foodstuffs that were used during the period of weight management. It showed that Most of the participants (59.5%) used low-calorie foods, and (23.8%) used fiber-rich foods, and (14.3%) used other foods, while (2.4%) used calorie-rich foods.

Table 9. Dietary supplement used

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	34	81.0	81.0	81.0
	No	8	19.0	19.0	100.0
	Total	42	100.0	100.0	

Table 10. Types of dietary supplements

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Protein	20	47.6	47.6	47.6
	Vitamins	5	11.9	11.9	59.5
	Herbs	2	4.8	4.8	64.3
	Laxatives	3	7.1	7.1	71.4
	different types	4	9.5	9.5	81.0
	No	8	19.0	19.0	100.0
	Total	42	100.0	100.0	

Table 11. Sources of dietary supplements

		Frequency	Percent	Valid percent	Cumulative percent
Valid	pharmacy	5	11.9	11.9	11.9
	internet	25	59.5	59.5	71.4
	relevant	5	11.9	11.9	83.3
	No	7	16.7	16.7	100.0
	Total	42	100.0	100.0	

Table 12. Currently in weight management

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	35	83.3	83.3	83.3
	No	7	16.7	16.7	100.0
	Total	42	100.0	100.0	

Table 13. Dieting used

		Frequency	Percent	Valid percent	Cumulative percent
Valid	low calories	25	59.5	59.5	59.5
	high fibers	10	23.8	23.8	83.3
	Others	6	14.3	14.3	97.6
	high calories	1	2.4	2.4	100.0
	Total	42	100.0	100.0	

Table 14. Shows the participants who have previous weight management experiences where they were proportionate (33.3%) while those who had no prior experience were (66.7).

The following Table 15, shows the nature of the family eating meals during the day, and those who always eat meals with some are (23.8%) and 64.8% eating sometimes with some while those who eat their meals alone were (12.4 %)

The following Table 16, shows the families member who sharing of the participants in the weight management who are about (28.6%) while the (71.4%) not sharing.

Table 17, shows the family support for the students who participated in this questionnaire, were (28.6%) and (71.4%) not supported.

Table 18, shows the percentage of participants who often eat fast food (23.8%), and who eat it at fast food sometimes were (66.7%) and often dependent on home-based meals were (9.5%).

The Table below 19, shows that (19.0%) of participant were do exercise in addition to diet management, while those who do not exercise were about (81.0%).

Table 14. Previous experience

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	14	33.3	33.3	33.3
	No	28	66.7	66.7	100.0
	Total	42	100.0	100.0	

Table 15. Family eating together

		Frequency	Percent	Valid percent	Cumulative percent
Valid	always	10	23.8	23.8	23.8
	some times	23	54.8	54.8	78.6
	individually	9	21.4	21.4	100.0
	Total	42	100.0	100.0	

Table 16. Family member in management

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	12	28.6	28.6	28.6
	No	30	71.4	71.4	100.0
	Total	42	100.0	100.0	

Table 17. Family support

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	12	28.6	28.6	28.6
	No	30	71.4	71.4	100.0
	Total	42	100.0	100.0	

Table 18. Fast food

		Frequency	Percent	Valid percent	Cumulative percent
Valid	all ways	10	23.8	23.8	23.8
	some times	28	66.7	66.7	90.5
	all ways home made	4	9.5	9.5	100.0
		Frequency	**Percent**	**Valid percent**	**Cumulative percent**
Valid	all ways	10	23.8	23.8	23.8
	some times	28	66.7	66.7	90.5
	all ways home made	4	9.5	9.5	100.0
	Total	42	100.0	100.0	

In the below Table 20. Shows the source of advice or information on weight management, and most of them (64.8%) took it from the internet, and (21.4%) takes it from their colleagues while (11.9%) take the advices from the specialists, and (11.9%) took it from other sources .

Table 21. The table shows that some of the participants, (19%) had suffered some health problems while using weight management, while most of them (81%) did not.

Table 22, below Clarifies the types of health problems explained that (16.7%) of participant were suffering from an appetite disorder and (2.4%) were suffering from other disorders, while most of them(81%) did not suffer from anything.

Table 19. Participants doing exercises

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	19.0	19.0	19.0
	No	34	81.0	81.0	100.0
	Total	42	100.0	100.0	

Table 20. Advices about weight management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	internet	23	54.8	54.8	54.8
	collage	9	21.4	21.4	76.2
	dietitian	5	11.9	11.9	88.1
	others	5	11.9	11.9	100.0
	Total	42	100.0	100.0	

Table 21. Problems caused during weight management.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	19.0	19.0	19.0
	No	34	81.0	81.0	100.0
	Total	42	100.0	100.0	

Table 22. Types of side effects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	appetite disturbance	7	16.7	16.6	19.0
	Others	1	2.4	2.4	21.4
	No	34	81.0	81.0	100.0
	Total	42	100.0	100.0	

