

# Glimpse into the Lifestyle of Doctors

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ABSTRACT

**Background:** Lifestyle disorders are on rise world over. Also, the role of doctors as leaders in propagating healthy lifestyles needs to get a reality check. **Aims and Objectives:** This study aimed to investigate the prevalence of lifestyle disorders, eating habits, nutrition patterns, and lifestyle of doctors by assessing health-related behaviours considering gender and other relevant demographic parameters. The objectives of the present study are to find out the relationship of lifestyle disorders among doctors and to study lifestyle disorders and related behaviour among male and female doctors and other subgroups. **Materials and Methods:** Online survey was conducted using Google doc in June to August 2021. Descriptive statistical analysis has been carried out in the present study. The student's t-test (two tailed, independent) has been used. **Results:** About 50% rated a happiness quotient of 7 and 8. Surgeons had more diabetes and hypertension than physicians. Prevalence of hypertension was more in self-employed males versus males in job. About two-third participants scored  $\geq 80\%$  on healthy lifestyle score. **Conclusion:** Our results call for a well-thought strategy to overcome the financial and technological hindrances to accurately identify health risk factors and plan corrective interventions. A healthy lifestyle both in terms of diet and exercise should be incorporated into the schedules of doctors.

**KEYWORDS:** Doctors, lifestyle disorders, lifestyle

## INTRODUCTION

A healthy lifestyle keeps one fit, energetic, and at reduced risk for disease. According to WHO, healthy living is a way of living that helps you enjoy more aspects of life. It is a way of living that lowers the risk of being seriously ill or dying early.<sup>[1]</sup> Doctors being uniquely placed in society have the burden of responsibility for taking a leadership role in propagating healthy lifestyle habits, as they continually interact with society in their daily life. Doctors who themselves follow healthy lifestyle practices are more likely to discuss with their patients about lifestyle modifications to optimize health, and likelihood of acceptance of their advice will be high in comparison to those doctors who do not follow healthy lifestyles.<sup>[2]</sup> Staying happy is integral to staying healthy and it has been established that there is a positive correlation between the two; hence, analysis of lifestyle of happy doctors is warranted for larger good.<sup>[3]</sup> It has been well established based on long-term population follow-up studies that

adopting a healthy lifestyle can significantly decrease premature mortality and increase life expectancy.<sup>[4]</sup>

Only a few studies have looked into eating habits and lifestyle traits among doctors, especially in light of the fact that they are much more informed about the importance of a healthy diet, physical exercise, and the negative effects of consumption of various substances on physical and mental health.

## MATERIALS AND METHODS

The study was conducted during June–August 2021. A total of 500 questionnaires were distributed online via Google doc forms to doctors across the country randomly. They were informed about the purpose of the study and the confidentiality of data, and once they

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opened to fill the form, it implied their consent with the option to withdraw any time before submitting the responses. Questionnaires fully filled in and returned before the deadline were included for the analysis of data. This study aimed to investigate the prevalence of lifestyle disorders, eating habits, nutrition patterns, and lifestyle of doctors by assessing health-related behaviors (physical activity, smoking, and alcohol consumption) considering gender and other relevant demographic parameters as appropriate. The objectives of the present study are to find out the relationship of lifestyle disorders among doctors and to study lifestyle disorders and related behavior among male and female doctors and other subgroups.

### Statistical analysis

Descriptive statistical analysis has been carried out in the present study. The collected data were entered into MS-Excel 2007 and analyzed with the help of IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp. The Student's *t*-test (two tailed, independent) has been used to find the significance ( $P \leq 0.05$ , confidence interval [CI] 95%) of study parameters on a continuous scale between two groups. A healthy lifestyle score was derived based on the information on five lifestyle factors – diet, body mass index (BMI), physical activity, smoking, and alcohol consumption. For each low-risk lifestyle factor, the participant received a score of 1 or 0 based on fulfillment of the criterion for low risk. The total of all these five scores together gave a final Healthy lifestyle score ranging from 0 to 5. The higher scores indicated a healthier lifestyle.<sup>[5]</sup> The Alternate Healthy Eating Index score was used to assess the quality of diet, which has significant association with increased risk of cardiovascular disease and other chronic diseases in the general population.<sup>[6]</sup> Scores more than 80% of ideal scores were considered healthy. BMI was calculated as weight (in kg) divided by square of height ( $m^2$ ), with the range of 18.5–24.9 being considered as normal. Physical activity was assessed as more than or <30 min of brisk walking/running daily. Smoking was assessed as smoker or nonsmoker. Alcohol consumption was assessed as (never/occasional/weekly/daily) irrespective of the quantity taken.

