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Original Research Article

Pattern of physical activity, diet, sleep and yoga in health care physicians. A study from a tertiary care hospital, Pondicherry

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ABSTRACT

Background: Physical activity, diet pattern and yoga practices are linked with cardiovascular fitness. The objective of this study is to study the pattern of physical activity, diet and yoga practice in health care physicians.
Methods: The study was done at a tertiary care hospital in Pondicherry. All adult health care physicians of both sexes working in the hospital and giving informed consent to participate in the study were included. Pregnant physicians and those who are not willing to give written consent for participation in the study were excluded from the study. The study was done as a cross sectional study using a pretested standardised questionnaire. Age, sex, demographic data, height, weight, diet habits, pattern of physical activity, sleep and yoga pattern in all the health care physicians were recorded and studied.
Results: Of the total one hundred health care physicians, there were 65 male physicians. Among the female physicians, there were 20 of age 31 to 40 years, Of the 65 male physicians, there were 28 with body mass index of 25 to 29.9. Eight males and four females in the age group of 41 to 50 had abdominal obesity. Eight female physicians were doing regular exercise and nine physicians were doing yoga.
Conclusions: They had a poor physical activity pattern, improper diet habits and reduced sleep. Only a few physicians were having the practice of doing yoga. Overweight and abdominal obesity was more prevalent in health care physicians.

Keywords: Diet pattern, Physicians, Physical activity, Sleep, Yoga

INTRODUCTION

According to World health organization statement cardiovascular diseases are the first leading cause of death worldwide.[1,2] More than 75% of these death occur in low and middle income countries.[1] Deaths due to cardiovascular diseases can be prevented by correction of modifiable risk factors like sedentary life style, improper diet habits, obesity.[1,2] Overweight and obesity have a negative impact on the cardiovascular disease risk factors like diabetes, high blood pressure, dyslipidemia and hence contribute significantly to cardiovascular disease mortality.[3] All these risk factors have been shown to be linked with physical inactivity and poor diet pattern in previous studies.[3-12] Also, the practice of yoga and proper sleep habit has been documented to have a positive impact on the these risk factors.[13-18] The physicians are the primary persons responsible for the life style, the diet pattern, sleep habits and the knowledge about the yoga for the patients they treat. So, we in our study decided to analyse the life style and habits of the health care physicians in their own personal life.

METHODS

The study was done as a cross sectional study using a standardized questionnaire method during the period of April 2016 to November 2016 in Aarupadai Veedu

Medical College and Hospital, Pondicherry. The study was conducted after obtaining a proper Institutional ethics committee approval. Health care physicians working in various departments of all ages and both genders were taken up for the study after obtaining an informed written consent. All those who were not willing to give an informed consent, pregnant physicians and those with chronic ill health were excluded from the study. All the participants were asked to fill in a pretested questionnaire, which had questions regarding their physical activity, diet pattern, sleep and yoga habits.[20] Anthropometric measurements with regards to height and weight was recorded. The height was measured using a standardized wall mounted scale making the participant stand erect in a flat surface after removing the foot wear and the weight was recorded using a standardized weight scale after removing the foot wear and heavy clothing's if any. Age, sex, height, weight, diet pattern, exercise pattern, sleep and yoga pattern in all the participants were studied.

RESULTS

Of the total one hundred health care physicians, there were 65 male physicians,35 female physicians (Table 1).

Table 1: Sex distribution.

Sex	Physicians
Male	65
Female	35

Twenty female physicians were in age group of 31 to 40 years and there were 11 male physicians in age group of more than 60 years (Table 2).

Table 2: Age distribution.

Age	Male physicians n=65	Female physicians n=35
<30	18	8
31-40	24	20
41-50	8	4
51-60	4	2
>60	11	1

Table 3: Body mass distribution.

BMI	Male physicians n=65	Female physicians n=35
<25	27	17
25-29.9	28	15
30-34.9	10	3
35-39.9	0	0
≥40	0	0

Of the 65 male physicians, there were 28 with body mass index of 25 to 29.9 and 10 with body mass index between 30 to 34.9. Of the 35 female physicians, there were 17 with body mass index less than 25 and 15 with body mass index between 25 to 29.9 (Table 3). Eight males and four females in the age group of 41 to 50 and 7 males, 3 females in the age group of 51 to 60 had abdominal obesity (Table 4).

Table 4: Abdominal circumference.

Age	Male physicians >90 cms n=65	Female physicians >80 cms n=35
<30	1	02
31-40	06	02
41-50	08	04
51-60	07	03
>60	04	01
Total	26	12

Table 5: Diet distribution.