Table 23. Correlations

		Dietary supplements types	Sources of Dietary supplements
Dstypes	Pearson Correlation	1	.517**
	Sig. (2-tailed)		.000
	N	42	42
Sources of Ds	Pearson Correlation	.517**	1
	Sig. (2-tailed)	.000	
	N	42	42

***. Correlation is significant at the 0.01 level (2-tailed)*

Table 24. Correlations

		age	weight
Age	Pearson Correlation	1	-.456**
	Sig. (2-tailed)		.003
	N	41	41
Weight	Pearson Correlation	-.456**	1
	Sig. (2-tailed)	.003	
	N	41	42

***. Correlation is significant at the 0.01 level (2-tailed)*

Table 25. Correlations

		age	status
Age	Pearson Correlation	1	-.319*
	Sig. (2-tailed)		.042
	N	41	41
Status	Pearson Correlation	-.319*	1
	Sig. (2-tailed)	.042	
	N	41	42

**. Correlation is significant at the 0.05 level (2-tailed)*

Table 26. Correlations

		status	weight
Status	Pearson Correlation	1	.372*
	Sig. (2-tailed)		.015
	N	42	42
Weight	Pearson Correlation	.372*	1
	Sig. (2-tailed)	.015	
	N	42	42

**. Correlation is significant at the 0.05 level (2-tailed)*

Table 27. Correlations

		Weight lost	exercises
WTlost	Pearson Correlation	1	-.508**
	Sig. (2-tailed)		.001
	N	42	42
Exercises	Pearson Correlation	-.508**	1
	Sig. (2-tailed)	.001	
	N	42	42

***. Correlation is significant at the 0.01 level (2-tailed)*

Table 28. Correlations

		Familyeatingtogether	Family support
familyeatingtogether	Pearson Correlation	1	-.336*
	Sig. (2-tailed)		.030
	N	42	42
familysupport	Pearson Correlation	-.336*	1
	Sig. (2-tailed)	.030	
	N	42	42

**. Correlation is significant at the 0.05 level (2-tailed).*

Table 29. Correlations

		Dietary supplements types	Sourceso f Dietary supplements
Dstypes	Pearson Correlation	1	.517**
	Sig. (2-tailed)		.000
	N	42	42
sourcesofDs	Pearson Correlation	.517**	1
	Sig. (2-tailed)	.000	
	N	42	42

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 30. Correlations

		familysupport	Familyeatingtogether
Familysupport	Pearson Correlation	1	-.336*
	Sig. (2-tailed)		.030
	N	42	42
familyeatingtogether	Pearson Correlation	-.336*	1
	Sig. (2-tailed)	.030	
	N	42	42

**. Correlation is significant at the 0.05 level (2-tailed).*

Table 32. Correlations

		familysupport	familymemberin management
Familysupport	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.000
	N	42	42
Family member in management	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.000	
	N	42	42

***.Correlation is significant at the 0.01 level (2-tailed).*

4. DISCUSSION

According to this study which conducted Among the female university students, 42 students were engaged in methods to regulate their weights and they were the ones who followed the questionnaire with them and their answers to the questionnaire, that most of them follow the methods of weight loss (73.8%), most of them with excess weight or obese (88%) but the maximum weight was reduced were 6 kg (2.4%) and Most of them have a weight loss of between 1 to 3 kg (59.5%). This study is similar to another study that was conducted in Japan, which is that the main reason for using nutritional supplements is to reduce weight [15]. In this study there was a variation in the time of continuation of the diet as it ranged (54.8%) of student who engaged in the program continued for a period of 1-3 months and only (9.6%) continued for a period of more than 6 months and stop method from time to time . most of the participants do not follow the advice from the professional cadres whereas (61.4%) take the information of dietary supplements and other information's from the internet, or their colleagues which may Unsupported sources. There is another study conducted among athletes on the sources of information on nutritional supplements, which is that most of them were taken by coaches for them [16]. The dieting methods used perhaps not good because most of the participants (90.5%) eating fast food during the week, which often lead to weight gain and also focus on low-calorie meals (59,5%) while neglect of high-fiber meals (23.3%), and most of the participants in this study who are interested in weight regulation do not exercise any types of sports (81%), which is very

important in weight management. Also some participants are exposed to some side effects which is also possible as a result of the wrong advice and not visit the specialists. According to the result of this study that most of the participants follow the methods of weight loss (73.8%), but the maximum weight was reduced were 6 kg (2.4%). (54.8%)of student who engaged in the program me continued for a period of 1-3 months and only (9.6%) continued for a period of more than 6 months. Most of participants (61.4%) take the information's of dietary supplements and other advices from the internet, or their colleagues which may Unsupported sources. Also most of the participants (90.5%) eating fast food during the week, and also focus on low-calorie meals (59,5%) while neglect of high-fiber meals (23.8%), Another study conducted on a topic similar to the current one showed that most students are not inclined to eat foods that contain fiber, such as vegetables and fruits , 65.2% and 14.3%, respectively actually consumed the recommended amounts [17], and most of the participants in this study who are interested in weight regulation do not exercise any types of sports (81%). Also some participants (19%) are exposed to some side effects which is also may be possible as a result of the wrong or poor advices. Keeping these results into consideration, we can recommend daily life by incorporating good nutrition habits and regular exercise and take an advice from the specialist.

