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RESEARCH ARTICLE

LIFESTYLE HABITS AMONG KSMC PHYSICIANS

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Abstract

Background: Most medical research today focuses on three aspects: stress and burnout at work; mental illness such as depression and suicide; and drug addiction. On the other hand, little research has been done among physicians so far on behavioral and preventive interventions including healthy lifestyles habits among physicians. Therefore, the aim of this study to assess the lifestyle habits practicing among KSMC physicians, Saudi Arabia.

Methodology: This is an analytical cross-sectional study conducted in Kingdom of Saudi Arabia, Riyadh (including all physicians in King Saud Medical City), from April, 2020 till December 2021 using pre-designed questionnaire which was distributed online. The questionnaire was prepared to assess the demographic factors, physical activity, eating pattern, health concern. Statistical Package for the Social Sciences (SPSS) version 23 for data analysis.

Results: we were able to collect data from 104 physicians in response to our questionnaire where all of them where medicine physicians and 57.7 % of them were males. The prevalence of overweight and obesity were 18.4 % and 27.2 % respectively. Moreover, 55.8 % of physicians reported that they did not practice any type of exercises however, 32.7 % practiced endurance or aerobic exercise. Furthermore, 24 % of the participants reported being on diet where 8.7 % were on keto diet and 1.9 % were on Mediterranean diet. In our study, poor exercise and diet habits were associated with poor BMI, poor sleep pattern and higher prevalence of medical conditions.

Conclusion: We found that there is high prevalence of obesity and overweight among physicians at KSMC, Saudi Arabia which in addition to poor sleep pattern and high incidence of other medical conditions were significantly associated with the poor life-style habits including low level of practicing exercise and having health diet regime.

Introduction:-

Health is defined by the World Health Organization is not just be free from disease of infirmity rather it could be defined as state of complete physical as well as mental and social wellbeing [[1]]. Healthy lifestyle habits include

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regular physical activity, health diet which is balanced, and cessation of smoking as well as cessation of alcohol consumption. These habits are known to reduce the overall mortality of non-communicable diseases which is responsible for more than 36 million deaths per year worldly [2]. Lifestyle modifications in direction to healthy habits is known todays to be the fundamental strategy for long-term prevention of non-communicable diseases or at least reduce incidence of its complications [3]. For examples, cardiovascular diseases including heart failure are associated with many different modifiable risk factors including smoking, obesity, low-physical activity as well as diabetes and hypertension and all these risk factors could be controlled or prevented by adopting health life styles [3,4]. In Saudi Arabia, cardiovascular-related mortality is associated with 46 % of all-cause mortality related to non-communicable diseases and considered the main causes of death [3,4]. Moreover, the prevalence of obesity in Saudi Arabia is ranged between 24.1 % and 28.7 % which mean that in the kingdom there is 3.6 million of the population are obese with significant decrease in consumption of fruit and vegetables while about 50 % of males and 75 % of females reported low- or no physical activity [5]. This is associated with the change in dietary habits of Saudi citizens which is correlated with the rapid socioeconomic jump at the level of the government and the population where these socioeconomic changes affected all the ages groups with no exception for physicians [6,7]. Considering physicians, studies showed that all of them are exposed to everyday stressors including prolonged and irregular working hours as well as disturbed sleep cycle, emotional exhaustion which causes many physicians to not have the enough time for health life including practicing physical exercise [8] causing that one from each two physicians is seen to suffer from a major health issue by the time of 50 years old mostly from preventable conditions [9]. Though, not all physicians are simply ignoring their health; there is a form of barriers related with physicians' health-seeking behavior as supported by research [8,10], with as many as 61% of physicians seen to be involved in self-diagnosis and self-treatment [6].

