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Lifestyle habits and will being of primary health care physicians in Taif city

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Abstract

Background: Physicians are desirable to lead a favorable lifestyle not only for theirhealth status but also because of their role in guiding patients as a privilege and responsibility of taking a frontline role in promoting healthy lifestyle habits.

Aim: To evaluate the nature of the lifestyle habits and wellbeing of primary healthcare physicians in Saudi Arabia (Taif city).

Material and Methods: a cross-sectional design through questionnaire, which was distributed among physicians working in all primary health care center belonging to ministry of health in Taif city. Each questionnaire includes a cover letter detailing the purposes of the study and instructions on how to complete the form.

The study period was within (May-December 2020)after taking approval from all entities requested.

Results: One hundred physicians were included. Females represent 55% of them. Their age ranged between 26 and 68 years with a mean ± SD of 37.8±7.1 years. More than half (53%) of them perceived their health as "good" whereas 44% perceived it as "excellent". Almost two-thirds of the physicians (64%) were either overweight (36%) or obese (28%). History of practicing physical activity during the usual week was observed among 31% of physicians. Only 41% of th physicians took breakfast almost every day. Ten percent of the physicians never eat fresh fruits while only 14% eat them almost every day and 26% eat vegetables every day. Their overall average sleeping hours/day was of 6.51±1.08 hours. Prevalence of daily smoking among the physicians was 13%. Almost one-fourth of the physicians (22%) utilized TV/DVD appliances or computer or lap top 3-5 hours/day or more. Almost a quarter of them (28.2%) usually talk on the phone while driving and 38.5% usually text or use social media services while driving.

Conclusion: Despite a considerable proportion of the primary healthcare physicians in Taif city, KSA were not following Healthy life style, majority of them perceived their health as either "good" or "excellent".

Keywords: primary health care physicians, life style, well being

Introduction

Health is defined by World Health Organization (WHO) as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity" [1].

According to center for disease control and prevention (CDC) Well-being is a positive outcome that is meaningful for people and for many sectors of society, because it tells us that people perceive that their lives are going well. Good living conditions (e.g., housing, employment) are fundamental to well-being. Tracking these conditions is important for public policy. However, many indicators that measure living conditions fail to measure what people think and feel about their lives, such as the quality of their relationships, their positive emotions and resilience, the realization of their potential, or their overall satisfaction with life—i.e., their "well-being." [2, 3]. Well-being generally includes global judgments of life satisfaction and feelings ranging from depression to joy [4].

Healthy lifestyle habits including regular physical activity, a balanced diet, and refraining from smoking and excessive alcohol consumption have been shown to reduce the overall mortality from non-communicable disease (NCD), which accounts for 38 million deaths worldwide yearly, and 16 million deaths happen before the age of 70 years old [5]. Additionally, other research studies and reviews indicated that NCDs are the primary cause of death in the world [6, 7] that killing more people annually than all other causes [8].

NCDs may be defined as a group of chronic illnesses which are not infectious or contagious and may cause disability or even premature death. They result in prolonged, slowly-progressing consequences that require long-term care. The major NCDs identified by the WHO that are the major for death annually include cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes with 17.5 million, 8.2 million, and 1.5 million, respectively [5]. These four diseases together are responsible for 82% of all the deaths from NCDs.

Data from a WHO study conducted in 2014 on NCDs in Saudi Arabia reported proportional mortality as follows: cardiovascular diseases (46%), cancers (10%), chronic respiratory diseases (3%), diabetes (5%), and other NCDs (14%). Compared with a total of 22% of all other causes of death, this proves that NCDs are the significant causes of mortality, both nationally and internationally [9, 10].

Lifestyle modification is a fundamental strategy for long-term prevention of such diseases. For example, cardiovascular diseases are associated with several modifiable risk factors such as obesity, tobacco consumption, physical inactivity, and diabetes and hypertension [10]. As Das and Horton; and Lee *et al*., physical inactivity were found to be associated with an increase in the occurrence of NCDs [11, 12]; and one of the most critical risk factors for developing chronic diseases and

increasing morbidity and mortality [8]. It has been reported that (9%) of premature deaths in 2008 worldwide were associated with inactivity [12].

In particular, physical inactivity has significant effects on the occurrence of coronary heart disease, type 2 diabetes, and cancer, specifically breast and colon cancers [12]. A study published in 2012 reported that (6-10%) of global deaths from NCDs were directly related to physical inactivity [12]. Conversely, improvement of physical activity contributes to NCD prevention, as it is considered one of the most critical risk factors [13, 14].

Many important factors have been studied and reported as determinants of inactivity including insufficient time, injuries, obesity, and lack of encouragement by family and friends. Furthermore, environmental factors, such as hot weather and lack of facilities such as proper walking or jogging areas, can also affect the level of physical activity [15].

The regular physical activity benefit is proven among all age groups have physical and mental benefits. Improvement of life quality, sleep, and stress management are some of the physical benefits; the enhancement of social relationships is a mental benefit [11].

