

## Original Research Article

# Health awareness in female doctors

Reena V. Wagh<sup>1</sup>, Aditi J. Upadhye<sup>2</sup>, Jayshree J. Upadhye<sup>3\*</sup>

<sup>1</sup>Department of Biochemistry, Government Medical College, Nagpur, Maharashtra, India

<sup>2</sup>Department of Pathology, PDMMC, Amravati, Maharashtra, India

<sup>3</sup>Department of Gynecology and Obstetrics, Rajshree Medical College, Bareilly, Uttar Pradesh, India

**Received:** 13 April 2018

**Accepted:** 05 May 2018

### \*Correspondence:

Dr. Jayshree J. Upadhye,

E-mail: [jayshreeupadhye@gmail.com](mailto:jayshreeupadhye@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

**Background:** Managing the hectic schedule, female doctors often neglect their own health. In the present study, we evaluated the awareness, attitude and practices of breast, cervical and ovarian malignancies and also hypertension, diabetes, coronary artery disease and osteoporosis in female doctors.

**Methods:** A cross sectional study was conducted among 100 female doctors of M.B.B.S. and higher degrees of various subjects. Selection of female doctors was done randomly.

**Results:** In present study, out of 100 female doctors, 90 (90%) were doing their self breast examination regularly and 31 (31%) had done their mammography. 54 (54%) female doctors had their own pap smear done while 72 (72%) female doctors had their own ultrasound got done. 82 (82%) had their own blood pressure check up, 74 (74%) had their own blood sugar checked, 62 (62%) had got their own lipid profile done while only 44 (44%) female doctors had their ECG done and 48 (48%) had their bone mineral density done. 23 (23%) female doctors were diagnosed as hypertensive, 14 (14%) as diabetes, 4 (4%) as coronary artery disease, 5 (5%) as breast cancer, 2 (2%) as ovarian cancer, 18 (18%) as thyroid disease while 15 (15%) were detected as having osteopenia.

**Conclusions:** In spite of knowing about all diseases, their complications, screening methods and preventive care, practice of applying screening or preventive methods to themselves is not universal in doctors.

**Keywords:** Breast, Cancer, Cervical cancer, Female doctors, Diabetes, Hypertension, Screening

### INTRODUCTION

According to WHO, a BMI of less than 18.5 as underweight and may indicate malnutrition, an eating disorder, or other health problems, while a BMI equal to or greater than 25 is considered overweight and above 30 is considered obese.<sup>1</sup> A body mass index  $<24.9\text{kg/m}^2$  and a waist circumference  $<80\text{cm}$  are recommended so as to decrease the likelihood of developing a menopausal insulin-resistance syndrome.<sup>2</sup>

American Heart association/American college of cardiology guidelines recommend adherence to dietary and lifestyle habits including body weight control and physical activity.<sup>2</sup>

Diabetes definitely increases the other risk factors and modifies the protective effect by estrogens.<sup>2</sup> Carcinoma breast and carcinoma cervix are leading causes for cancer deaths in India. Still, these get detected only in late stages. Preventive measures and early detection of disease will help to decrease the burden of these cancers.<sup>3</sup> Vaccination of girls between 9 and 12 years may offer an option to decrease this burden. The use of HPV Vaccine has been approved by the Drug Controller of India.<sup>3</sup>

In the last decades, papilloma and herpes viruses got more importance in the development of epithelial dysplasia, neoplasia and cervical cancer. Cervical cancer has the second place in mortality from gynecological

cancers. The incidence is 350,000 new cases diagnosed each year.<sup>4</sup>

Breast and cervical cancer are the most common causes of cancer mortality among women all over world, but they are preventable diseases. Doctors in developing countries regularly see women with advanced, incurable cancers. Health of a rural Indian women and her access to health facility is compromised due to socio-cultural, economical, and environmental factors.<sup>5</sup>

**Breast cancer screening**

Yearly mammography should be done starting at the age 40. If there is family history of breast cancer, screening by mammography should start earlier.<sup>6</sup>

**Cervical cancer screening**

Pap smear should be done at the age of 21 years and then after every 2-5 years. It is usually not needed after the age of 65 years.<sup>6</sup>