Physicians have the privilege and responsibility to be at the forefront of health promotion of healthy lifestyle habits to their patients because they have time and chance to communicate with patients on a daily basis. A Study in Bahrain has linked physicians' recommendations to quit smoking with positive attitudes of physicians themselves toward smoking cessation [11], Other studies in other countries had confirmed the effectiveness of advice from physicians on lifestyle modifications on increasing positive behavioral changes in patients [5,12,13]. The study of Oberg EB showed that physicians' own health habits are the main predictors of their attitude to give advices about lifestyle modifications [14].

The physician's lifestyle habits are particularly important, either because it affects his or her own health (physical as well as mental and social wellbeing), or because these habits affect the physician's consultation with the patient toward healthy lifestyle modifications [11]. Physicians who have a good health lifestyle habits as regular exercise, balanced food, with less avoidable habits as smoking would more likely to discuss related preventative measures with their patients when compared to those physicians who have unfavorable lifestyle habits who would be less proactive in giving advices that they could not follow by themselves [15]. This phenomenon can be explained by the relationship between the complex medical behaviors used by physicians and the impact of these behaviors on both physician confidence in patient management and the practice of real advice [16].Physicians' practices also shape their attitudes toward a healthy lifestyle. Physicians who care about their physical and mental health are more confident in treating their patients and are able to cope with the barriers associated with such lifestyle changes. Physicians 'attitudes toward a healthy lifestyle are important because it determines the extent to which these habits lead to overall health. Most call their doctor the biggest health promoter [17].

Most medical research today focuses on three aspects: stress and burnout at work; mental illness such as depression and suicide; and drug addiction. On the other hand, little research has been done among physicians so far on behavioral and preventive interventions including healthy lifestyles habits among physicians. Therefore, the aim of this study to assess the lifestyle habits practicing among KSMC physicians, Saudi Arabia.

Subjects and Methodology:-

Subjects and setting

This is an analytical cross-sectional study conducted in Kingdom of Saudi Arabia, Riyadh (including all physicians in King Saud Medical City), from April, 2020till December 2021. Sample size of the projected study was150 physicians.

Inclusion criteria

1. All physicians who work for KSMC hospitals

2. Agree to participate in this study and complete the questionnaire.
3. Male and females' physicians were be included
4. Saudi and non-Saudi Arabian were be included
5. Exclusion criteria:
6. Physicians work for other hospitals
7. Other medical profession as nurses and pharmacists be excluded
8. Physicians who not agree for participate in the study
9. Physicians who not completing the questionnaire

Measurement tool

In this study, we depended on pre-designed questionnaire which was distributed online among physicians in KSMC hospital using Google sheet. The questionnaire consisted of three parts; part oneincluded questions to assess the sociodemographic factors of participants including their age, gender, job title, career progression, and weight and height which was collected in order to assess BMI of participants. BMI is a prefect tool in assessment of obesity state of participants. Part two consisted of nine questions which assessed the type of exercise performed by participants including questions about frequency of going to gym, type of aerobic exercise, and if the participants take any nutrients supplement, being on diet and type of their diet. Third part aims to assess the health state of participants including questions about medical history, smoking and sleeping pattern.

Outcomes measures and statistical consideration

The study aims to provide three main outcomes, including demographic characters, health outcomes and healthy habits. Health outcomes described in calculating BMI and determine the prevalence of obesity among physicians as well as prevalence of diseases and smoking as well as sleep pattern. Healthy habits would be describing by providing the prevalence of physicians performing exercise and those on diet. In this study, we usedStatistical Package for the Social Sciences (SPSS) version 23 for data analysis. Frequency and percent were used for describing categorical data as age, gender, job titles while mean and standard deviation were used for height and weight variables. BMI be calculated through the equation of (Weight in KG)/ (Height in M)^2. Univariate analysis, Chi test and Mann-Whitney testwas performed to investigate the association between the exposure factors (age, sex, career, types of physical fitness, body mass index, diet, health state and opinion of evaluation of importance of sports. P value was set at a significance level of < 0.05.

