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RESEARCH ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF DIETARY AND LIFESTYLE HABITS AMONG MEDICAL STUDENTS IN HAIL UNIVERSITY, SAUDI ARABIA.

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Abstract

Knowing the medical students' knowledge, attitude and practices of nutritional and lifestyle habits helps to enhance the nutrition of the community, which will consequently lead to a healthier society, as they will constitute the main body of future physicians and professionals. We aimed to evaluate their nutrition knowledge, their eating habits and overall perception regarding importance of healthy eating habits and lifestyle habits of medical students of Hail University, Kingdom of Saudi
Arabia . A cross-sectional study included 207 students between ages 19-24 years from basic and clinical levels in the faculty of medicine. A self-reported questionnaire was employed to assess perceived attitude and barriers to healthy practices by the study participants. Overall most medical students were aware of importance of minerals and vitamins in diet yet they were not practicing it adequately in their daily life but the majority of the students were not aware of the composition of balanced diet, improving nutrition knowledge, attitude and dietary practices through nutritional education may help to prevent many nutrition related diseases.

Introduction:-

During the 20th century, the leading causes of death shifted from infectious to chronic diseases: Cardiovascular disease, cancer, and diabetes are now among the most prevalent, costly, and preventable of all health problems.[1] These diseases have been strongly associated with unhealthy lifestyle habits, including inappropriate nutrition, lack of exercise, smoking, alcohol consumption, caffeine overuse, and improper sleeping habits.[2]

Recently, the Kingdom of Saudi Arabia has faced marked changes in the demographics, socioeconomics, and public health, This increasingly higher economic development of Saudi Arabia has resulted in a rapid Westernization of lifestyle habits. [**3**] The Westernization of dietary habits and lifestyle reflects the national increasing trend towards consumption of macronutrients including total food, fats, animal products, and refined foods. [4,5] In contrast, this new trend in the Saudi dietary patterns is accompanied by low consumption of vegetables and fruits, which are some of the main sources of essential micronutrients. [6,7] Changes in lifestyle and socioeconomic status in KSA have also had a significant impact on Saudis' physical activity. With the availability of modern techniques and entertainments, life has become more sedentary. The college students; representing the young age population of community, for different reasons are prone to eat unhealthy foods and to have bad health habits during their college

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years, and it is often assumed that the medical students have a greater knowledge about healthy lifestyle and dietary habits when compared to non-medical students. However there is no evidence to indicate that this knowledge translates into maintaining good health practices [8].

In Saudi Arabia, there are few studies reflecting medical students knowledge and perception of healthy lifestyle habits, so this study was conducted to assess knowledge, attitude and practice of medical students in University of Hail, Hail, Saudi Arabia regarding lifestyle and dietary habits.

Methods:-

Study design:-

A cross-sectional survey was conducted from 2016 October 18th to 2017 March 28th involving 207 participants from medical students enrolled at University of Hail, Hail, KSA.

Study participant:-

A total of 207 students out of 439 medical students in UOH were selected by convenience sampling method. Include all male and female students from basic and clinical years.
Electronic Informed consent of participants were properly obtained before data collection.

Data collection:-

The Knowledge, Attitude and Practice (KAP) of dietary habits and exercise were assessed by an electronic questionnaire which contained three questions about nutrition knowledge, four questions about attitudes, four questions about dietary practice, and four questions about the exercise were completed bythe students.

Data Analysis:-

The collected data was coded and analyzed by using descriptive statistics via SPSS , and planned in on deferent charts abstraction.