The Kingdom of Saudi Arabia (KSA) has recently experienced enormous lifestyle changes associated with less and less physical activity among large sectors of the population. These changes may be strongly related to the currently witnessed epidemic level of NCDs and their associated complications [16]. Overall, (67.7%) of different age groups of the Saudi population aged 15-64 years, (60.9 %) of men and (74.3%) of women, were reported to be physically inactive according to STEP wise surveillance in 2005 [17]. Previous data on the prevalence of obesity in Saudi Arabia were 24.1%, but in 2013 it reached 28.7%, which means 3.6 million of the population are obese. In the same study, researchers found a decrease in fruit and vegetable consumption with almost half of males and 75.1% of females demonstrating low or no physical activity [5, 18]. These statistics highlight that national physical inactivity is a serious and prevalent issue. Many national and international studies have been published on physical activity [8, 14, 16, 19, 20]. In Abha, Southwestern Saudi Arabia, Mahfouz *et al*. studied 736 health care workers in government hospitals and primary health care centers, reported smoking status as 14.8% current smokers, and 11.5% former smokers [21].

Physicians are one such subgroup worth studying given that they are highly educated and supposedly more engaged in physical activity than others [13, 15, 22]. Furthermore, physicians' level of activity can improve their consultations regarding physical exercise, increase job satisfaction, and decrease rates of depression, all of which, promote patient care [23]. As primary care physicians are trained to provide comprehensive primary care services to a defined population of patients and take continuing responsibility for health promotion and well-being [24], therefore, adopting healthy lifestyle habits by physicians will improve their own health and influence patients' health as well [2].

Physicians are desirable to lead a favorable lifestyle not only for their health status but also because of their role in guiding patients as a privilege and responsibility of taking a frontline role in promoting healthy lifestyle habits [25]. However, It has been pointed out that physicians tend to turn a blind eye to their unfavorable lifestyle habits, and to be less assertive and proactive about providing patients with guidance for a better lifestyle if they are not practicing it themselves [26]. The enlightening activities have been actively pursued by national medical associations in various overseas countries, as part of an effort to promote physicians leading a favorable lifestyle in order to protect their health [27].

As well as several studies have confirmed the effectiveness of physicians' advice on lifestyle habits for inducing and maintaining positive behavior changes in patients [2, 18, 28, 29], as well as One of the solidest predictors of physicians giving lifestyle advice is the physician's own health behavior [30]. Physicians' lifestyle habits are of precise importance both because they influence the physician's health and because that these habits affect physician-patient consultations.

Physicians with healthy practices are more likely to discuss related preventive measures with their patients, while physicians with unfavorable lifestyle habits are less proactive in advising that they do not follow themselves [26, 31]. This spectacle could be clarified by the association between the health behaviors that physicians themselves struggle to attain and the effects of these behaviors on both, physicians' confidence to counsel their patients and their actual counseling practices [32].

There is a lack of statistics from KSA, especially among sub-population groups that deal with lifestyle and health well-being in health care professionals. Even in recent years, some studies were conducted as a local study on physical activity levels among physicians in a single center in Riyadh targeted the physicians of a residency training program [33]. While Mandil *et al*. evaluated levels of physical activity among physicians in Riyadh, Saudi Arabia and the possible factors affecting physical inactivity, where findings verified a prevalence of physical activity among Riyadh physicians (63%), which is higher than the general population (32.4%), where the main reason for not appealing in physical activity was lack of time (58.1%) followed by work duties (22.5%). The prevalence of the most frequently reported NCDs (cardiovascular diseases, diabetes, chronic respiratory diseases, and cancers) was 21.9% [33].

Some studies conducted in Saudi Arabia involved health wellbeing in their objectives as Alshareef *et al*. assessed the lifestyle habits and well-being of primary healthcare physicians working at the Ministry of National Guard Health Affairs in western Saudi Arabia. It showed that more than half of the studied physicians were either overweight or obese. However, 40.6% of the participants were involved in diet to reduce their weight in the past sixmonths, and 35% practiced sports 3–4 days/week. Reported chronic diseases were hyperlipidemia, hypertension, bronchial asthma, and diabetes. General health was identified as fair by 15.6%, good by 54.4%, and excellent by 30% of the participants. A moderate-high stress level was perceived by 77.5% of the participants [34]. While, AlAteeq and AlArawi assessed four main determinants of a healthy lifestyle (smoking, diet, physical activity, and body mass index) among primary health care professionals. Findings showed the prevalence of smoking was 8.4%. Most of the participants (75.1%) scored more than 50% for a healthy diet. Only 38.8% of the participants have a healthy body mass index, and 21.1% were physically active [35]. In Riyadh, Al Alwan *et al*. studied the cardiovascular disease risk factors among physicians and non-physician health workers. They reported no difference in BMI, dietary habits, smoking, and physical activity between the two groups [36].

Ban day *et al*. studied the prevalence of physical activity among primary health care physicians in Al jouf region of Saudi Arabia, where 65.2% of primary health care physicians were doing moderate to vigorous physical exercise, and 34.8% of them were physically inactive. Majority of physically inactive primary health care physicians had the intention to increase their physical activity. Physically active primary health care physicians

significantly impart advice and role modeling on physical activity to their patients compared to physically inactive primary health care physicians ($p<0.01$). It cited that most primary health care physicians in cities studied were physically active and were able to impart the excellent behavior counseling to their patients. A firm intention prevailed to increase physical activity among physically inactive primary health care physicians [37].