		Count	Column N %
Gender	Male	60	57.7%
	Female	44	42.3%
Age	< 30 years old	65	62.5%
	30-40 years old	38	36.5%
	> 40 years old	1	1.0%
Job title	Family Medicine	82	78.8%
	General Practitioner	9	8.7%
	Emergency physician	4	3.8%
	Pediatrician	5	4.8%
	Orthopedist	3	2.9%
	Radiologist	1	1.0%
Career progression	Medical Intern	2	1.9%
	Resident	101	97.1%
	Consultant	1	1.0%
BMI score	Normal	56	54.4%
	Overweight	19	18.4%
	Obese	28	27.2%

Table 1:- Demographic factors of participants.

Ethical considerations

This study includes human individuals represented by physicians in KSMC hospital. Before starting the study, all participants should agree to informed consent which was provided at the top of the questionnaire with question of " Do you agree to participate in this study". Administrative approval was sought from the unit of biomedical ethics

research committee Ethical approval was sought from the ethical committee of research center in King Saud Medical City.

No personal data as name and address were collected and all participants have the right to leave the study at any time however, only completed questionnaire would be included. All collected data was stored in especial computer with prepared password which was available only for investigators and all data was used for the purpose for this study.

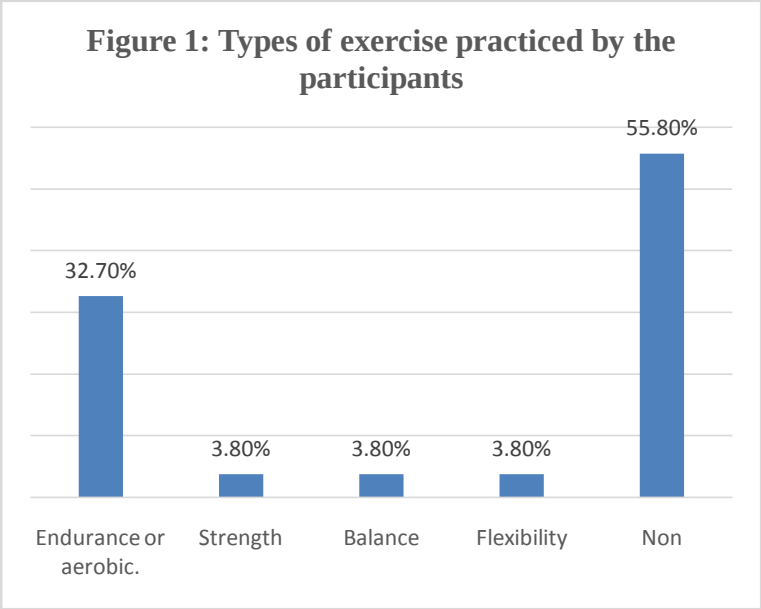

Table 2:- Types of exercises.			
		N	
Endurance	Brisk walking or jogging	39	37.5%
	Yard work (mowing, raking, digging)	5	4.8%
	Dancing	11	10.6%
	Swimming	10	9.6%
	Nothing at all	55	52.9%
Strength	Lifting weights	35	33.7%
	Using a resistance band	11	10.6%
	Using your own body weight	24	23.1%
	Nothing at all	59	56.7%
Balance	Standing on one foot	15	14.4%
	Heel-to-toe walk	8	7.7%
	Tai Chi	3	2.9%
	Nothing at all	82	78.8%
Flexibility	Shoulder and upper arm stretch	30	28.8%
	Calf stretches	17	16.3%
	Yoga	16	15.4%
	Nothing at all	66	63.5%

Do you take any nutritional supplement?	No	66	63.5%
	Yes	38	36.5%
Are you on a diet?	No	79	76.0%
	Yes	25	24.0%
Type of your diet	I am not on a diet	77	74.0%
	Keto Diet	9	8.7%
	The Mediterranean Diet.	2	1.9%
	Other	16	15.4%

Table 3:- Participants' diet characteristics.

