Osteoporosis Risk Analysis in Women Residing in Selected Urban Areas

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Abstract

Osteoporosis is a bone disorder with significant changes in bone biologic material and consequent bone structural disruption, affecting millions of people around the world from diverse ethnic groups. The number of osteoporotic fractures increases in both men and women (by more than 3-fold over the next 50 years) as a result of the ageing population particularly in Asia and Latin America.

Methodology: Results: Majority of the women are in the age group of 40 to 50 years. Majority of the women around 38% doesn't have any formal education. Majority of the women (20%) were home makers. Very few women completed post-graduation. Around 36% working in private institution. Around 40 % women monthly family income is 60,000-80,000. Around 40% women were in moderate risk of getting osteoporosis and 2 women has a high risk and 29% doesn't have any risk towards osteoporosis. None of the variables are associated with the risk analysis of the women anyhow age of the women is near by the association as the value is 0.05.

Conclusion: Previous studies suggested that osteoporosis is related to age, weight, intake of corticosteroid tablets, history of fracture, history of thyroid diseases, menstrual history and Vitamin D deficiency[7]. The tool is prepared to assess the risk factors. And it found that majority of the women are in moderate risk

Keywords: *Osteoporosis, Women, Urban areas, Vitamin D*

Introduction

In current era, Osteoporosis is a major health problem faced by people in older age. This leads a morbidity and mortality in older age especially to women. Osteoporosis is characterized by low bone mass and degeneration problems leads to brittleness of the bones. Early identification leads to prevention of fractures[2] Osteoporosis is a significant problem in Indian postmenopausal women with significant increase in morbidity and mortality following fragility fractures[3]

Methodology

Research methodology used for this study is non-experimental, descriptive design was used. In the present study, the population is comprised of the women in different urban areas across the Pune city. Sample size consist of 45 women of selected urban area of Pune city .Inclusion criterion included the women from selected urban areas of Pune and those who were willing to participate. Women above 40 years till 60 years were included in the study

To collect the data for present study, self-assessment screening questionnaire was prepared based on the old literature and studies. The tool consists of two sections as follows. Section1 consist of Demographic variables (age, education, occupation and monthly family income). Section 2: consists of questionnaire to find the risk of osteoporosis in women. The tool was given to 8 experts in the field of osteoporosis for content validity. All the comments and suggestions given by the experts were duly considered and corrections were made after discussions with research guide. Pearson Test-retest was used to establish a reliability of structure questionnaire

and it was satisfactory, value is 0.80 and the tool is highly reliable.

Results

Table 1: Section A: Frequency distribution table of demographic variables. n=45

Demographic variables		Frequency	Percentage %
1.	Age Group		
a.	40-45	11	24.44
b.	46-50	11	24.44
c.	51- 55	14	31.11
d.	56- 60	9	20.00
2.	Education		
a.	Post graduate	3	6.67
b.	Diploma &Graduate	12	26.67
c.	High School	13	28.89
d.	No formal education	17	37.78
3.	Occupation		
a.	Private	16	35.56
b.	Government	7	15.56
c.	Semi-skilled worker	2	4.44
d.	House wife	20	44.44
4.	Monthly family income		
a. 20,000 -40,000		9	20.00
b. 40,000 -60,000		18	40.00
c. 60,000 -80,000		12	26.67
d. 80,000 -1,00,000		6	13.33

Majority of the women are in the age group of 40 to 50 years. Majority of the women around 38% doesn't have any formal education. Majority of the women (20%) were home makers. Very few women completed post-graduation. Around 36% working in private companies. Around 40 % women monthly family income is 60,000-80,000.