Colectively, it recommended the consistent check-ups and screenings for early lifestyle status detection and intervention to diminish the burden of lifestyle-associated diseases among primary care physicians, as well as, health care professionals in the primary care setting and other health facilities need to be targeted by health promotion programs for their health benefits, and better role modeling for their patients

Material and Methods

Study Design and Participants

This study used a cross-sectional design through questionnaire, which was distributed among physicians working in all primary health care center belonging to ministry of health in Taif city. Each questionnaire includes a cover letter detailing the purposes of the study and instructions on how to complete the form.

The study period was within (May-December 2020) after taking approval from all entities requested.

Study Population

All primary health care physicians who are working in primary health care center belonging to ministry of health in Taif city.

Study Area

Current research was conduct in Kingdom of Saudi Arabia, West region, Makka state, and in Taif city specifically.

The Makkah State or Mecca Stateis the most populous state in Saudi Arabia. It is located in western Saudi Arabia, and has an extended coastline. It has an area of 153,128 km², and a population of 8,557,766 (2017 survey) [38]. Its capital is Mecca, the holiest city in Islam, and its largest city is Jeddah, which is also Saudi Arabia's main port city. The third major city is Ta'if.Ta'if is a city in Mecca Province of Saudi Arabia, at an elevation of 1,879 m (6,165 ft) on the slopes of the Sarawat Mountains (Al-Sarawat Mountains). It has a population of 1,200,000 people [38] and is the unofficial summer capital.

Inclusion Criteria

Physicians who are working permanently and in a daily basis in the field of primary health care services in Taif were eligible for inclusion.

Exclusion Criteria

Dentist, Physicians who are joining primary health care services in terms of part time for training and residency requirements, as well as physicians who have another job outside of primary health care center either in medical or administrative duties.

Sample Study

According to criteria, population = 100 physcians. To add strength for the study, researcher decided to include all physicians in analysis, where the questionnaire was distributed among all of primary health care physicians, and this was served as a sampling frame of the study.

Data Collection

The English version of the updated self administer questionnaire to assess the lifestyle and wellbeing was used. Demographic data were collected from the physicians that supporting the research outcome, and several well-being and health lifestyle variables were entitled for evaluation. Researcher used the previous survey (i.e. Wellbeing and Lifestyle Habits among primary care physicians in Bahrain: Survey) that used by another authors, where permission for use was taken.

Using printed hard copy of the English version of the questionnaire to assess the study objectives.

Data Collection Technique

One week was specified to each PHC include in the study to recruited all physicians work on it.20 week had to collected data, the questionnaire were distributed to PHC physicians by researcher himself hand to hand during their working hours, then collected after been filled in same day,The researcher were around for any inquiry.

Ethical Consideration

The approval of the study for ethical clearance was sought from the Research Review Board and Research ethics committee from all entities, where all information going to collect was considered confidential.

Statistical Analysis

Data collected will be treated, coded and analyzed by using statistical package for social science program (SPSS®), Version 26. Frequency and percentage were used to describe categorical variables while mean and standard deviation (SD) were used to describe continuous variables. Chi-square test was applied to investigate the association between categorical variables, Student t-test to compare means between two different groups and one-way analysis of variance (ANOVA) test to compare means between more than two different groups. P value less than 0.05 was considered as a cut off level for statistical significance.

Budget

The research was self-funded research

Results

The socio-demographic characteristics of the one-hundred primary healthcare physicians participated on the study. Females represent 55% of them. Most of them (76%) were married. Their age ranged between 26 and 68 years with a mean±SD of 37.8±7.1 years. Half of the participants were general practitioners whereas 48% were family physicians. Saudi nationals represent 60% of the physicians.

Assessment of wellbeing

- **General health perception**

More than half (53%) of the PHC physicians perceived their health as "good" whereas 44% perceived it as "excellent".

- **Body mass index**

Almost two-thirds of the physicians (64%) were either overweight (36%) or obese (28%) as shown in Figure 2

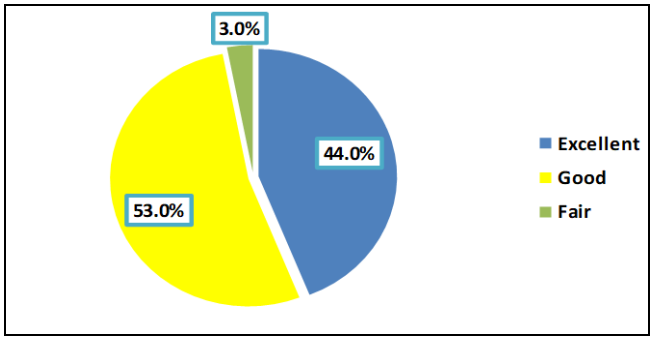

Fig 1: General health perception of primary healthcare physicians, Taif

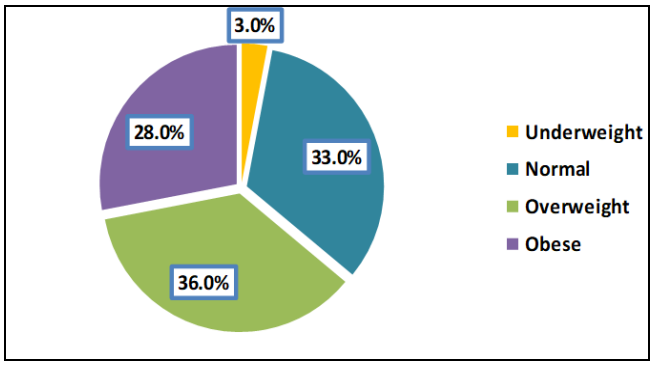

Fig 2: Distribution of body mass index among primary healthcare physicians, Taif

Medical history

Almost one-fifth of the participants (19%) visited dentist in the last 6 months and 10% were seen by other health professionals regarding their health in the last 6 months. Common health problems reported among them were hypertension (8%), hyperlipidemia (7%), bronchial asthma (5%) and diabetes mellitus (4%). Physicaldisabilities and psuchiatric problems were nor reported among any of the participants. Table 1