Results:-

In this study, we were able to collect data from 104 physicians in response to our questionnaire where all of them where medicine physicians and 57.7 % of them were males. Moreover, we found that 62.5 % of the participants were under the age of 30 years old whole 36.5 % were between 30-40 years old and most of them were in family medicine department and 8.7 % were general practitioner. Moreover, almost all of the participants were residents (97.1 %). Considering BMI, we found that more than half of the participants had normal weight (54.4 %) while the prevalence of overweight and obesity were 18.4 % and 27.2 % respectively (Table 1).

Considering practicing of different types of exercise, we found that 55.8 % of physicians reported that they did not practice any type of exercises however, 32.7 % practiced endurance or aerobic exercise (Figure 1).

Moreover, we found that the most common endurance exercise practiced by the participants was brisk walking or jogging (37.5 %) while lifting weights was the most common type of strength exercises (33.7 %) and standing on one foot was practiced by 14.4 % of the participants while 28.8 % practiced shoulder and upper arm stretch (Table 2).

Considering food which should be taken before exercising, we found that 41.2 % of the participants reported nothing while bananas, chicken breasts and nuts were the main food should be taken before exercising according to 32.4 %, 30.4 % and 22.5 % respectively (Figure2).

Moreover, we found that 36.5 % reported that they took any nutritional supplement. Furthermore, 24 % of the participants reported being on diet where 8.7 % were on keto diet and 1.9 % were on Mediterranean diet (Table 3).

Furthermore, we found that 68.9 % of participants reported having no concurrent diseases while the most common medical conditions include asthma (16.5 %), diabetes mellitus (8.7 %) and dyslipidemia (6.8 %). In addition, we found that the participants reported mean score of 8.5 when asked about their evaluation of the importance of sports (out of score of 10). Moreover, 75 % of the participants reported that they never smoke, while 10.6 % smoke electronic cigarettes (10.6 %) and 8.7 % smoke shishah. Furthermore, 77.9 % of the participants reported having sleeping pattern of 6-8 hours daily where 15.4 % slept for less than 6 hours. Moreover, 74.0 % reported having non on calls (Table 4).

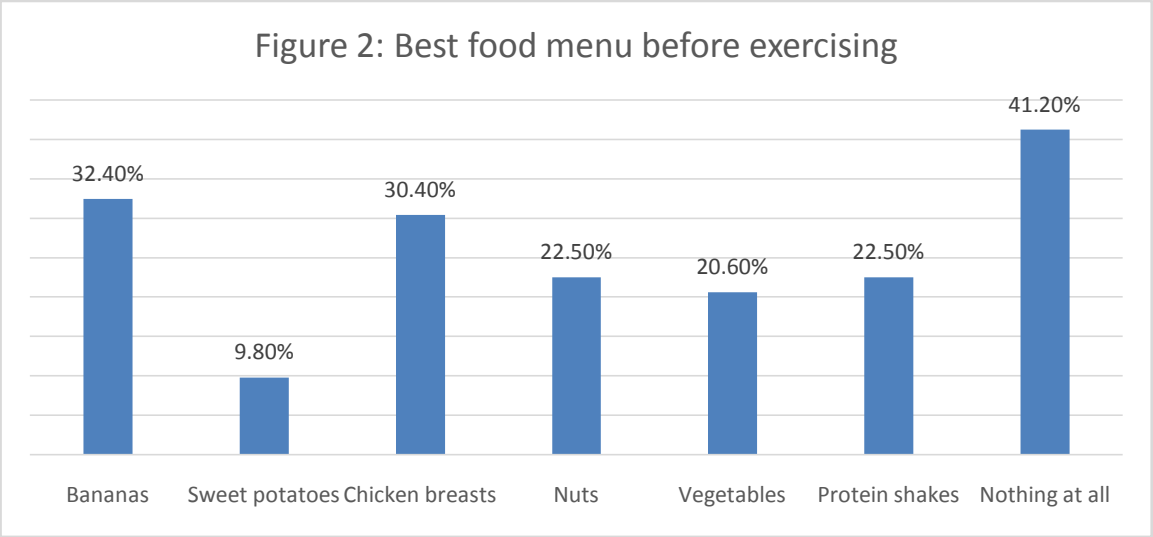

Table 4:- Health consideration including diseases and sleeping pattern.