### RESULTS

A total of 377 responses from doctors of various specialties across the country were recorded and analyzed. The demographic parameters of study participants is summarised in Table 1. The mean BMI in male surgeons was 23.4 and in female surgeons was 26.7. Except male surgeons, all physicians and female

**Table 1: Baseline parameters**

Parameter	Group 1 (physician) (n=196)	Group 2 (surgeon) (n=181)
Sex		
Male	136	72
Female	60	109
Age (years)		
Male	47.66±0.97	44.98±0.99
Female	43.31±1.09	47.17±1.09
Height (cm)		
Male	168.19±0.92	170.89±0.86
Female	156.07±1.75	158.21±0.64
Weight (kg)		
Male	74.94±0.92	77.05±1.23
Female	64.26±1.16	66.87±0.97
BMI (kg/m <sup>2</sup> )		
Male	27.20±0.97	23.39±0.38
Female	28.48±2.75	26.76±0.38

Mean±SD, n: Total number of subjects. BMI: Body mass index, SD: Standard deviation

**Table 2: Responses recorded**

Question	Positive response (%)	Negative response (%)
Surgeon	52	48
Financially independent spouse	80.9	19.1
Owning pets	20.4	79.6
Play musical instruments	21	79
Diabetes present	14.1	85.9
Hypertension present	23.1	76.9
Family history of DM/HTN/ CAD/cancer/obesity	79.6	20.4
Vegetable consumption	98.1	1.9
Fruit consumption	87.3	12.7
Whole grain consumption	85.7	14.3
Nuts consumption	77.5	22.5
Legumes and pulses	96	4
Long-chain fatty acids	69.5	30.5
Alcohol consumption	45.1	54.9
Refined sugars	64.7	35.3
Fruit juice	39.5	60.5
Red meat	17	83
Added sodium to diet	35.5	64.5
Trans fat	33.7	66.3
Tobacco	5.6	94.4
Physical activity	47.5 (>30 min)	52.5 (>30 min)
OSA present	5.8	94.2
Lack of sleep due to work	48	52

DM: Diabetes mellitus, CAD: Coronary artery disease, HTN: Hypertension, OSA: Obstructive sleep apnea

surgeons were in overweight category, considering BMI of more than 25 as overweight. Majority of the participants were in a government job, followed by those owning a hospital or nursing home, a clinic, and least number of participants worked in a private hospital, i.e.,

**Table 3: Prevalence of hypertension of study participants according to the workplace profile**

Work profile	Male		Female		P***
	Yes	No	Yes	No	
Self-employed*	35	81	13	56	0.62 (male)
Job**	24	68	15	85	0.65 (female)
Total	69	149	28	141	0.36

\*Self-clinic/hospital/nursing home, \*\*Job (private or government in clinic/hospital/nursing home), \*\*\*Chi-Square test: Result significant for ( $P < 0.05$ )

**Table 4: Prevalence of diabetes of study participants according to the workplace profile**

Work profile	Male		Female		P***
	Yes	No	Yes	No	
Self-employed*	25	91	7	62	0.11 (male)
Job**	12	80	9	91	0.80 (female)
Total	37	171	16	153	0.36

\*Self-clinic/hospital/nursing home, \*\*Job (private or government in clinic/hospital/nursing home), \*\*\*Chi-Square test: Result significant for  $P < 0.05$

**Table 5: Prevalence of hypertension of study participants according to the job profile**

Work profile	Male		Female		P*
	Yes	No	Yes	No	
Physician	35	101	4	56	0.31 (male)
Surgeon	24	48	24	85	0.01 (female)
Total	59	149	28	141	0.0002