5. CONCLUSION

I noticed that most of the participants have errors in their weight management In a short time use, as the most of them only lasted between 1 to 3 months, as well as making the wrong choice in eating meals, and relying on non-specialized people and choosing other means such as the Internet , which may give not correct information, and the majority of them do not care In sports, so health programs should be implemented to increase students' awareness of weight management techniques and the importance of physical activity, along with a healthy diet. and should be interested to go to a specialist in weight management programs to get the correct information.

6. RECOMMENDATION

First and foremost, at all ages, the correct dietary behavior must be followed in all stages of life, Make proper food and exercise a part of your daily life. You should know how to calculate moderate calories for you and fill up fiber in your diets with different vegetables and fruits items and seeds. You should check body weight according to body mass index, keeping positive attitude, motivation from your family and colleagues which is very important in continuation of weight management. One of the most important things that you must follow in maintaining your ideal weight and following the appropriate foods for your health condition is to follow the instructions and take information from the correct sources or specialized agencies Such as specialized institutions, community programs that include regular monitoring, nutrition and health promotion.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

ETHICAL CONSIDERATION

The permit to fill out the questionnaire was taken from the Research Council at Al-Baha University, the questionnaire was filled with the approval of the college students female student side.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Dietary Supplements: Background Information". Office of Dietary Supplements, US National Institutes of Health; 2011.
   Retrieved 2 February 2018.
2. Food and Nutrition Board, Institute of Medicine. Dietary reference intakes:applications in dietary planning.Washington, DC, National Academy Press; 2003.
3. FAO, food composition; 2016.
   Avalable: Phttp:://www.fao.rg/nutrition food- composition /en/,
4. FAO, IFAD, UNICEF, WFP and WHO. The State of Food Security and Nutrition in the World. Building climate resilience for food

security and nutrition. Rome, FAO; 2018.
5. Halvorsen BL, Holte K, Myhrstad MC, Barikmo I, Hvattum E, Remberg SF, Wold AB, Haffner K, Baugerød H, Andersen LF, et al. A systematic screening of total antioxidants in dietary plants. J. Nutr. 2002;132:461–471.
[PubMed] [Google Scholar] .
6. Food and nutrition board. institute of medicine. Dietary reference intakes for calcium, phosphorous, magnesium ,vitamin, and fluride. Washington, DC:national Academy press, 1997;250-287.
7. Whitney E, Rolfes SR. Understanding nutrition. 11th Edition California, Wadsworth puplishing company ; 2007.
8. Centers for Disease Control and Prevention Overweight and obesity; 2012, 2013,
Available:http://www.cdc.gov/obesity/adult/causes/ index. html.
9. Bayyari WD, Hennery LJ, Jones C, dieting behaviors, obesity and predictors of dieting among females college students at at Palestinian universities . Eastern Mediterranean Health Journal. 2011;19(1): 30-36
10. USDA Center for Nutrition Policy and Promotion. Nutrition Insights: Is total fat consumption really decreasing? Beltsville, MD: USDA Center for Nutrition Policy and Promotion; 1998.
Available:http://www.cnpp.usda.gov/Publications/NutritionInsights/insight5.pdf .
11. Memon KN, Shaikh K, Khaskheli LB, Shaikh S, Memon S Food Faddism; Its Determinants & Health Outcomes Among Residents of Taluka Latifabad, Hyderabad. Professional. Med J. 2014;1:21.
12. Knowler WC, Barrett-Connor E, Fowler SE, Hamman RF, Lachin JM, Walker EA, Nathan DM. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med. 2002;346:393.
13. Centers for disease control and prevention (CDC 2011). Abot BMI for adults retrieved on September . 13;2011
14. Sacks FM, Bray GA, Carey VJ, et al. "Comparison of Weight-Loss Diets with Different Compositions of Fat, Protein, and Carbohydrates". N. Engl. J. Med. 2009;360(9):859–73.
DOI:10.1056/NEJMoa0804748.
PMC 2763382 . PMID 19246357 .
15. Kobayashi E, Sato Y, Umegaki K, Chiba T. “Theprevalence of dietary supplement use among college students: a nationwide survey in Japan,” Nutrients. 2017;9;11:1250.
16. Aljaloud SO, Ibrahim SA. “Use of dietary supplements among professional athletes in Saudi Arabia,” Journal of Nutrition and Metabolism,;2013.
Article ID 245349, 7 pages, 2013.
17. Al-Otaibi HH. “The pattern of fruit and vegetable con-sumption among Saudi university students,” Global Journal of Health Science. 2014;6;2:155–162.
ISSN: 1916- 9736 E-ISSN 1916.

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/66119