**Routine screening**

Blood pressure, blood sugar and cholesterol should be checked routinely for early detection of hypertension, diabetes and cardiovascular disease. Thyroid profile and bone mineral density should be checked for thyroid disorder and osteoporosis.<sup>6</sup> HPV, or human papillomavirus, vaccine is recommended for girls before they become sexually active to prevent cervical cancer.<sup>6</sup>

Dyslipidemia is one of the primary causes of coronary artery disease (CAD). Elevated total cholesterol (TC), triglycerides (TG), low-density lipoprotein-cholesterol (LDL-C) and lowered high-density lipoprotein-cholesterol (HDL-C) are conventional risk factors in myocardial infarction patients.<sup>7</sup> High HDL cholesterol levels (>45 mg/dl) are considered to be protective in women.<sup>7</sup> The incidence and mortality rates of coronary artery disease are higher in the Indian than the western

population.<sup>8</sup> Many studies have demonstrated that postmenopausal use of estrogens alone result in a decrease in LDL and an increase in HDL levels.<sup>9</sup>

Dual-energy X-ray absorptiometry (DXA) of the lumbar spine and hip is the gold standard to diagnose osteoporosis. Bone mineral density (BMD) screening should begin at age 65 for all women. Postmenopausal women <65 years should only be screened with DXA if they have significant risk factors for osteoporosis and/or bone fracture.<sup>10</sup> With the hectic schedule, women, especially if she is working, frequently put themselves on the back burner. This happens until a health crisis hits.

The present study was conducted to evaluate the health awareness, attitude and practices in female doctors. Evaluation was done about weight awareness, attitude and practices in terms of diet and exercise in female doctors. Evaluation was done about awareness, attitude and practices of breast, cervical and ovarian malignancies in female doctors. Evaluation was done about awareness, attitude and practices of hypertension, diabetes and coronary artery disease in female doctors. Evaluation was done about awareness, attitude and practices of osteoporosis in female doctors.

Aims and objectives of the present study was to evaluate weight awareness, attitude and practices in terms of diet and exercise in female doctors and also to evaluate awareness, attitude and practices of breast, cervical and ovarian malignancies in female doctors.

Also, to evaluate awareness, attitude and practices of hypertension, diabetes and coronary artery disease in female doctors and to evaluate awareness, attitude and practices of osteoporosis in female doctors.

**METHODS**

A cross sectional study was conducted among 100 female doctors of various subjects. Selection of female doctors was done randomly.

**Table 1: Questionnaire.**

Variables	Answer	Answer	Answer	Answer
<b>Name</b>				
<b>Age</b>				
Body mass index	Normal	Undreweight	Overweight	Obese
Exercise per week	>3 times/week	<3 times/week		
Own pap smear got done	Yes	No		
Own Ultrasound got done	Yes	No		
Own mammography got done	Yes	No		
Self breast examination doing regularly	Yes	No		
Blood pressure got checked	Yes	No		
Blood sugar got checked	Yes	No		
Lipid profile got checked	Yes	No		
ECG done	Yes	No		
Bone mineral density got done	Yes	No		

This survey was conducted in Nagpur and Amravati districts in female doctors of M.B.B.S. and higher degrees from July to October 2017 using a questionnaire.

**Inclusion criteria**

Female doctors above 30 years of age were included.

**Exclusion criteria**

Female doctors below 30 years of age were excluded as very young female doctors don't think of investigating themselves.

This evaluated implementation of screening and preventive measures used by them for self-protection. Data was collected in Microsoft excel sheet and analyzed. Statistics was done in percentages.

**RESULTS**

In present study, out of 100 female doctors, 48 (48%) female doctors were between 41-50years, 24 (24%) female doctors were between 51-60years, 18 (18%) female doctors were between 31-40years, 10 (10%) female doctors were >60 years. Female doctors of <30 years were excluded (Table 2).

**Table 2: Age distribution.**

Age distribution	No. of female doctors	Percentage
< 30 years	0	0%
31-40 years	18	18%
41-50 years	48	48%
51- 60 years	24	24%
>60 years	10	10%
Total	100	100%

**Table 3: Body mass index (BMI).**

Body mass index (BMI)	No. of female doctors	%
Normal	26	26%
Underweight	8	8%
Overweight	58	58%
Obese	8	8%

In present study, out of 100 female doctors, 58 (58%) female doctors were overweight, 26 (26%) female doctors had normal BMI, 8 (8%) female doctors were obese while 8 (8%) female doctors were underweight (Table 3).