Results:-

A total of 207 students participated of which females were higher (58.8%) compared to males (41.5%).44% were from basic years and 56.1% were from clinical years. The mean age for male and female student subgroups was 19-24 years respectively. Figure (1)(2)

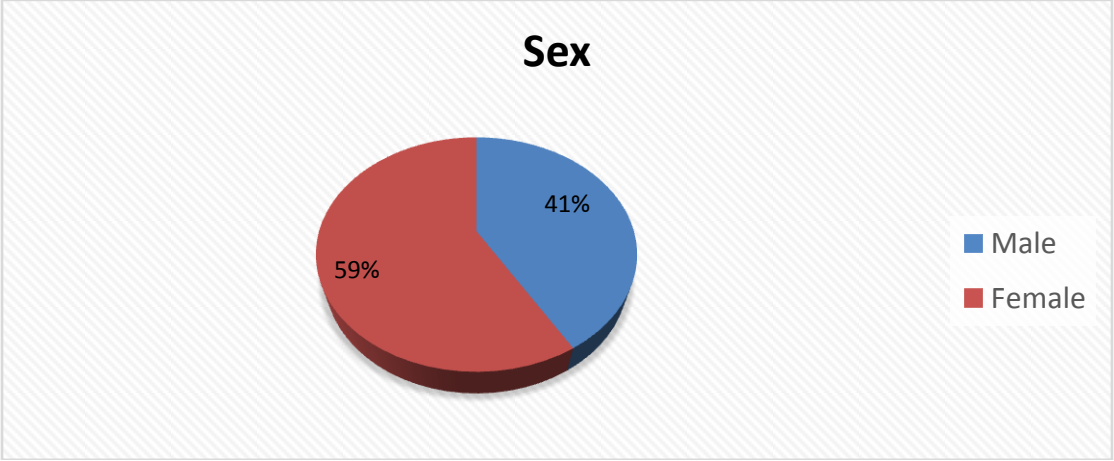


Figure 1:-

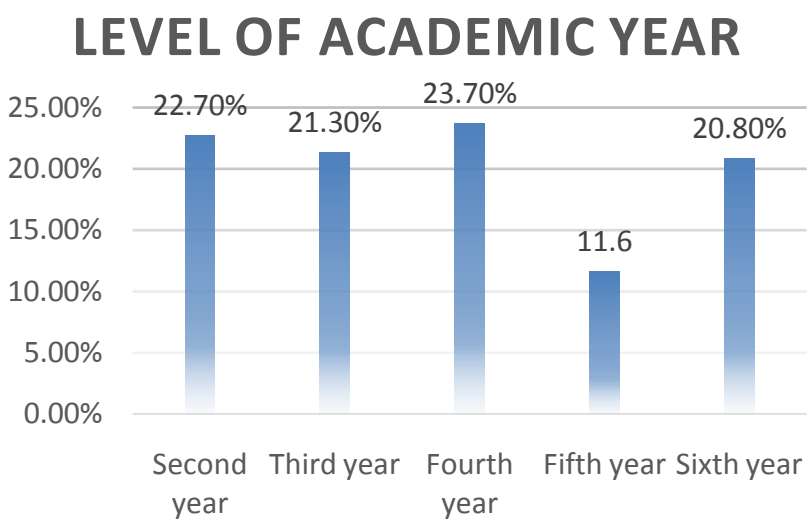


Figure 2:-

Nutritional knowledge of the study participants is summarized by their answers to three questions in **Table (1).** Overall, only 11.6% of the students were aware of the composition of balanced diet, 69.6% were aware of the importance of fruits and vegetables ,and 73.4% were aware of the meaning of organic food.

Table 1:- Nutritional knowledge among the study cohort (N=207).

	No. (%) of respondents answered correctly	**No. (%) of respondents answered incorrectly**
Composition of balanced diet	11.6%	79.4%
Importance of fruits and vegetables	69.6%	30.3%
Meaning of organic food	73.4%	26.5%

When the students were asked about how would they rate their nutrition Separately, in females only (2.4%) percent of 125 students rated their nutrition excellent, (14.6%) answered good and most of them (50%) answered quite good. Where the remaining of students their answers varies between poor (25.6%) and very poor (7.3%).(Figure3)

In males ,(2.4%) percent of 82 students rated their nutrition excellent, only (9.6%) answered good and (52%) answered quite good , (28%) answered poor , where (8%) answered very poor. So males and females have no big difference in diet rating**.**(Figure3)