\*Chi-Square test: Result significant for  $P < 0.05$

**Table 6: Prevalence of diabetes of study participants according to the job profile**

Work profile	Male		Female		P*
	Yes	No	Yes	No	
Physician	23	113	5	55	0.79 (male)
Surgeon	14	58	11	98	0.92 (female)
Total	37	171	16	153	0.03

\*Chi-Square test: Result significant for  $P < 0.05$

42.7%, 29.7%, 19.4%, and 8.2%, respectively. About 80.9% of doctors had financially independent spouses either in the same or a different profession. About 79.6% of doctors did not own a pet and only 20% played some musical instrument. Only 14.1% of doctors had diabetes and 23.1% suffered from varying degrees of hypertension though a family history of diabetes, hypertension, computer-aided design (CAD), obesity, and cancer was positive in 79.6% of cases. A whopping 98% of doctors consumed adequate vegetables, 87.3% and 85.7% had enough fruits and whole grains, respectively. Almost all the participants (96%) consumed legumes and pulses also. About 77.5% also added nuts to their diet. About 69.5% had a diet rich in long-chain

fatty acids [Tables 1-6]. The consumption of alcohol however had a varied response wherein 54% abstained; rest of them had it occasionally or weekly, with only a negligible number consuming it daily. Only 17% ate red meat; however, 30%–35% also stayed away from refined sugar. About 65% also avoided added sodium to their diets. Almost 94.4% were not tobacco chewers. Almost all the participants reported some level of physical activity, with 47.5% performing more than 30 min of walking/running daily. Also, 48% did report inadequate sleep due to professional involvements. When asked to rate their happiness on a scale of 10 with 1 being extremely unhappy and 10 being extremely happy, near about 50% rated a happiness quotient of 7 and 8. Surgeons had more diabetes and hypertension than physicians. Prevalence of hypertension was more in self-employed males versus males in job. Healthy lifestyle score, Burden of diseases among doctors and Comparison of lifestyle disorders with healthy lifestyle scores are as shown in Figures 1-3.

## DISCUSSION

In a survey conducted exploring the professional and family life of doctors, the mean age of the participants was 37.5 years and 60% had professional spouses. About 62% of the respondents were males and 38% were females. Majority of the doctors, i.e., 80.9%, had financially independent spouses in our study, which may be explained by increasing desire for equal partners and shared family responsibilities.<sup>[7]</sup>

A study carried out on the lifestyle habits and well-being of physicians in middle-east in 2015 reported that 20.3% of doctors had hypertension and 11% had diabetes, almost comparable to the results in our study wherein 23.1% and 14% had diabetes and hypertension, respectively. About 50.3% consumed fruits and 56.3% consumed vegetables daily. Only 1.4% consumed meat on a regular basis. There was a significant difference in our study, with 85%–98% of Indian doctors being more responsible and consistent about healthy eating habits, this may be attributed to different sociogeographic-cultural attributes of the study population.<sup>[8]</sup>

In a study by Ramachandran *et al.*, doctors had significantly higher ( $P < 0.001$ ) prevalence of hypertension: 35.6% versus 27.0%, obesity: 55.5% versus 35.8%, and metabolic syndrome: 29.0% versus 24.8% compared to the general population. The use of alcohol was more common among doctors. Our study showed that 14.1% of doctors had diabetes and 23.1% suffered from varying degrees of hypertension though a family history of diabetes, hypertension, CAD, obesity, and cancer was recorded in 79.6% of cases.

