

A study to assess the knowledge and practices in order to prepare self-instructional module on Prevention of osteoporosis among postmenopausal Women

Mrs. Manda Phuke¹, DR. Vaishali Mohite², DR. Mahadeo Shinde³, DR. Nutan Potdar⁴, Mrs. Namrata Mohite⁵, Mr. Sameer Choudhary⁶

¹Assistant Professor, community health nursing

²Dean, Medical Surgical Nursing

³Vice principal, Professor, Medical Surgical Nursing

⁴Associate Professor, Mental Health Nursing

⁵Assistant Professor, Medical Surgical Nursing

⁶Clinical Instructor, Mental Health Nursing
7Krishna Institute of Nursing Sciences, Karad

Background of the study

Osteoporosis is an emerging global health problem and multiple factors are responsible to cause this disease in human. Among women the lifetime risk of dying from hip fracture is same as that from breast cancer. Among the age group of 50-60 years One out of three women is suffers from osteoporosis in India. Indian women have an early age of onset of osteoporosis as compared to western counterparts. There is need for early diagnosis, identification of high-risk groups and prevention and treatment of osteoporosis in the Indian context. The aim of this study was to reduce the number of sufferings from osteoporosis among postmenopausal women by providing the knowledge and improving the practices of Prevention of osteoporosis. Materials and methods: A descriptive study conducted on 60 samples selected by convenient sampling technique to assess knowledge and practices regarding the prevention of osteoporosis. A Self structured questionnaire was used for data collection from the subjects. Data were analyzed by using descriptive and inferential statistics. **Result:** Majority of the women, 40 (66.67%) had average knowledge and 16 (26.66%) women had poor knowledge regarding prevention of osteoporosis and 42 (70%) had average practices and 10 (16.67%) women had poor practices regarding prevention of osteoporosis.

Keywords: knowledge, practices, osteoporosis and postmenopausal Women.

Introduction

Like all other non communicable disease Osteoporosis is one of the emerging health issues worldwide. Osteoporosis is a condition occurs due to Low bone mineral density [BMD], that precedes osteoporosis. It is a silent disease and the outcome of this is fractures of bones. Due to an increase in lifespan of population in India, osteoporotic fractures are becoming a major cause of morbidity and mortality, which is similar to the western part of the world. It is estimated that currently India has more than 36 million population affected by osteoporosis^{1,2}.

After menopause women's are in the process of osteoporosis is accelerated due to deficiency of estrogen hormone. Estrogen helps in the calcium metabolism and osteogenesis. Menopause accelerates the bone loss to 2-5% per year, which may continue till 10 years due to this prevalence of osteoporosis is increases with age in women and not in men. According to data provided by the world health organization (WHO) 30 percent of postmenopausal women have osteoporosis. It is

difficult to treat and is still incurable. Because of all these factors high prevalence of this disease among women makes prevention of disease is important^{2,3}. Osteoporosis or Bone fractures, is a major cause of human suffering and a financial burden on healthcare systems⁴. Approximately 9 million cases of osteoporotic fractures are reported yearly, with expectations that till 2050 it will be increased by four times⁵. Based on the International Osteoporosis Foundation's reports, one in five men and one in three women aged more than 50 years suffer from bone fracture^{6,7,8}. 25% of postmenopausal women with osteoporosis had a vertebral deformity and 15% had a hip fracture⁹.

The development of osteoporosis in postmenopausal women has been attributed to many risk factors, such as physiological and hormonal changes, including a progressive reduction in estrogen levels that affects calcium absorption¹⁰⁻¹². In turn, a reduction in calcium levels has a negative impact on bone density and bone restructuring. Reduced calcium absorption can lead to the gradual loss of bone mass (osteopenia) and eventually osteoporosis with a higher possibility of

fractures¹³.

Women can prevent themselves from this disease by changing unhealthy lifestyles to maximize bone mass density before its occurrence. Lifestyle modification including calcium and vitamin D supplementation, physical activity, smoking, and body weight are also described as risk factors for osteoporosis in postmenopausal women. There is evidence suggesting that knowledge on osteoporosis is a major contributor to osteoporosis preventive behavior^{13,4}. Estimating the level of knowledge of the population can help to guide public health programs. Hence, the investigator has decided to assess their knowledge and practices level regarding prevention of osteoporosis in order to prepare self-instructional module on Prevention of osteoporosis.

Aim of the study

Aim of the study is to reduce the risk of osteoporosis among postmenopausal women by increasing their level of knowledge and improve the practices with the help of self-instructional module on prevention of osteoporosis.