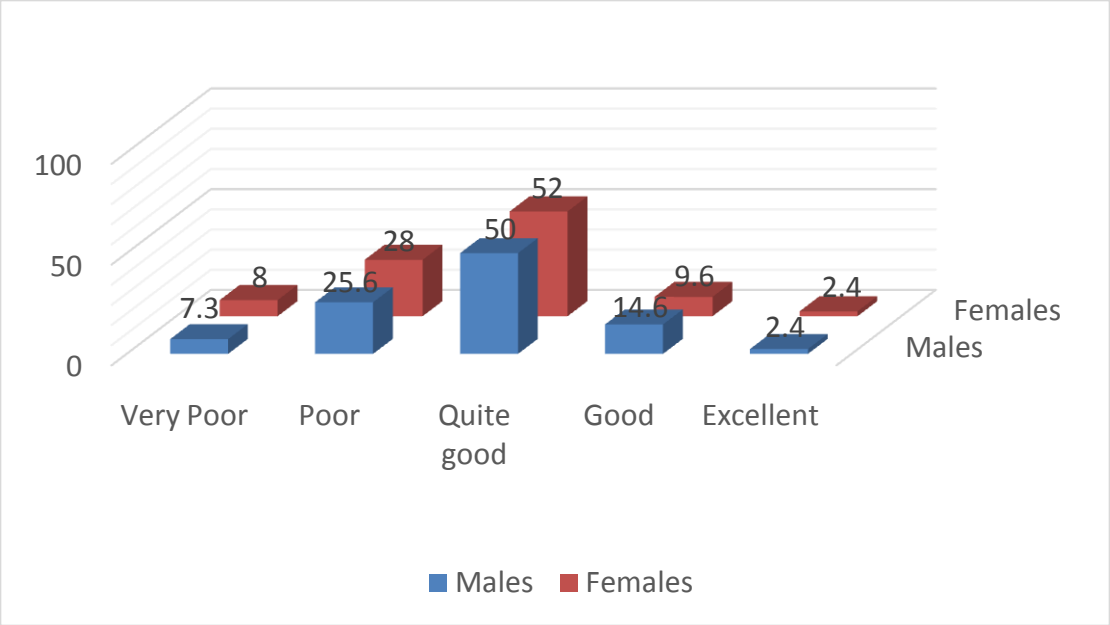


Figure 3:-

Although 69.6% knew about the importance of consuming fruits and vegetables only 11.1% admitted that they eat fruits and vegetables daily, and 21.3% eat it monthly, the rest of students are in between. Figure (4)

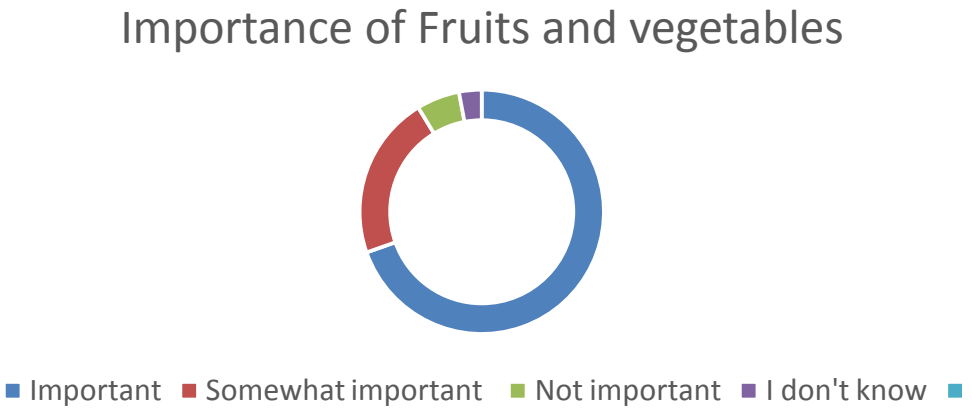


Figure 4:-

About half of the students (54.1%) knew their daily calorie need, but the majority (84.5%) do not calculate their calories whereas 15.5% calculate their calories. About 35.3% of students based all their meals around starchy foods, 28% have only one starchy meal, 31.4% have two starchy meals and 5.3% does not count on starchy foods in any of their meals. Percentage of students who consume sugary snacks daily is 33.3%, and 13% of students consume it in monthly manner. The consumption of pre-prepared food among study cohort is 21.7% daily, and only 15.5% monthly.