DIET	Male physicians n=65	Female physicians n=35
Proper time	33	19
Improper time	32	16
High sugar diet	43	32
Non-carbohydrate diet	22	3
Junk foods	10	5
Non-junk foods	55	30

With regards to diet, 33 males, 19 female physicians were taking food at proper timing and the remaining 32 males, 16 females missed their timing of consuming food (Table 5). 43 males and 32 females physicians were taking carbohydrate rich high sugar diet (Table 5). Junk foods were consumed regularly by 10 males and 5 female physicians (Table 5).

20 males, 8 female physicians were doing regular exercise and 18 males, 17 females physicians were not doing exercise in any form (Table 6).

Table 6: Physical activity and yoga practice.

Activity	Male physicians n=65	Female physicians n=35
Exercise< 4 days/week	27	10
5 or more days	20	8
No exercise	18	17
Practicing yoga	7	2
NOT practicing yoga	58	33

A total of nine,7 male and 2 female physicians were doing yoga and the remaining 91 did not practice yoga (Table 6). Overall 21 males,13 females slept for 8 to 10 hours, went to bed before 10 pm and got up from bed after 6 am in the morning (Table 7). 54 male physicians and 22 female physicians had refreshing normal sleep (Table 7).

Table 7: Sleep pattern.

Sleep	Male physicians n=65	Female physicians n=35	Duration of sleep hours
Going to bed before 10pm getting up before 6 am	7	2	7 -8
Going to bed before 10pm getting up after 6 am	21	13	8 -10
Going to bed after 11pm getting up before 6 am	37	20	< 7
Disturbed sleep	11	13	-
Normal sleep	54	22	-

DISCUSSION

Treating health care physicians are primary persons responsible for advising the patients and the general public in their area about the importance of lifestyle characteristics like physical activity, diet, yoga and its association with cardiovascular diseases.[1,2] Physicians in turn need to have a healthy lifestyle habits to maintain a good cardiovascular health and also in many areas the patients follow the habits of the physicians. In our study, male physicians (65%) outnumbered the female physicians (35%). Among the physician's 44% were of age between 31 to 40 years and 12% were more than 60 years of age. Generalized obesity as measured by body mass index is a direct risk factor for future cardiovascular diseases.[3-5] In our study, 28 male physicians and 15 female physicians were having body mass index in the range of 25 to 29.9 and were diagnosed to be overweight. Overall overweight was present in 43 (43%) of the physicians, which was more than that of the general population.[5] A total of thirteen physicians had mild obesity with a body mass index of 30 to 34.9, almost similar to general population5.But in our study, none of the participants had either moderate or severe obesity, possibly due to a smaller study size.[5] Though general obesity as defined as a body mass index of more than 30 was lesser (13%) in the study group, abdominal obesity as defined as abdominal circumference more than 90 centimeters in males was seen in 26 male physicians and as more than 80 centimeters in females was seen in 12 female physicians.[5,6] Males (40%) had more prevalence of abdominal obesity when compared to females (34%) contrary to the previous study 6. Overall 38 (38%) in the study group had abdominal obesity which was more than the general population 6. Abdominal obesity correlates well with cardiovascular diseases than general obesity.[6] In our study, 32 male physicians and 16 female physicians were not taking food at the proper timing, possibly due to their work pattern. Intake of high sugar diet is associated with risk of developing obesity, diabetes, hypertension.[7,9] In our study, 43 male physicians and 32 female physicians were taking high sugar foods and 10 male physicians and 5 female physicians were taking junk foods in the form of pizzas, burgers, fried fast foods regularly. This type of poor diet pattern has been linked to cardiovascular disease risk especially in Asian Indians.[9,10] Diet pattern and timing of food intake is has shown to be linked with future cardiovascular diseases in previous studies.[7-11] Physical activity in the form of walking, jogging for most days in the week prevents future cardiovascular diseases.[12] But 18 male physicians and 17 female physicians did not exercise in any form and of the total 100 physicians, only 28 (20 male, 8 female) exercised for 5 or more days in week for at least thirty minutes a day. The practice of yoga and proper sleep habit has been documented to have a positive impact on the cardiovascular disease risk factors but only nine physicians were practicing yoga and the remaining 91% did not practice yoga.[13-18] Overall 37 male physicians and 20 female physicians went to sleep after 11 pm but got up before 6 pm and had a sleep of less than 7 hours a day. Most of these physicians reported that they had adjusted their sleep pattern to accommodate their work pattern. A total of 24 physicians (11 male and 13 female) reported poor and disturbed sleep pattern. This type of short sleep durations of less than seven hours and disturbed sleep pattern as seen in our study is associated with future cardiovascular disease mortality as proved in previous studies.[16-18] The population at our part of Asia is at risk of coronary artery disease, hence appropriate life style changes in general population as well as health care physicians are needed.[19,20]

CONCLUSION

Health care physicians have a poor physical activity pattern, improper diet habits and reduced sleep. Only a few physicians were having the practice of doing yoga. Overweight and abdominal obesity was more prevalent in health care physicians. Hence, they are at risk of future cardiovascular diseases.

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