- **Physical activity**

History of practicing physical activity during the usual week was observed among 31% of participants as clear from Figure 3. Among those who reported practicing physical activity (n=31), the frequency of practicing physical activity exceeded two days in a week among 67.7% of them and the commonest practiced activity was walking (87%).

Almost half (51%) of the physicians reported using both elevator and stairs in their workplace while 29% reported using stairs only. Figure 4

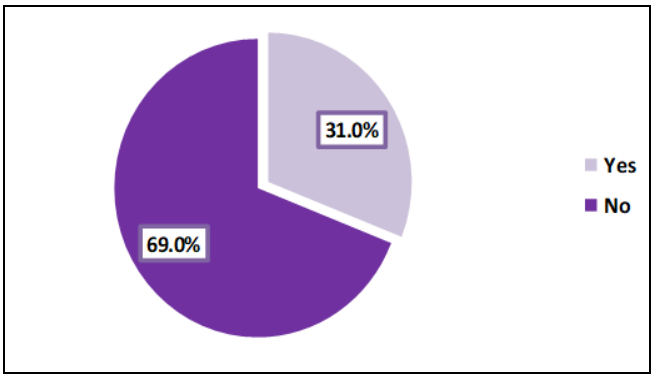

Fig 3: History of practicing physical activity during the usual week among the participants

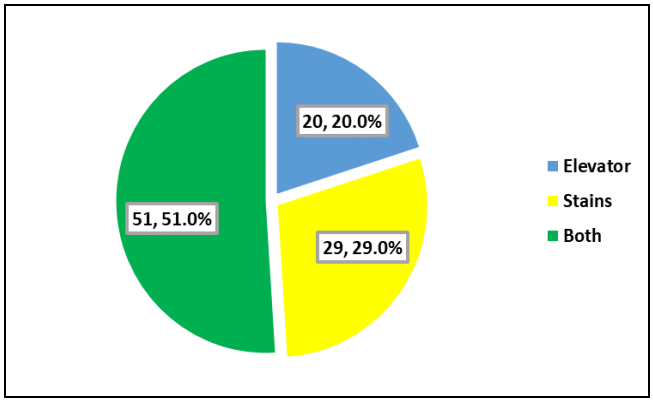

Fig 4: Usual use of elevator and stairs in participants` work place

Table 1: Details of physical activity among the participants (N=31)

	Frequency	Percentage
Frequency of practicing physical activity (number of days/week)		
1-2	10	32.3
>2	21	67.7
Type of practicing sports		
Walking	27	87.0
Weight lifting	2	6.5
Football	2	6.5

- **Dietary habits**

Only 41% of th physicians took breakfast almost everyday and 4% never take breakfast while 34% took dinner almost everyday and only 4% never have dinner. Red meat was consumed 1-2 days/week by 65% of the physicians while chicken was eaten almost everyday by 22% of them. Ten percent of the physicians never eat fresh fruits while only 14% eat them almost everyday and 26% eat vegetables everyday. Table4 A quarter of physicians have been on a diet to reduce their weight during the last 6 months while only 2% have consumed any weight lowering medications during the last 6 months. About one-fifth of the physicians (19%) followed low corbohydrate diet in their last attempt to reduce weigh. Most of the physicians (63%) had one fast-food meals during a week. Table 5

- **Sleep pattern**

It is realized from Figure 5 that 39% of the physicians sleep on the average 6 hours per night and 24% sleep 7 hours whereas 17% sleep 5 hours with an overall average of 6.51±1.08 hours.

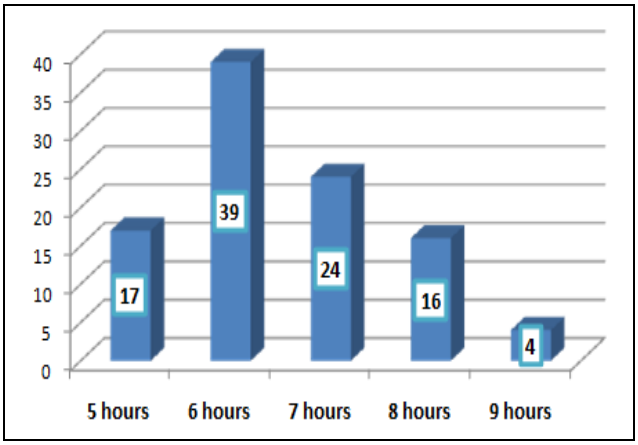

Fig 5: Average number of sleeping hours per night among primary healthcare physicians, Taif