In present study, out of 100 female doctors, 52 (52%) female doctors were consuming pure vegetarian diet while 48 (48%) female doctors were consuming mixed (vegetarian and non-vegetarian) food. Advice regarding healthy food was given.

In present study, out of 100 female doctors, 32 (32%) female doctors were eating outside food >3 times a week while 68 (68%) female doctors were eating outside food <3 times in a week.

In present study, out of 100 female doctors, 64 (64%) female doctors were doing exercise >3 times a week while 36 (36%) female doctors were doing exercise <3 times in a week (Table 4).

**Table 4: Diet and exercise pattern.**

Diet pattern	No. of female doctors	%
Vegetarian	52	52%
Mixed (Veg and non-veg)	48	48%
Outside food <3 times a week	68	68%
Outside food >3 times a week	32	32%
Exercise > 3 times a week	64	64%
Exercise <3 times a week	36	36%

In present study, out of 100 female doctors, 50 (50%) were gynecologists, 12 (12%) were physician, 9 (9%) were anesthetists, 8 (8%) were pathologists, 7 (7%) were general practitioners, 4 (4%) were ophthalmologists, 3 (3%) were surgeons, 2 (2%) were microbiologists while 1(1%) each were psychiatrist and pulmonologist (Table 5).

**Table 5: Speciality of female doctors.**

Specialty of female doctors	No. of female doctors	Percentage
Gynecologists	50	50%
Physician	12	12%
Anesthetist	9	9%
Pathologist	8	8%
General practitioner	7	7%
Ophthalmologist	4	4%
Surgeon	3	3%
Pediatrician	3	3%
Microbiologist	2	2%
Psychiatrist	1	1%
Pulmonologist	1	1%

**Table 6: Awareness of breast cancer, cervical cancer and ovarian cancer.**

Awareness of breast cancer	No. of female doctors	%
Self breast examination	90	90%
Mammography	31	31%
Pap smear	54	54%
Ultrasound	72	72%

In present study, out of 100 female doctors, 90 (90%) were doing their self breast examination regularly and 31 (31%) had done their mammography. 54 (54%) female

doctors had their own pap smear done while 72 (72%) female doctors had their own ultrasound got done (Table 6).

In present study, out of 100 female doctors, 82 (82%) had their own blood pressure check up, 74 (74%) had their own blood sugar checked, 62 (62%) had got their own lipid profile done while only 44 (44%) female doctors had their electrocardiogram (ECG) done and 48 (48%) had their bone mineral density done (Table 7).

**Table 7: Awareness of hypertension, diabetes, coronary artery disease and osteoporosis.**

Awareness of hypertension, diabetes and coronary artery disease and osteoporosis	No. of female doctors	%
Blood pressure checked	82	82
Blood sugar done	74	74
Lipid profile done	62	62
Electrocardiography (ECG)	44	44
Bone mineral density	48	48

In present study, 23 (23%) female doctors were diagnosed as hypertensive, 14 (14%) were diagnosed as diabetic, 4 (4%) as having coronary artery disease, 5 (5%) as breast cancer, 2 (2%) as ovarian cancer, 18 (18%) as thyroid disease while 15 (15%) were detected as having osteopenia (Table 8).

**Table 8: Suffering from major disease.**

Suffering from major disease	No. of female doctors	%
Hypertension	23	23%
Diabetes	14	14%
Coronary artery disease	4	4%
Breast cancer	5	5%
Ovarian cancer	2	2%
Cervical cancer	0	0%
Thyroid disorder	18	18%
Osteopenia	15	15

## DISCUSSION

In present study, out of 100 female doctors, 48 (48%) female doctors were between 41-50 years, 24 (24%) female doctors were between 51-60 years, 18 (18%) female doctors were between 31-40 years, 10 (10%) female doctors were >60 years.