		Frequent	Percent
Concurrent diseases	Back pain	6	5.8%
	Heart diseases	4	3.9%
	Asthma	17	16.5%
	Diabetic	9	8.7%
	Dyslipidemia	7	6.8%
	No thing	71	68.9%
What is the evaluation of the importance of sports out of ten?	Mean	8.5 (±2.5)	
Do you smoke?	Do not smoke	78	75.0%
	Electronic cigarettes	11	10.6%
	Tobacco cigarettes	6	5.8%
	Shishah	9	8.7%
How many hours do you sleep daily?	Less than 6 hours	16	15.4%
	6 to 8 hours	81	77.9%
	More than 8 hours	7	6.7%
Do you have on calls per month ?	Non	77	74.0%
	Less than 3	7	6.7%
	3-7	20	19.2%

Gender of the participants did not significantly affect the participants' perception of practicing exercise or changing their diet regimen however male show slightly higher intendent to practice exercise rather than females (47.5 % vs 37.2 %). In addition to gender, age also did not affect the pattern of health life (P=0.664) however, it was found that the rate of participants practicing of exercise decreased from 44.4 % of participants younger than 30 years old to 21.1 % in participants with age between 30 and 40 years old. Moreover, we found that BMI was significantly associated with practicing of exercise or having diet where lower precent of obese patients practiced exercise and having special diet compared with overweight and normal populations (33.3 % vs 47.3 %) and (14.3 % verse 19.6 %) respectively. However, the most important point that the highest precent of participants who practice exercise or being on diet were of overweight participants. Moreover, we found that having healthy habits would affect participants' sleep pattern where less practicing of exercise associated significantly with increase duration of sleep (P=0.01) and participants with normal duration of sleep (6-8) were more likely to have healthy diet. Moreover, we found that most of medical conditions were significantly associated with exercise and diet pattern of participants. More pattern of practicing of exercise and having healthy diet was associated with less prevalence of back pain, heart disease, diabetes mellitus and dyslipidemia and higher incidence of asthma (Table 5).

Table 5:- The relation between demographic factors and health state with practicing health habits.

		Practicing exercise			Are you on a diet?		
		No	Yes	P-value	No	Yes	P-value
Gender	Male	52.5%	47.5%	0.302	76.7%	23.3%	0.345
	Female	62.8%	37.2%		75.0%	25.0%	
Age	< 30 years old	55.6%	44.4%	0.664	75.4%	24.6%	0.848
	30-40 years old	57.9%	42.1%		76.3%	23.7%	
	> 40 years old	100.0%	0.0%		100.0%	0.0%	
BMI score	Normal	52.7%	47.3%	0.015*	80.4%	19.6%	0.020*
	Overweight	59.6%	40.4%		52.6%	47.4%	
	Obese	66.7%	33.3%		85.7%	14.3%	
How many hours do you sleep daily?	Less than 6 hours	43.8%	56.3%	0.017*	87.5%	12.5%	0.01*
	6 to 8 hours	57.0%	43.0%		71.6%	28.4%	
	More than 8 hours	85.7%	14.3%		100.0%	0.0%	

Do you smoke ?	do not smoke	61.5%	38.5%	0.187	75.6%	24.4%	0.244
	Electronic cigarettes	27.3%	72.7%		81.8%	18.2%	
	Tobacco cigarettes	60.0%	40.0%		100.0%	0.0%	
	Shishah	50.0%	50.0%		55.6%	44.4%	
Back pain	No	33.3 %	66.7 %	0.002*	74.5%	25.5%	0.125
	Yes	38.3 %	41.7 %		100%	0.0%	
Heart diseases	No	56.1%	43.9%	0.001*	75.0%	25.0%	0.125
	Yes	75.0%	25.0%		100%	0.0%	
Asthma	No	61.2%	38.8%	0.049*	71.3%	28.7%	0.011*
	Yes	35.3%	64.7%		100.0%	0.0%	
Diabetic	No	56.4%	43.6%	0.737	73.7%	26.3%	0.47*
	Yes	62.5%	37.5%		100.0%	0.0%	
Dyslipidemia	No	55.2%	44.8%	0.017*	74.2%	25.8%	0.01*
	Yes	83.3%	16.7%		100.0%	0.0%	