- **Smoking behaviour**

Prevalence of daily smoking among the physicians was 13%. Most of them (61.5%) started smoking after the age of 20 years. And number of cigarettes was 20 or more among only one physician (5%). Smoking shisha or e-cigarettes were reported among 5% and 2% of the physicians, respectively. Table 2

Table 2: Details of smoking behaviour among primary healthcare physicians, Taif

	Frequency	Percentage
Current cigarette smoking status		
Never smoker	87	87.0
Daily smoker	13	13.0
Age at start smoking for daily smoker		
≤20	5	38.5
>20	8	61.5
Number of cigarettes smoked per day (for daily smokers)		
<20	12	92.3
≥20	1	7.7
Smoking shisha		
Yes	5	5.0
No	95	95.0
e-cigarette smoking		
Yes	2	2.0
No	98	98.0

- **Consumption of caffeinated beverages, energy drinks and alcohol**

82% of the physicians consumed daily caffeinated beverages; 31% consumed them four times or more per day. None of them consumed energy drinks or alcohol.

Daily life stress

On a scale ranged between 1 and 10, 38% of the physicians scored over 5 concerning the level of their daily life stress; the overall median value of the score was 5 with interquartile range (IQR) of 3-7 as shown in Table 3 and Figure 6

Table 3: Level of daily life stress among the primary healthcare physicians, Taif

≤5	**62**	**62.0**
>5	38	38.0
Median	5	
IQR	3-7	

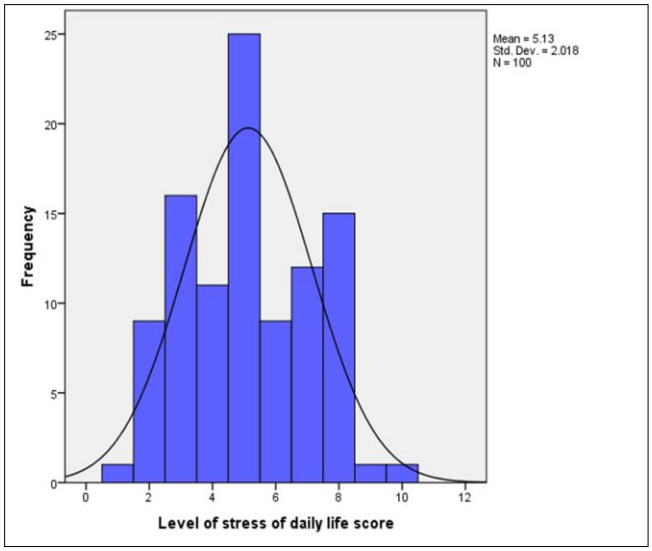

Fig 6: Distribution of the level of daily life stress score among the primary healthcare physicians, Taif

Using audiovisual appliances

Almost one-fourth of the physicians (22%) utilized TV/DVD appliances or computer or lap top 3-5 hours/day or more. Table 4

Table 4: Average daily time duration of using audiovisual appliances among the primary healthcare physicians, Taif

	Frequency	Percentage
TV/DVD		
1-2 hours/day, or less	78	78.0
3 to 5 hours/day	22	22.0
6 to 10 hours/day, or more	0	0.0
Computer/laptop		
1-2 hours/day, or less	78	78.0
3 to 5 hours/day	19	19.0
6 to 10 hours/day, or more	3	3.0

Driving-related habits

More than a third (39%) of primary healthcare physicians reported putting seatbelts when driving. Among 53.9% of them, the actual speed (km/h) at which they drive on the highway ranged between 101 and 120. Almost a quarter of them (28.2%) usually talk on the phone while driving and 38.5% usually text or use social media services while driving. Table 5

Table 5: Driving related habits of the primarycare physicians, Taif

	Frequency	Percentage
Do you usually put seat belts when you drive		
Yes	39	39.0
No	0	0.0
I don't drive	61	61.0
What is the actual speed (km/h) at which you drive on the highway? (n=39)		
80 or less	2	5.1
81-100	16	41.0
101-120	21	53.9
Do you usually talk on the phone while driving? (n=39)		
Yes	11	28.2
No	28	71.8
Do you usually text or use social media services while driving? (n=39)		
Yes	15	38.5
No	24	61.5

Factors associated with general health perception

Among studied factors, physicians with history of diabetes (p=0.011), hypertension (p=0.001) and dyslipidemia (p<0.001) were less likely to perceive their general health as "excellent" compared to their peers. Obese physicians were the least to perceive their genral health as "excellent" (32.1%) whereas two-thirds of underweight physicians perceived it as "excellent", p=0.043. Almost half of the physicians who using either stairs only (48.3%) or both stairs and elevators (52.9%) at their workplace perceived their general health as "excellent" compared to only 15% of those using elevators only, p=0.043. Other factors were not significantly associated with their general health perception. Table 6

Table 6: Factors associated with general health perception of the primary healthcare physicians, Taif