This variation may be due to participants from different geographical regions of India.<sup>[9]</sup>

As per the estimates of WHO, the per capita consumption of pure alcohol (liters) crude-adjusted estimates for India is 4.3 (CI – 3.5–5.1), In our study, 54% abstained; rest of them had it occasionally or weekly with only a negligible number consuming it daily. In our study, per capita consumption was not estimated.<sup>[10]</sup>

In a study conducted in Tamil Nadu by Hegde *et al.* in 2015, the prevalence of diabetes and hypertension among health-care professionals was 15.6% and 21.6%, respectively.<sup>[11]</sup> Our study found a prevalence of 14.1% and 23.1%, respectively, almost similar to this study. The prevalence of diabetes in the general population as reported by the National Family Health Survey 2015–2016 was 7.1% and 5.2%, much lower than our study.<sup>[12]</sup> This discrepancy may be explained by the fact that this study was carried out on doctors, who tend to get themselves investigated more often. Furthermore, at times, the stress and lifestyle associated with medical profession makes health workers vulnerable to these medical conditions, taking the prevalence of hypertension among doctors to as high as 35.6%.<sup>[9]</sup>

In the first 20 years of the Framingham study, about 6% of the women and 8% of the men were diagnosed as diabetics. The incidence of cardiovascular disease among diabetic men was twice that among nondiabetic men. The estimates in our study were 21.6% of male doctors and 10.4% of female doctors had diabetes. We also estimated that 46% and 19.8% of male and female doctors, respectively, had hypertension. These differences may be attributed to different timelines of study and Framingham represented general population, but, in our study, medical professionals were studied who have different work and lifestyles in comparison to general masses.<sup>[13]</sup>

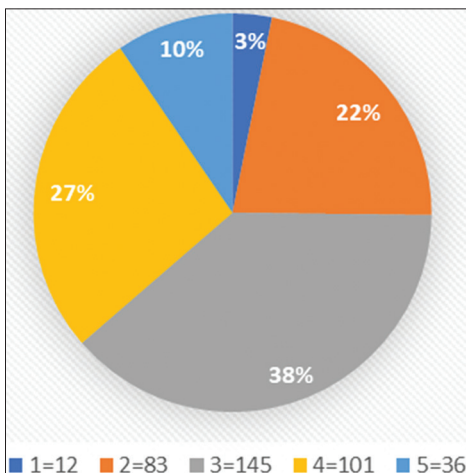


Figure 1: Healthy lifestyle score

A study carried out about dietary habits among health-care professionals in Saudi Arabia by Kunene and Taukobong<sup>[14]</sup> reported a high percentage of participants who regularly ate dairy foods (74%), meat (91%), and sweet foods (60%) and drank carbonated beverages with sugar (55%) and alcohol (65%). Most participants rarely ate fruits (77%) and vegetables (73%) and drank water (68%). Most participants rarely ate whole grain (53%) and high-fiber (61%) foods. Approximately 50% of participants frequently ate unhealthy snacks, 36% ate salty foods, 37% ate fast foods, 38% ate fatty foods, 49% ate fried foods, and 47% ate food with lots of sugar. The results were inconsistent with our findings wherein 35% stayed away from refined sugar and 65% avoided added sodium in their diets. About 54% abstained from alcohol and 94% were nontobacco chewers. This discrepancy may be due to the fact that the present survey was conducted post COVID in India when people have refrained from outside food partly due to lockdowns and partly because of increased health awareness. Indian food culture is also internationally recognized as being healthy and western eating habits are increasingly shunned in the wake of resurrection of our traditional eating habits after the epidemic. A systematic review on the dietary patterns in India, published in 2016, also reinforces our findings. They found a total of 41 dietary patterns across the nation, of which 29 dietary patterns were predominantly vegetarian, suggesting societal inclination toward vegetarianism.<sup>[15]</sup>

The prevalence of hypertension in both urban and rural population stands presently at 25%–40% in urban adults and 10%–15% among rural adults as per the study by Rajeev Gupta *et al.* They also observed overweight (BMI >25) in 31.7% urban and 16.8% in rural population; obesity (BMI >30) in 13.9% and 5.7% urban and rural populations, respectively.<sup>[16]</sup> The mean BMI in our study was 27.2 and 28.5 among male and female physicians. The mean BMI in male surgeons was 23.4 and in female surgeons was 26.7. Also, 23.1% of participants in our study suffered from varying degrees of hypertension.