These charts shows practices of physical exercises among the study participants (cohort study) . Those who are physically active represent 45.1% of students, 48.6% of them exercise for about 1-2 hours weekly, 22.9% exercise for 2-4 hours weekly, 16.5% exercise for 4-6 hours weekly and only 11.9% exercise for more than 7 hours weekly. Figure (5)

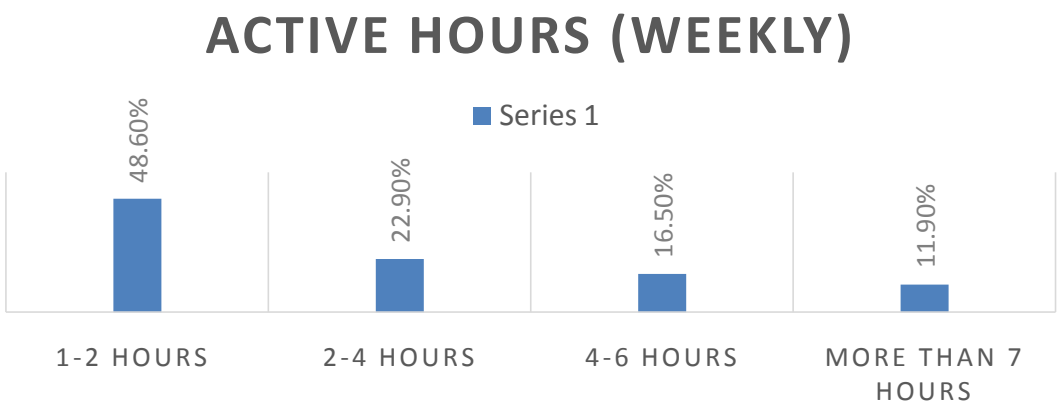


Figure 5:-

When the students were questioned whether their daily routine involve physical activity, most of them 31% stated that they perform more than one type of Exercise and the same percent perform brisk walking only . 15% run, 6% climb stairs as exercise, 8% do high intensity workouts, and only 1% swim. 8% of students perform other types of exercise like weight lifting or self-defense. Figure (6)