In present study, out of 100 female doctors, 58 (58%) female doctors were overweight, 26 (26%) female doctors had normal BMI, 8 (8%) female doctors were obese while 8 (8%) female doctors were underweight (Table 3). These results are not similar with studies by D Priya et al, and Pantenberg B et al.

D Priya et al, reported that in 147 study subjects, according to BMI, 25 (17%) were undernourished while 111(75.5%) and 11(7.5%) were normally nourished and overweight respectively.<sup>11</sup> Pantenburg B reported that 84% were of normal weight and 10% were either overweight or obese.<sup>12</sup>

In present study, out of 100 female doctors, 52 (52%) female doctors were consuming pure vegetarian diet while 48 (48%) female doctors were consuming mixed (vegetarian and non-vegetarian) food. 32 (32%) female doctors were eating outside food >3 times a week while 68 (68%) female doctors were eating outside food <3 times in a week. 64 (64%) female doctors were doing exercise >3 times a week while 36 (36%) female doctors were doing exercise <3 times in a week (Table 4).

In present study, out of 100 female doctors, 90 (90%) were doing their self breast examination regularly and 31 (31%) had done their mammography. 54 (54%) female doctors had their own pap smear done while 72 (72%) female doctors had their own ultrasound got done (Table 6). This result is not similar with studies by S. Chkotua et al, Australian Bureau of Statistics. Hadley DW.

Chkotua S et al, reported that the overall prevalence of mammography use was 80.0%, whereas nonuse was 20.0% and underuse 27.3% among users. The prevalence of nonuse and underuse were lower and associated with sociodemographic factors, use of health care services, and behavioral factors were stronger among women aged 45 to 69 than among women aged 30 to 44 and women aged 70 or older.<sup>13</sup>

Australian bureau of statistics reported that a variable proportion from 47% to 81% of women doctors of appropriate age reported having had a mammogram in the past 2-5 years. But in the general Australian population, 74% of women have screening mammograms.<sup>14</sup>

Australian Bureau of Statistics reported that 74% of Australian women doctors reported having a Pap test as compared with 64% of women in the general Australian population.<sup>14</sup> A survey in Ireland by O'Connor M et al found that over 30% of women doctors had never undergone a Pap test.<sup>15</sup> A study in Pennsylvania by Hadley DW reported that in spite of free genetic counseling and testing, only 57% of individuals with a positive BRCA1/2 family mutation status participated in testing.<sup>16</sup> Sasieni P et al, reported that 51% underwent genetic testing for Lynch syndrome who had positive family mutation status.<sup>17</sup>

In present study, out of 100 female doctors, 50 (50%) were gynecologists, 12 (12%) were physician, 9 (9%) were anesthetists, 8 (8%) were pathologists, 7 (7%) were general practitioners, 4 (4%) were ophthalmologists, 3 (3%) were surgeons, 2 (2%) were microbiologists while 1(1%) each were psychiatrist and pulmonologist (Table 5).

In present study, out of 100 female doctors, 82 (82%) had their own blood pressure check up, 74 (74%) had their own blood sugar checked, 62 (62%) had got their own lipid profile done while only 44 (44%) female doctors had their electrocardiogram (ECG) done and 48 (48%) had their bone mineral density done (Table 7).

Frank E et al, found that female Pediatricians were less likely to do screening regarding cholesterol, HIV, smoking, and alcohol but more likely regarding skin cancer or sunscreen use, nutrition, and weight.<sup>18</sup>

In present study, 23 (23%) female doctors were diagnosed as hypertensive, 14 (14%) were diagnosed as diabetic, 4 (4%) as having coronary artery disease, 5 (5%) as breast cancer, 2 (2%) as ovarian cancer, 18 (18%) as thyroid disease while 15 (15%) were detected as having osteopenia (Table 8). These results are near to study by Hyun-Young Shin et al.

Hyun-Young Shin et al, diagnosed 39.5% of patients with osteoporosis. These patients were compared with the control group. The awareness group with diagnosed osteoporosis by a doctor, had a lower proportion of smokers and higher serum vitamin D level than the control group without osteoporosis.<sup>19</sup>

## CONCLUSION

Doctors know everything in detail about the diseases and complications if they occur. They also know the preventive aspects and screening methods too. They advise these tests routinely to their patients. Still, the attitude and practice about screening methods is not universal in doctors.