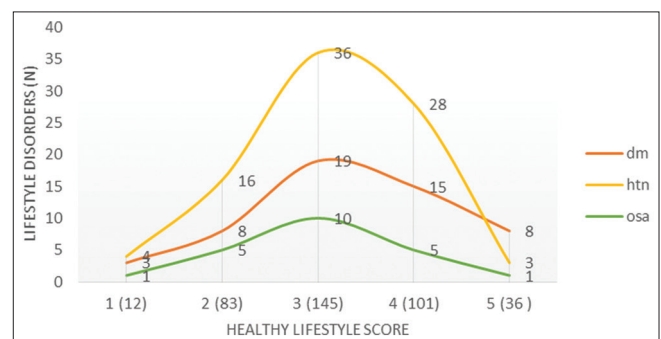
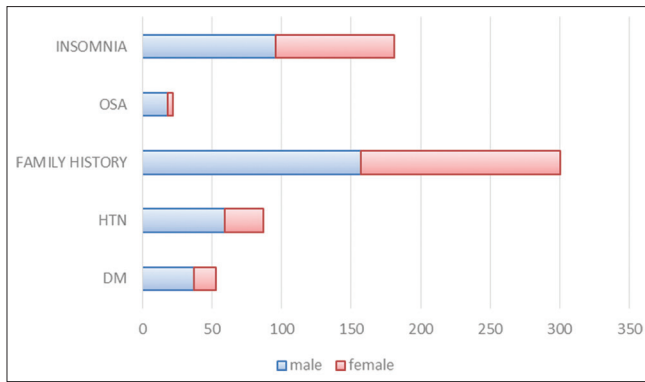


Figure 2: Comparison of lifestyle disorders with healthy lifestyle scores





**Figure 3: Burden of diseases among doctors**

In another survey carried out on the dietary habits of medical students, only 13 participants (10%) said that they had a fruit daily in our study. Daily consumption of fruits and vegetables was only 1–2 portions for 98 (75%) of the participating students. Out of 130 students studied regarding snacks preference, fried snacks were the most popular with 51 (39%) students, followed by various bakery items by 30 students. Only 9 (7%) students preferred salads and soups for snacking.<sup>[17]</sup> The results were contradictory to our findings, but in the case of medical students, several factors may come into play: busy schedule, skipping lunches, early wakeups with no breakfasts, long practical sessions, etc., considering the lives of many students.<sup>[18]</sup>

Majority of the doctors in our study gave a score of 7–8 on a scale of 10 for happiness (mean = 7.44) [Figure 4]. A study carried out by Mahobia concluded that 50%–60% of doctors were unhappy. However, this survey was based on individual salary, which may explain the different results.<sup>[19]</sup>

A physician happiness survey published by AAFP in 2019 stated that 33% were very happy and 38% were somewhat happy in their profession. The results were consistent with our findings.<sup>[20]</sup> Surprisingly, only around half of the doctors consumed alcohol and 55% doctors were teetotalers. Ninety-five percent of doctors did not consume tobacco or cigarette and therefore can be role models for society. Only 20% of doctors played musical instruments and the same percentage had pets.

### Limitations

This study is not without limitations of its own, as it was done during ongoing COVID pandemic, which may introduce a bias because the lifestyles were likely not the same. A similar study may be planned once pandemic is over, for comparison, but aftereffects of COVID pandemic may have to be factored as well. Moreover, a larger multi-ethnic data collection with a



**Figure 4: Happiness among doctors**

larger participant size may be considered for increased reliability of conclusions.

### CONCLUSION

Doctors must be self-motivated to put healthy lifestyle into practice, which is important for their professional life as well as promoters of healthy physical and psychological health in society. Only 50% doctors did physical activity for more than half hour daily and the rest despite knowledge about advantages of physical activity were not practising so. Our results are in line with the conclusions drawn by many other studies call for a well-thought strategy to overcome the financial and technological hindrances to accurately identify health risk factors and plan corrective interventions.

A healthy lifestyle both in terms of diet and exercise should be incorporated into the schedules. Half of the doctors had insomnia due to their professional engagement. Some patterns in dietary habits, physical activity, and lifestyle are related to the busy schedule and long working hours.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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