	General Health perception			p-value
	Fair	Good	Excellent	
	N=3	N=53	N=44	
	N (%)	N (%)	N (%)	
Gender				
Male (n=45)	1 (2.2)	22 (48.9)	22 (48.9)	0.647*
Female (n=55)	2 (3.6)	31 (56.4)	22 (40.0)	
Marital status				
Single (n=18)	0 (0.0)	7 (38.9)	11 (61.1)	0.298*
Engaged (n=6)	3 (3.9)	44 (57.9)	29 (38.2)	
Married (n=76)	0 (0.0)	2 (33.3)	4 (66.7)	
Age in years				
Mean±SD	41.3±8.1	38.3±8.1	36.9±5.7	0.426[I]
Occupational position				
Family physicians (n=48)	1 (2.1)	22 (45.8)	25 (52.1))	0.601*
General practitioner (n=50)	2 (4.0)	30 (60.0)	18 (36.0)	
Resident in FPRP (n=2)	0 (0.0)	1 (50.0)	1 (50.0)	
Nationality				
Saudi (n=60)	1 (1.7)	30 (50.0)	29 (48.3)	0.410*
Non-Saudi (n=40)	2 (5.0)	23 (57.5)	15 (37.5)	
Medical history				
Diabetes mellitus				
No (n=96)	2 (2.1)	50 (52.1)	44 (45.8)	0.011*
Yes (n=4)	1 (25.0)	3 (75.0)	0 (0.0)	
Hypertension				
No (n=92)	1 (1.1)	49 (53.3)	42 (45.7)	0.001*
Yes (n=8)	2 (25.0)	4 (50.0)	2 (25.0)	
Hyperlipidemia				
No (n=93)	1 (1.1)	48 (51.6)	44 (47.3)	<0.001*
Yes (n=7)	2 (28.6)	5 (71.4)	0 (0.0)	
Body mass index				
Underweight (n=3)	0 (0.0)	1 (33.3)	2 (66.7)	0.043*
Normal (n=33)	0 (0.0)	16 (48.5)	17 (51.5)	
Overweight (n=36)	1 (2.8)	19 (52.8)	16 (44.4)	
Obesity (n=28)	2 (7.1)	17 (60.7)	9 (32.1)	
Practicing physical activity during the usual week				
Yes (n=31)	2 (6.5)	16 (51.6)	13 (41.9)	0.398*
No (n=69)	1 (1.4)	37 (53.6)	31 (45.0)	
Usual use of elevator and stairs in participants` work place				
Elevator (n=20)	1 (5.0)	16 (80.0)	3 (15.0)	0.043*
Stairs (n=29)	0 (0.0)	15 (51.7)	14 (48.3)	
Both (n=51)	2 (3.9)	22 (43.1)	27 (52.9)	
Current cigarette smoking status				
Never smoker (n=87)	2 (2.3)	49 (56.3)	36 (41.4)	0.171*
Daily smoker (n=13)	1 (7.7)	4 (30.8)	8 (61.5)	
Average number of sleeping hours per night				
≤6 (n=56)	1 (1.8)	26 (46.4)	29 (51.8)	0.181*
>6 (n=44)	2 (4.5)	27 (61.4)	15 (34.1)	
Eating fast-food meals during a week				
Never (n=17)	0 (0.0)	11 (64.7)	6 (35.3)	0.749*
Once (n=63)	2 (3.2)	33 (52.4)	28 (44.4)	
>Once (n=20)	1 (5.0)	9 (45.0)	10 (50.0)	

*Chi-square test [I]ANOVA test

Factors associated with body mass index

Married physicians were more likely to be overweight/obese compared to singles or engaged physicians (72.4% versus 38.9% and 33.3%), respectively and the difference was

statistically significant, p=0.008. Other studied factors were not significantly associated with their body mass index. Table 7

Table 7: Factors associated with body mass index of the primary healthcare physicians, Taif

	Body mass index		p-value
	Normal or below	Overweight/obesity	
	N=36	N=64	
	N (%)	N (%)	
Gender			
Male (n=45)	16 (35.6)	29 (64.4)	0.933*
Female (n=55)	20 (36.4)	35 (63.6)	
Marital status			
Single (n=18)	11 (61.1)	7 (38.9)	0.008*
Engaged (n=6)	4 (66.7)	2 (33.3)	
Married (n=76)	21 (27.6)	55 (72.4)	
Age in years			
Mean±SD	37.8±7.8	37.7±6.8	0.931ǂ
Occupational position			
Family physicians (n=48)	13 (27.1)	35 (72.9)	0.208
General practitioner (n=50)	22 (44.0)	28 (56.0)	
Resident in FPRP (n=2)	1 (50.0)	1 (50.0)	
Nationality			
Saudi (n=60)	23 (38.3)	37 (61.7)	0.552*
Non-Saudi (n=40)	13 (32.5)	27 (67.5)	
Medical history			
Diabetes mellitus			
No (n=96)	36 (37.5)	60 (62.5)	0.162**
Yes (n=4)	0 (0.0)	4 (100)	
Hypertension			
No (n=92)	35 (38.0)	57 (62.0)	0.144**
Yes (n=8)	1 (12.5)	7 (87.5)	
Hyperlipidemia			
No (n=93	35 (37.6)	58 (62.4)	0.207**
Yes (n=7)	1 (14.3)	6 (85.7)	
practicing physical activity during the usual week			
Yes (n=31)	12 (38.7)	19 (61.3)	0.705*
No (n=69)	24 (34.8)	45 (65.2)	
Usual use of elevator and stairs in participants` work place			
Elevator (n=20)	6 (30.0)	14 (70.0)	0.261*
Stairs (n=29)	14 (48.3)	15 (51.7)	
Both (n=51)	16 (31.4)	35 (68.8)	
Current cigarette smoking status			
Never smoker (n=87)	32 (36.8)	55 (63.2)	0.465**
Daily smoker (n=13)	4 (30.8)	9 (69.2)	
Average number of sleeping hours per night			
≤6 (n=56)	21 (37.5)	35 (62.5)	0.724*
>6 (n=44)	15 (34.1)	29 (65.9)	
Using audiovisual appliances			
1-2 hours/day, or less (n=78)	30 (38.5)	48 (61.5)	0.334*
≥3 hours/day	6 (27.3)	16 (72.7)	
Eating fast-food meals during a week			
Never (n=17)	6 (35.3)	11 (64.7)	0.916*
Once (n=63)	22 (34.9)	41 (65.1)	
>Once (n=20)	8 (40.0)	12 (60.0)	