Objectives

- To assess the knowledge and practices of prevention of osteoporosis among postmenopausal women.
- To find out an association between socio-demographic variables and practices among postmenopausal women.

Materials and methods

A descriptive study conducted to assess the knowledge and practices about the prevention of osteoporosis among postmenopausal women. Total 60 post-menopausal women selected by using non-probability convenient sampling technique from Jakhinwadi village at rural area from, Karad. A Self structured questionnaire with three section were used for data collection from the subjects. First section included demographic variables such as age, religion, education, marital status, occupation, diet pattern, tobacco use, postmenopausal period age, height and weight. Second session consist 10 multiple choice questions regarding the knowledge of osteoporosis third session consist yes, no type Likert scale on practices regarding prevention of osteoporosis.

After obtaining ethical clearance, prior permission from the concerned authorities and informed written consent from subjects, data were collected by using above tool were analyzed in terms of descriptive and inferential statistics.

Results

Maximum 33 women don't know about prevention of osteoporosis where as only 27 women's knows

about how osteoporosis can be prevented.

Most of the 34 women's response is false and 26 said true for Women's are more likely affected by osteoporosis.

Near to half 29 women reported that Gastrointestinal surgery can cause osteoporosis and 31 says no and don't know.

Maximum 38 women's know that a bone of the human body is affected in Osteoporosis where as 22 women's responded skin/ brain/ liver is affected.

Maximum 26 women's knows the risk factors of osteoporosis and only 23 women's knows that osteoporosis can be prevented by early detecting bone density through various tests.

More than half 35 of the women knows that exercise helps in prevention of osteoporosis and Only 14 women's knows food items helps to prevention osteoporosis.

Only 25 women's knows the risk factors of osteoporosis where as 35 women's are unaware about this.

Maximum 38 participants agreed to osteoporosis can be prevented where as 22 agreed to osteoporosis can be prevented by Getting enough calcium and vitamin D and 46 women knows the exercise and Getting enough calcium and vitamin D helps in prevention of osteoporosis but very few 15 women able to report maximum sources of vitamin C and D.

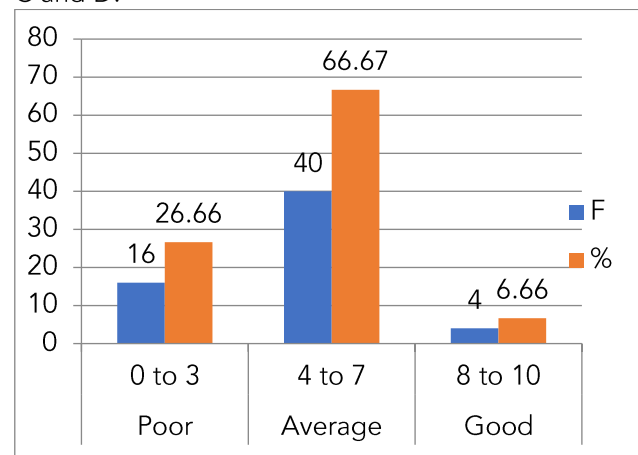


Figure 1. - The Knowledge of Pre- and Postmenopausal Women Regarding Prevention of Osteoporosis

The level of knowledge of pre- and postmenopausal women regarding prevention of osteoporosis is depicted in Figure 1, which shows that majority of the women, 40 (66.67%) had average knowledge and 16 (26.66%) women had poor knowledge regarding prevention of osteoporosis.

Practices of women's regarding prevention of osteoporosis

Only 24 women's perform exercise regularly for 20-30 minutes where as 39 women reported that they suffer from joint pain while doing regular activities. Only 7 women reported that they take a sunbath at least 15 min. in the morning and half of the 30 women reported that they eat dairy products such as yogurt, cheese or milks etc. where as 22 women eats green leafy vegetables such as spinach, Cabbage etc

daily. Maximum 16 women have habits like tobacco misery chewing, alcohol, caffeine and tea where as 22 women's drinks carbonated soft drinks eg. Soda,

Coca-Cola , seven up , thumbs up , sprite etc. Most of 13 women's had taken medication to prevent seizures and 31 women's go for regular health checkup at least once in a year.