Discussion:-

Numerous studies have demonstrated that the health of medical professionals may affect the health of the larger population, and there is an established association between physicians' own healthy practices and their patient interactions [18]. In our study, we aimed to assess the lifestyle habits practicing among KSMC physicians, Saudi Arabia.

In our study, we found that the prevalence of overweight and obesity among physicians were 18.4 % and 27.2 % respectively. These prevalence were lower than reported by other study including study of BorganS, which found that 39 % of physicians being overweight and 33 % obese [19]. However, this prevalence was lower than reported in other studies including study of Ghamri R, which found that 31% of the participants were either overweight or obese [20]. Moreover, we found that 55.8 % of physicians reported that they did not practice any type of exercises however, 32.7 % practiced endurance or aerobic exercise where brisk walking or jogging, lifting weights, and shoulder and upper arm stretch were the most common types of exercise. In the study of Borgan S, the author reported that 29.6 % of physicians reported performing more than 30 min of continuous physical activity during an whole week where the most commonly reported exercises were walking and swimming [19]. In addition, a study conducted in Aljouf (Saudi Arabia), found that almost two-thirds of the primary healthcare physicians engaged in moderate to vigorous physical activity, and only 34.8% were inactive [21]. Moreover, in our analysis, we found that only 24 % of the participants reported being on diet. This finding could be explained the current high prevalence of obesity and overweight among physicians in our study. High proportion of physicians who reported not practicing any type of exercise or having restricted to health diet regime could be explained by the long and exhausting work hours of them where many physicians did not have the time for indulge in physical exercise or stick to their dietary regimes as many of them do not find the physical or mental strength to practice some healthy habits after working long hours each day which could affect the quality of healthcare services they provide to their patients [22]. Moreover, poor lifestyle habits among both physicians in Saudi Arabia and other neighboring countries reflect rooted cultural patterns present in the Middle Eastern population that may be exaggerated among physicians due to excessive workload and long shifts [23].

In our study, we found that 68.9 % of participants reported having no concurrent diseases while the most common medical conditions include asthma (16.5 %), diabetes mellitus (8.7 %) and dyslipidemia (6.8 %). In study of Borgan, the authors found that the most common medical conditions among physicians were hypertension, and diabetes mellitus with prevalence of 20.3 % and 11 % [19]. Moreover, Sleep deprivation has been shown to affect physician clinical performance and cognitive scores [21,23]. Considering sleep pattern of the physicians, we found that 77.9 % of the participants reported having sleeping pattern of 6-8 hours daily where 15.4 % slept for less than 6 hours.

Considering the factors affecting the pattern of exercise and having healthy diet includes BMI, sleep pattern, and medical conditions. We believe that these relations are two tailed relations where the change in pattern of healthy habits would cause change in these factors and verse versa. In our study, poor exercise and diet habits were

associated with poor BMI, poor sleep pattern and higher prevalence of medical conditions. These results were in agreement with previous many literature review [9,12,21,22].

This study had some limitations which could not be avoided including the depending on self-reported questionnaire which may lead to some personal bias including reported better weight and height and better health habits which may causing an underestimation of unfavorable lifestyle habits among physicians assessed in this study. Moreover, we used a locally-developed questionnaire, which makes it difficult to accurately compare our data with other studies worldwide.

In conclusion: We found that there is high prevalence of obesity and overweight among physicians at KSMC, Saudi Arabia which in addition to poor sleep pattern and high incidence of other medical conditions were significantly associated with the poor life-style habits including low level of practicing exercise and having health diet regime.

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