*Chi-square test **Fiswcher Exact test ǂStudent-t test

Discussion

It has been documented that physicians act as models for their patients and also for other members in the community, therefore, their health status impact directly or indirectly the health of the community as their practices impact the other people` practices [39]. For this reason, improving the physicians` health practice and behaviour is the aim of some health organizations in Canada and Australia for example [27, 40].

The present study is one of the few studies that investigated the physicians` life-style and their behaviour regarding physical activity, dietary habits, smoking, sleeping hours, driving behaviour and others, worldwide[20] and our Gulf Region.[25, 34, 35]

In the current survey, 53% of the primary healthcare physicians perceived their health as “good” whereas 44% perceived it as “excellent” and 3% as “fair”. Alshareef et al in a previous study carried out among primary healthcare

physicians in Western Saudi Arabia revealed that general health was identified as fair by 15.6%, good by 54.4%, and excellent by 30% of the participants [34]. In Bahrain, 26% of physicians consider their health status as "excellent", while 66% considered it as"good", 7% as"fair", and only 1 % as"poor" [25]. Observed difference could be attributed to different background and personal characteristics of the physicians in different settings.

From this study, almost two-thirds of the physicians (64%) were either overweight (36%) or obese (28%). Comparative findings were reported from local , regional as well as international studies. More than half of the primary health care physicians working at National Guard, Jeddah were either overweight or obese [34]. In Riyadh, only 38.8% of primary healthcare physicians had normal body mass index [35]. In southern Saudi Arabia, overweight and obesity rates were 36% and 23.2%, respectively among resident physicians [41]. In Bahrain, Borgan et al. reported that 39.4% and 33.1% of physicians were overweight, and obese, respectively [25]. In India, Ramachandran et al. (2003) reported that 61% of the physicians were either overweight or obese [42]. In Pakistan, Mahmood et al. (2010) observed that 28.2% of postgraduate trainee physicians were obese [43]. Obesity is a problem that necessitates immediate intervention not only for patients but also forphysicians, who are considered as the worst patients, as they often neglect their own health in favor of their career and personal obligations [44].

In the current study, only 41% of th physicians took breakfast almost everyday and 4% never take breakfast while 34% took dinner almost everyday and only 4% never have dinner. Red meat was consumed 1-2 days/week by 65% of the physicians while chicken was eaten almost everyday by 22% of them. Ten percent of the physicians never eat fresh fruits while only 14% eat them almost everyday and 26% eat vegetables everyday. Comparable findings have been reported among primary healthcare physicians in Jeddah [34]. Al-Alwan et al. (2013) reported that 68% and 51% of physicians rarely take fruits and vegetables, respectively[45].

This study revealed that a quarter of physicians have been on a diet to reduce their weight while only 2% have consumed any weight lowering medications during the last 6 months during the last 6 months. About one-fifth of the physicians (19%) followed low corbohydrate diet in their last attempt to reduce weigh. In Western Saudi Arabia [34], 40.6% of the primary healthcare physicians were involved in diet regimen to reduce their weight in the past six months and 12.5% took weight-lowering medications in the past 6 months. In the current study, most of the physicians (63%) had one fast-food meals during a week. In a study carried out in Riyadh among primary healthcare physicians, 75.1% scored more than 50% for a healthy diet.[35]

In the present study, 31% of physicians reported practicing of physical activity during the usual week and the frequency of practicing physical activity exceeded two days in a week among 67.7% of them. Walking was the commonest type (87%). Furthermore, 51% of the physicians reported using both elevator and stairs in their workplace while 29% reported using stairs only. These figures are quite similar to those reported earlier among genral Saudipopulation in STEPwise surveillance (2005) as 67.7% of different age groups aged 15-64 years; 60.9 % of men and 74.3% of women, were regarded physically inactive [17]. In a study carried out among primary healthcare physicians working at the Ministry of National Guard Health Affairs in western Saudi Arabia, 35% of them practiced sports 3–4 days/week[34]. In Riyadh, 21.1% of the physicians were physically active [35]. Also, in another study carried out by Mandil et al, prevalence of physical activity among physicians was 63%, which is higher than that of the general population (32.4%), where the main reason for not appealing in physical activity was lack of time (58.1%) followed by work duties (22.5%).[33] In Aljouf region of Saudi Arabia, 65.2% of primary health care physicians were doing moderate to vigorous physical exercise, and 34.8% of them were physically inactive. However, majority of physically inactive primary health care physicians had the intention to increase their physical activity.[37]

In Bahrain [25], more dramatic situation was reported as only 4 % of physicians met the criterion for leisure time physical activity and 29.6% reported performing physical exercise at least for thirty minutes during a week. In Riyadh, AlAteeq M and AlArawi S observed that 21.1% of the primary care physicians were physically active [35]. It has been suggested having simple exercise facilities at workplace and encouraging physicians to engage social events such as walks or runs can improve their physical activity[44].