So, it's high time that doctors take care of themselves. They should see their doctor regularly for preventive care and get important screenings and immunizations. Often, the earlier diseases are detected, the more easily they are treated.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

- World Health Organization. BMI classification: Global Database on Body Mass Index. 2006. Available at: [http://apps.who.int/bmi/index.jsp?introPage=intro\\_3.html](http://apps.who.int/bmi/index.jsp?introPage=intro_3.html).
- Bush TL, Fried LP, Barrett-Connor E. Cholesterol, lipoproteins, and coronary heart disease in women. *Clin Chem*. 1988;34(8):60-70.
- Radha KR., Reena RP, Jacob KJ. Preventive gynecology: attitude and practice among gynecologists of Central Kerala. *Inter J Reprod Contracept Obst Gynaecol*. 2017;6(6).
- Izetbegovic S, Alazbegovic J. Prevention of diseases in Gynaecology. *International J preventive medicine*. 2013;4(12):1347-58.
- Tripathi N., Kadam YR., Barriers for early detection of cancer amongst Indian rural women. *South Asian J Cancer*. 2014 Apr;3(2):122-7.
- Cleveland Clinic. Women's Health Team. Preventive care:a checklist, Health Essentials for Women. 2012. Available at: <https://health.clevelandclinic.org/preventive-care-a-checklist-for-women/>.
- Adak M, Shivapuri JN. Serum lipid and lipoprotein profile abnormality in predicting the risk of coronary artery disease in non-diabetic patients attending NMCTH, Birgunj. *Nepal Med Coll J*. 2010;12(3):158-64.
- Goel PK, Bharti BB, Pandey CM, Singh U, Tewari S, Kapoor A. A tertiary care hospital based study of conventional risk factors including lipid profile in proven coronary artery disease. *Indian Heart J*. 2003;55(3):234-40.
- Assmann G, Davignon J, Fernández Cruz A, Gotto AM Jr, Jacotot B, Lewis B, et al. Women and ischemic cardiopathy. *Rev Clin Esp*. 1989;185(6):308-15.
- ACOG. Guidelines for Osteoporosis, Women's Health Care Physicians;2012.
- Priya D, Prasanna KS, Sucharitha S, Nafisa CV. Body image perception and attempts to change weight among female medical students at Mangalore. *Indian J Community Med*. 2010 Apr;35(2):316-20.
- Pantenburg B, Sikorski C, Lupp M, Schomerus G, König HH, Werner P, Riedel-Heller SG. Medical students' attitudes towards overweight and obesity. *PloS one*. 2012 Nov 5;7(11):e48113.
- Sofia C, Bárbara P. Mammography Use in Portugal: National Health Survey 2014. *CDC: Center for Disease Control and Prevention*. 2017;17. Available at: [https://www.cdc.gov/pcd/issues/2017/17\\_0054.htm](https://www.cdc.gov/pcd/issues/2017/17_0054.htm).
- Australian Bureau of Statistics. Australian social trends. Health-How women care for their health, Canberra: ABS;2004.
- O'Connor M, Kelleher C. Do doctors benefit from their profession? A survey of medical practitioners' health safety practices. *Ir Med J*. 1998;91:206-9.
- Hadley DW, Jenkins J, Dimond E, Nakahara K, Grogan L, Liewehr DJ, et al. Genetic counseling and testing in families with hereditary nonpolyposis colorectal cancer. *Archives Internal Medicine*. 2003 Mar 10;163(5):573-82.
- Sasieni P, Castanon A, Cuzick J. Effectiveness of cervical screening with age: population based case control study of prospectively recorded data. *BMJ*. 2009;339:b2968.
- Frank E, Meacham L. Characteristics of women pediatricians. *Clinical pediatrics*. 2001 Jan;40(1):17-26.
- Hyun-YS, Hee CK, Kiheon L, Sang MP. Association between the awareness of osteoporosis

and the quality of care for bone health among Korean women with osteoporosis. *BMC Musculoskeletal Disorders*. 2014;15:334.

**Cite this article as:** Wagh RV, Upadhye AJ, Upadhye JJ. Health awareness in female doctors. *Int J Res Med Sci* 2018;6:2153-8.