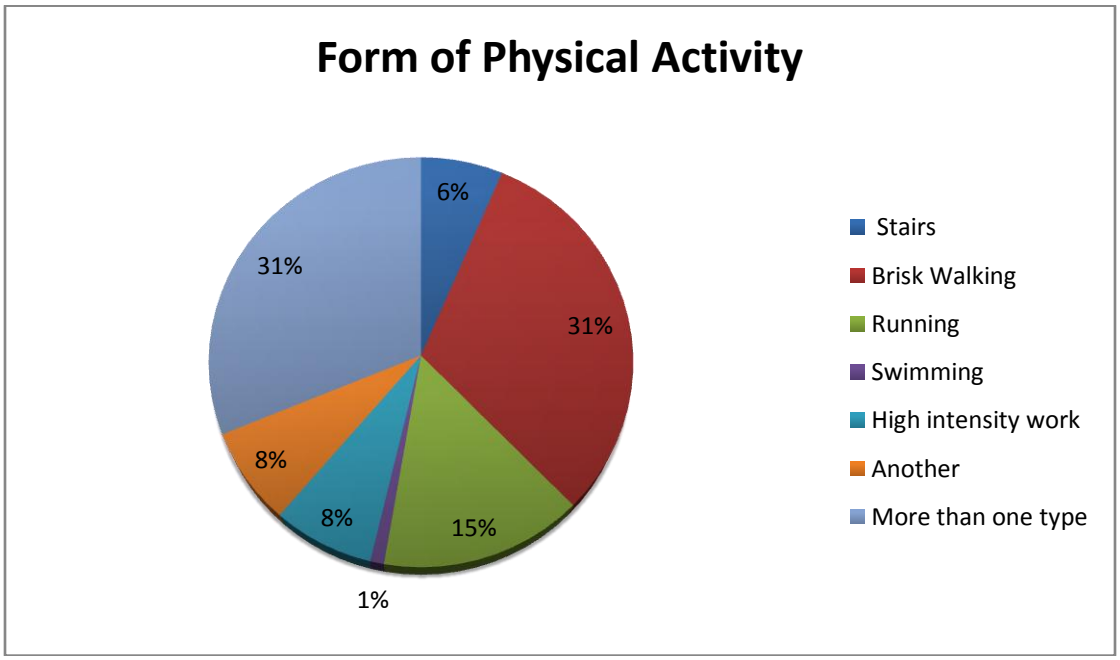


Figure 6:-

Students responded that they practice physical exercises in more than one place, including home about 42.2% of them, 18.3% exercise in public open area, also 18.3% exercise at the gym, only 6.4% exercise at the university campus and 14.7% exercise in more than one of these places .

Concerning attitude towards healthy lifestyle,most of students 29% prefer to eat burger and French fries than other meals, 27.5% of them prefer kabsa (rice and meat) with green salad, 22.7% prefer grilled chicken with white rice and steamed vegetables, 12.1% chose steak with mushroom sauce and mashed potato, and 8.7% prefer green salad only. Regarding fat consumption 58% of students would choose low fat products, 30% would prefer fat free products, 12.1% would prefer full fat products (Figure (7)).