This study revealed that 13% of physicians are daily cigarette smokers; most of them (61.5%) started smoking after the age of 20 years (after engaging in college of Medicine). Most of them smoke less than 20 cigarettes. Smoking shisha or e-cigarettes were reported among 5% and 2% of them, respectively. In a previous study carried out among primary healthcare physicians in Riyadh (Saudi Arabia), the prevalence of smoking was 8.4% [35]. In Abha, Southwestern Saudi Arabia, Mahfouz et al. studied 736 health care workers in government hospitals and primary health care centers, reported smoking status as 14.8% current smokers, and 11.5% former smokers [21]. Smoking cessation interventional programs are warranted and should be started early during medical careers.

In the present study, almost one-fourth of the physicians (22%) utilized TV/DVD appliances or computer or lap top 3-5 hours/day or more. Nealy the same has been observed in a similar study carried out recently in Jeddah [34].

In accordance with others, the reported chronic diseases among physicians were hyperlipidemia, hypertension, bronchial asthma and diabetes [33, 34. 42, 46].

It is realized from the present survey that 39% of the physicians sleep on the average 6 hours per night and 24% sleep 7 hours whereas 17% sleep 5 hours. The overall

average was 6.51±1.08 hours. In a similar study carried out in Bahrain, the average sleeping time for primary care physicians was 5.9± 1.2 hours [25]. Sleeping time among physicians in the present study is quite acceptable as sleep deprivation has been reported to impact physicians` clinical performance, increase the likelihood of medical errors and impaired cognitive functions which in turm affect the quality of care provided to patients [47].

On a scale ranged between 1 and 10, 38% of the physicians in the present study scored over 5 concerning the level of their daily life stress. In Western Saudi Arabia, a moderate-high stress level was perceived by 77.5% of the participants [34]. In USA, almost a third of physicians have reported stress throughout their work life [48]. In Germany, it has been reported by De Oliveira et al. (2011) that 22% of physicians have stress [49]. Stress is among physicians is associated directly with medical errors[50] and impacts physicians' personal safety [51].

In this study, 82% of the physicians consumed daily caffeinated beverages; 31% consumed them four times or more per day while none of them consumed energy drinks or alcohol. In Jeddah, drinking caffeinated beverages once daily was reported by 40%, Twice by28.8% and three times or more by 16.3% of the physicians while drinking power drinks once per per day was reported by 14.4% of the physicians [34]. Alsharif et al. (2016) noticed that consumption of caffeine among physicians is high particularly during periods of exams and on-call times [52]. In Switzerland, it has been reported that long time working physicians doctors, especially those who work for long hours, frequently depend on the drinking coffee to keep alert[52].

In the present study, more than a third (39%) of primary healthcare physicians reported putting seatbelts when driving. Among 53.9% of them, the actual speed (km/h) at which they drive on the highway ranged between 101 and 120. Almost a quarter of them (28.2%) usually talk on the phone while driving and 38.5% usually text or use social media services while driving. Driving with high speed among physicians has been observed by others [53]. In another study carried out among primary healthcare physicians in Bahrain, seat belt was not used by 25% of physicians while driving. Driving with high speed was common (40% usually drive on a speed >100 km/hour on the highway and 39% of physicians reported using mobile phones while driving while writing messages and using social media applications while driving was reported by 19.1% them. Conclusively, it has been documented that primary health care physicians who follow a healthy life style significantly provide advice and present a role modeling on healthy behaviour to their patients compared to their counterparts [37].

Some limitations of this study should be mentioned. First of all, the study was carried out in only one city in the Kingdom of Saudi Arabia (KSA) and among a specific group of physicians (primary healthcare physicians), which affects the ability to generalize the results over other physicians in the KSA. Second, its design as a cross-sectional study is considered another limitation of the study. Third, collecting data by a self-reported tool is subjected to bias because of over or under estimation of the situation for social reasons. Finally, our results might be underpowered to detect a significant associations, because the relatively small sample size. Therefore, caution is warranted in interpreting our results.

Conclusion

The current study revealed that despite most of the primary healthcare physicians in Taif city, KSA were either overweight or obese, majority of them perceived their health as either "good" or "excellent". Common health problems reported among them were hypertension, hyperlipidemia, bronchial asthma and diabetes mellitus. Physical activity is not adequate. Some unhealthy dietary habits were noted such as infrequent intake of fresh vegetables and fruits, escaping breakfast, and eating fast foods. Insufficient sleep, smoking, not following a safety while driving and stressful daily life were reported by a considerable proportion of physicians.

Recommendations

- Educational and behavioural programs should be implemented for physicians in primary care centers to make their life style healthier, particularly regarding physical activity, dietary habits and driving behaviour.
- Stress management program should be offered to primary healthcare physicians.
- Physical activity facilities and access to food services should be available in all primary healthcare settings.
- Further study among general population to compare their behaviour with those of physicians is needed

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Dedication

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