Table 2 : Section B : Risk analysis in osteoporosis women n=45

Sr. No	Risk score of osteoporosis	Frequency	Percentage
1	Lower risk	13	28.88
2	Moderate	18	40
3	High risk	2	4.44

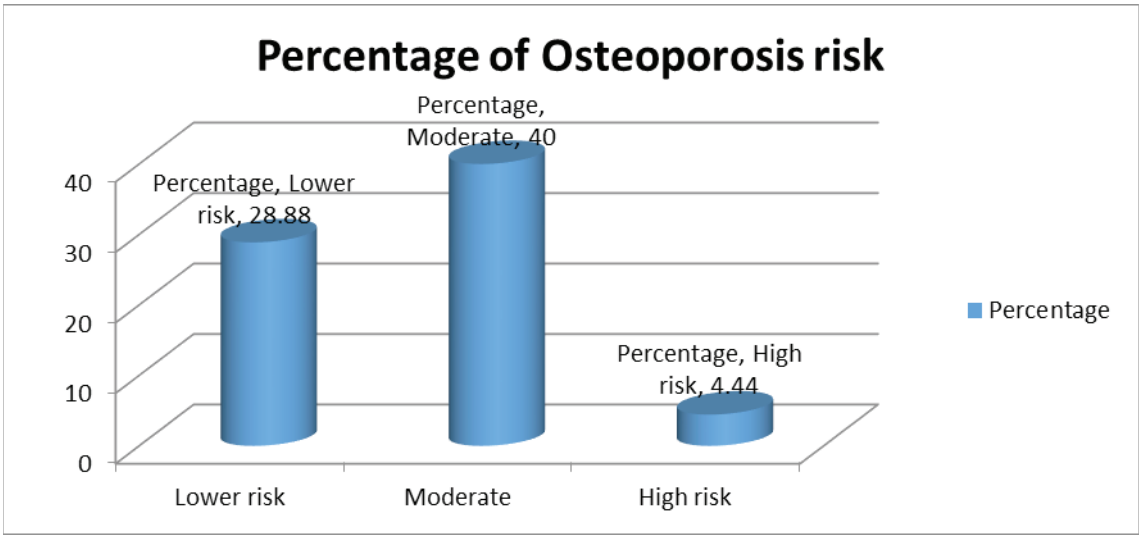

Figure 1 : Risk analysis in women for Osteoporosis

Around 40% women were in moderate risk of getting osteoporosis and 2 women has a high risk and 29% doesn't have any risk towards osteoporosis.

Table 3 : Association between the samples demographical details and osteoporosis risk score

Demographic variables	Lower risk	Moderate risk	High risk	Probability
Age Group				
40-45	5	6	0	0.05
46-50	10	1	0	
51- 55	5	8	1	
56- 60	5	3	1	
Education				
Post graduate	1	2	0	0.57
Diploma &Graduate	8	4	0	
High School	5	7	1	
No formal education	11	5	1	
Occupation				
Private	11	5	0	0.52
Government	5	2	0	
Semi-skilled worker	1	1	0	
House wife	8	10	2	

Cont... **Table 3 : Association between the samples demographical details and osteoporosis risk score**

Monthly family income				
20,000 -40,000	5	4	0	0.07
40,000 -60,000	7	10	1	
60,000 -80,000	9	3	0	
80,000 -1,00,000	5	0	1	

None of the variables are associated with the risk analysis of the women anyhow age of the women is near by the association as the value is 0.05.

Previous studies suggested that osteoporosis is related to age, weight, intake of corticosteroid tablets, history of fracture, history of thyroid diseases, menstrual history and Vitamin D deficiency[7]. The tool is prepared to assess the risk factors. And it found that majority of the women are in moderate risk. Urgent considerations need to be taken in women are calcium and Vitamin D supplementation. This can help the women to reduce the risk of osteoporosis. Anyhow further researches on this topic need to be evaluated.

Ethical Consideration: Ethical approval of the study taken from Symbiosis College of nursing ethical committee. Informed consent was taken from the women in different urban areas of Pune city. Informed the responders regarding the data collection procedure. The collected data was used only for research purposes and kept confidential.

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Conflict of Interest: No conflict of interest

Conclusion

Further researches have to be encouraged on large samples so findings can be generalized for a large population, A similar study may be conducted to find out the knowledge regarding Osteoporosis effect of health and lifestyle practices and a similar study may be conducted to find out the lifestyle of women who are risk for osteoporosis.

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