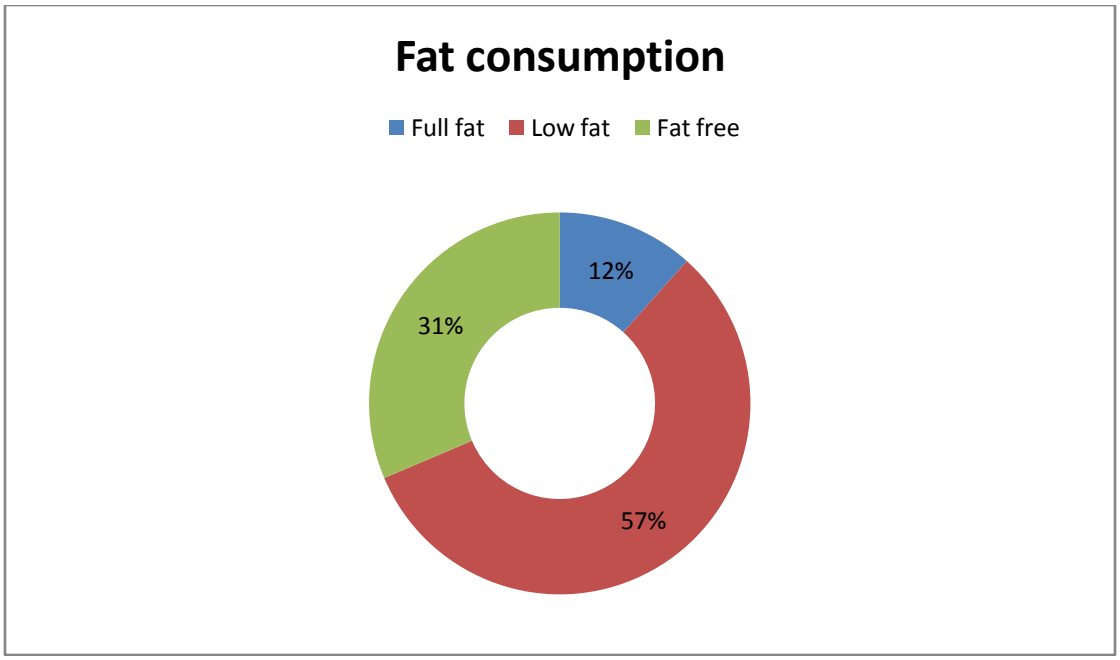
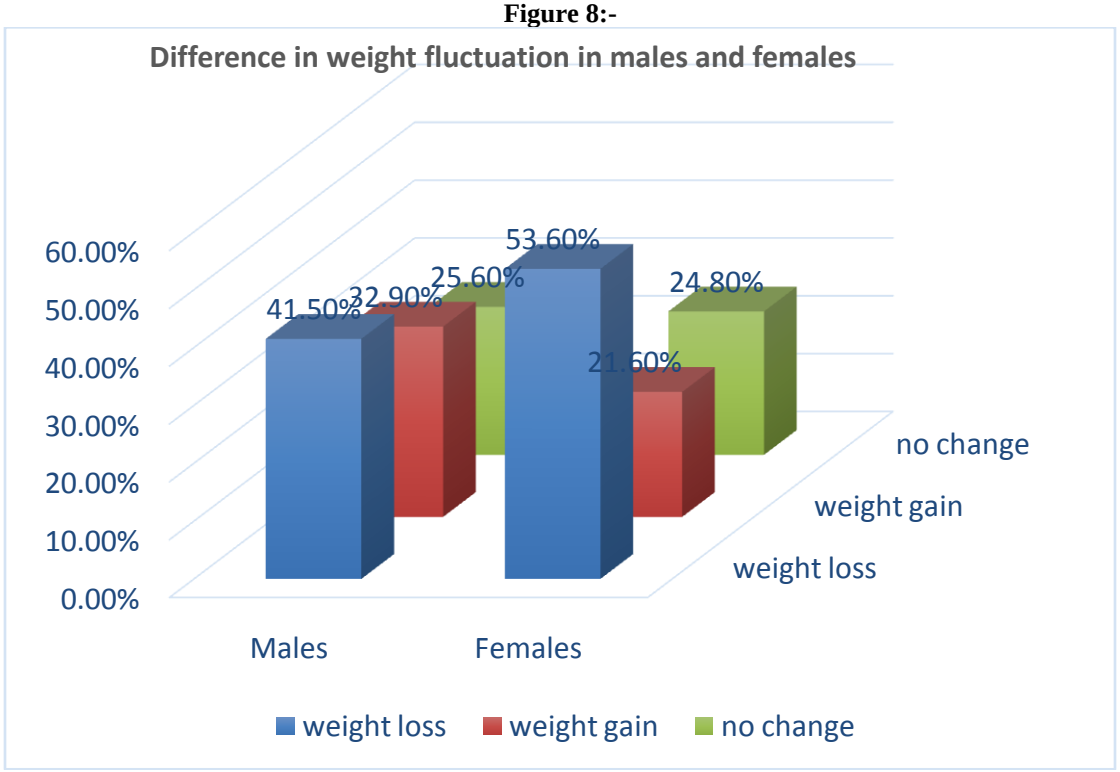


Figure 7:- Regarding weight fluctuations, (53.60%) of females and (41.5%) of males loss their weight during last year. (21.6%) of females and (32.9%) of males gain more weight in last year. The remaining of them have no weight charges.

Figure 8:-



Feigure 8:-

When females who follow special diet questioned about their diet, only (10.4%) follow the diet always and regular. and majority of them (36.8 %) follow it sometimes (Table2). And regarding type of diet in females' population most of them preferred low fat diet (Table3).

Where in Males (11.0%) follow the diet always and regular, (32.9%) follow it sometimes (Table1) . And about type of diet it varies, where most of them preferred low fat diet and others preferred low calories diet.(Table3).

Table 2:- Male & Females who follow special diet.