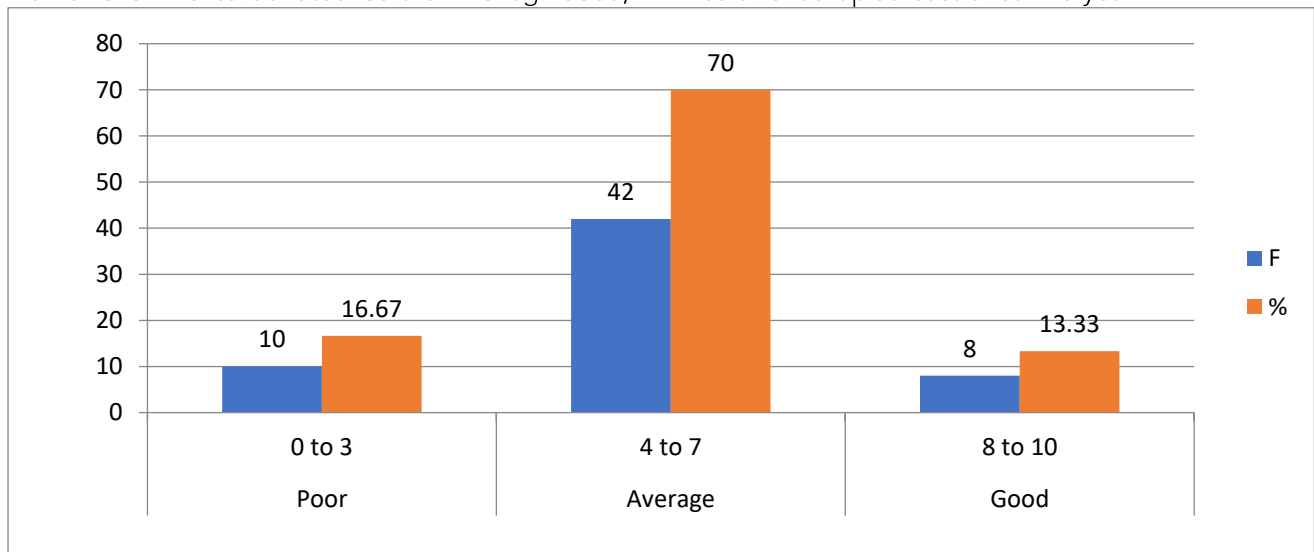


Figure -2. Practices of women's regarding prevention of osteoporosis

Figure 2 shows that the majority of the women, 42 (70%) had average practices and 10 (16.67%) women had poor practices regarding prevention of osteoporosis.

Association between practices for prevention of osteoporosis among postmenopausal women with selected demographic variables.

Sr. No.	DEMOGRAPHIC DATA	poor	Average	Good	Chi square value	P Value
		0 to 3	4 to 7	8 to 10		
1.	AGE40 TO 5050 TO 6060 TO 70	244	122010	152	2.098	0.7177
2	BMIUnder Nourish (Below 18.5) Normal (18.6 To 24.99) Obes (25 To 29.99) Obesity (Above 30)	2710	328101	0521	5.631	0.4657
3.	EducationIlliteratePrimarySecondaryGraduate/PG	1810	53061	0710	1.768	0.9397
4.	Marrital StatusMarriedWidow	91	393	80	0.7653	0.6820
5.	OccupatoinFarmerServiceBussinessHousewife	0901	132720	1700	10.706	0.0979
6.	SmokingYesNoOccasionallyFrequently	4420	132810	1601	14.244	0.027*
7	Menopausal AgeBelow 4344 To 51Above 52	0100	1392	071	1.911	0.7521
8	Past medical historyYesNo	37	3210	53	7.827	0.02*
9.	Genetic historyYesNo	55	1329	26	1.607	0.4477

Table 1. shows significant association between practices for prevention of osteoporosis with smoking and past medical history, rest all socio-demographic variables are not associated with practices.

Discussion

Osteoporosis in menopausal women is becoming a major public health problem in India. Osteoporosis is characterized by decreased bone strength that predisposes to an increased risk of fracture. Bone strength = Bone mineral density + bone quality.¹⁴ The decreased bone resorption risk in late postmenopausal women might be due to increased FSH levels. Nutritional status and dietary calcium intake directly related to bone mineral density have been found in India. Indian women are also frequently deficient in vitamin D, which is essential for positive bone metabolism¹⁵. In present study 26 participants knows that Women's are more likely affected by osteoporosis and 38

women’s know that a bone of the human body is affected in Osteoporosis. Congruent finding seen in study conducted by Tamboli Sana¹, Rupali Chaugule reported that 66% women's knows that osteoporosis is seen commonly in Women's and 60% knows bone of the human body is affected in Osteoporosis¹⁶.

Conclusion

Findings of the present study shows that majority of the women had insufficient knowledge and practices on prevention of osteoporosis. This implies that there is a dire need of planning and implementing health education program on prevention of osteoporosis.

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Conflicts of Interest – none

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