Males Population	Frequency	Percentage
1 (Always)	9	11.0%
2 (Sometimes)	27	32.9%
3 (Rare)	16	19.5%
4 (Never)	30	36.6%
	Total = 82	Total = 100%

females Population	Frequency	Percentage
1 (Always)	13	10.4%
2 (Sometimes)	46	36.8%
3 (Rare)	11	8.8%
4 (Never)	55	44.0%
	Total = 125	Total = 100%

Table 3:- Males & Females in type of diet.

Males Population	Frequency	Percentage
1 (Low carbohydrates diet)	7	8.5%
2 (Low calories diet)	18	22.0%
3 (low fat diets)	23	28.0%
4 (None)	34	41.5%
	Total = 82	Total = 100%

Females Population	Frequency	Percentage
1 (Low carbohydrates diet)	14	11.2%
2 (Low calories diet)	22	17.6%
3 (low fat diets)	31	24.8%
4 (None)	58	46.4%
	Total = 125	Total = 100%

Discussion:-

The general Saudi diet is largely dependent on carbohydrates, fats and animal sources of protein. so this study was held to assess whether being in a medical field has increased the knowledge and improved the lifestyle of the medical students in University of Hail or not.

When it comes to knowledge, our study found some variations, majority of the students (79.4%) were not aware of the composition of balanced diet, unlike other KAP held at Jeddah study shows.[9]

Meanwhile (69.6%) knew the importance of minerals and vitamins, which goes in parallel with the previously mentioned KAP study.

Depending on the study results, it seems like the knowledge students earned has no significant role in improving their lifestyle. Despite the majority were aware about importance of minerals and vitamins, less than half the study cohort (40.6%) consume fruits and vegetables on regular basis, contrary to medical students at University of Dammam.[10]

Recently, the interest in adopting a healthy lifestyle and counting calories has significantly increased among young Saudis, but we did not notice this in our study where only 15.5% of the study cohort stated they count their daily

calorie intake. This could be contributed to the ignorance of the true concept of healthy lifestyle and the new applications that counts calories and facilitates committing to a calculated and balanced diet.

Physical activity defined by the WHO as bodily movement produced by skeletal muscles that require energy expenditure and known to has significant benefit to the human body. In this study cohort lower than half of the sample are physical active (45.9%) by deferent forms of activity for 1-2 hours per week in the majority. In a study held at Dammam only 35.5% of their sample are active physically [11]. This is may be due to the lack of time and stressful academic life of the medical students .

With deferent types of diet or physical activity almost have of the study sample (48.8%) loss weight during last year where in the study held at Jeddah only (38%) of their sample [9].

Being a medical student makes them busy most of the time so they would not be able to cook everyday and as the university facilities do not provide healthy food so these factors make it likely to have unhealthy dietary choices among our study cohort. The majority of the students about 30% eat fast food twice or thrice weekly, and about 19.3% do it once a week, although about 33.3% eat cakes, chocolate and drink soda daily, yet 28.5% do it twice or thrice weekly, but more than 88% of the student admitted that they will choose low fat or fat free products instead of full fat products if it's available for them.

Other study held at Dammam have shown that the majority of the students (91.3%) admitted eating fast foods, most of them do it twice or less per week, and about 25% of the students; most of them are males (85%) do it 3 times or more per week, 77.4% of the students are consuming soft drinks slightly higher in females versus male (85% and 67% respectively), furthermore 30% of them do it 3 times or more per week. [10]

Conclusion:-

Overall most medical students were aware of importance of minerals and vitamins in diet yet they were not practicing it adequately in their daily life but the majority of the students were not aware of the composition of balanced diet, improving nutrition knowledge, attitude and dietary practices through nutritional education may help to prevent many nutrition related diseases.

Despite the interest in adapting a healthy lifestyle and counting calories has significantly increased among young Saudis, but we did not notice this in our study, this may be contributed to the ignorance of the true concept of healthy lifestyle and the new applications that counts calories and facilitates committing to a calculated and balanced diet. Or may be due to lack of time as the learning system in the college of medicine, Hail University is very tough.

Acknowledgments:-

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