



Knowledge Regarding Prevention of Post-Menopausal Osteoporosis: A Community Base Survey

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ABSTRACT

Introduction: Low bone mass and structural bone tissue degeneration are symptoms of osteoporosis, which also increases bone fragility and fracture susceptibility. A significant risk factor for fragility fracture is decreased bone density.

Aim/Objectives: The purpose of this study is to evaluate women's knowledge about post-menopausal osteoporosis prevention. 200 women between the ages of 25 and 50 were chosen from a non-probability purposive sampling of the locations. To gauge knowledge, a semi-structured interview was done.

Result: According to the findings, 3.5% of the participants had good knowledge, 27.5% of the subjects had average knowledge, and 69.0% of the subjects had bad knowledge.

Conclusion: Thus, it may be said that the bulk of the subjects have inadequate knowledge.

Key Words: Knowledge, Prevention, Post-menopausal Osteoporosis, Inadequate Knowledge, Estrogen, Osteoporosis

INTRODUCTION

The menopause, which is defined as the cessation of menstruation, normally starts between the ages of 45 and 55. Effects of menopause on bone health Estrogen regulates bone remodeling in part through modulating the expression of RANKL, a cytokine essential for osteoclasts' capacity to resorb bone. Estrogen is required for maintaining skeletal homeostasis. As a result, the osteoclasts differentiate less and undergo more apoptosis, favoring creation. Although the exact mechanism by which estrogen regulates bone turnover is not fully understood, it is known that it has a direct impact on osteoblasts, osteocytes, and a number of cytokines, including interleukin.¹

Osteoporosis is a condition that affects people worldwide and is brought on by a variety of circumstances. Women's lifetime risk of passing away from a hip fracture is equivalent to their risk of passing away from breast cancer. In India, one in three women between the ages of 50 and 60 has osteoporosis. Compared to their counterparts in the west, Indian women get osteoporosis at a younger age.²

Osteoporosis affects 200 million individuals globally, and 8.9 million fractures occur each year as a result.³ However, osteoporosis is four times more prevalent in women than in males because women experience bone loss at an earlier age and it accelerates more swiftly as they age.⁴

Because of the hormonal changes that take place after menopause, osteoporosis affects more than 30% of postmenopausal women. Therefore, postmenopausal osteoporosis is especially concerning. Osteoporosis has several risk factors attached to it. The progression of this condition is influenced by factors like heredity, ethnicity, food, and the presence of other disorders in addition to age and sex. Exercise, a well-balanced diet, and high vitamin D levels are important contributors. The majority of this comes from the sun, and early childhood is when future bone development is at its highest. These preventive actions can now be complemented by drugs. Nursing staff members' duties include early detection and treatment in addition to prevention. Additionally, educating the public about the condition is essential for preventing an osteoporosis epidemic.⁵

Dietary balance is a key component in the prevention of osteoporosis and many other disorders. There was a study done

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that used the New Deep Learning Model for Citrus Fruit Disease Severity Level Detection, therefore it is necessary to be aware of the importance of a healthy diet. This model offers a useful chance to learn about.⁶ Changing your diet and lifestyle can help you live a healthy lifestyle. A healthy diet is useful in preventing many diseases, including malignancies, metabolic disorders, epileptic seizures, autosomal dominant polycystic kidney disease, and skeletal muscle abnormalities.⁷

PROBLEM STATEMENT

A community base survey: Determine the level of knowledge among women about the prevention of post-menopausal osteoporosis in selected rural areas of District Rajpura, Punjab.

OBJECTIVES

1. To assess how well-informed women are in preventing post-menopausal osteoporosis.
2. To determine the association among knowledge score and particular demographic characteristics

REVIEW OF LITERATURE

A study on osteoporosis knowledge, attitudes, and practice assessment among post-menopausal women visiting a city health care in south India was done. An osteoporosis knowledge evaluation tool, a validated questionnaire, was used in a cross-sectional investigation. This study included 300 postmenopausal women in total. Although most individuals were aware of the effects of osteoporosis, there was a general lack of knowledge about the risk factors and treatment alternatives. We found that 40% of people were unaware of osteoporosis.⁸

The disease burden and treatment choices of postmenopausal women with severe osteoporosis were investigated at Greece. Women who were postmenopausal were questioned. A third (31%) of the 186 respondents who completed the study in its entirety had experienced severe osteoporosis and had it for over ten years. 89% respondents said osteoporosis was to blame for the decline in their general quality of life, which 72% thought was worse than it had been ten years earlier.⁹

A Community-Based Survey to Evaluate Menopausal Women's Knowledge and Preventive Practice Regarding Osteoporosis, 100 samples in total participated in the study. The information was gathered using a self-structured knowledge questionnaire and a preventive practice checklist. With a median score of 12, the results show that 50% of the participants

had shown appropriate knowledge; other 50% had a knowledge score below 12.¹⁰

Study to evaluate the awareness of osteoporosis prevention among women living in a particular rural community in Tiruchirappalli, Tamil Nadu. In this study, 245 women were chosen using a practical sample technique. A standardized tool was used to collect the data. According to the findings, just 9% of participants had sufficient knowledge about osteoporosis prevention, and 76% of participants had inadequate understanding about osteoporosis.¹¹

A study to gauge premenopausal women in a particular area of Pune City's knowledge about menopausal osteoporosis. On 100 samples, it was done. Data were gathered using a structured questionnaire and non-probability purposive sampling. According to findings, 97% of samples had good knowledge, 3% had bad knowledge, and none had exceptional knowledge.¹²

RESEARCH METHODOLOGY

Research approach: A quantitative research methodology was used for the current research.

Research design: The research methodology used in the present study was a descriptive survey approach.

Research setting: The study was conducted in a couple of Punjab's District Rajpura's rural areas.

Population: The target group consists of women between the ages of 25 to 50 who live in particular rural areas of Punjab's District Rajpura.

Sample Size: 200 women made up the study's entire sample.

Data Collection Tool:

The instrument was split into two parts:

- Section A: Socio Demographic factors
- Section B: Semi-structured interview. This section consists of 20 objective-type questions with a 0 for a wrong answer and 1 for a right answer.

RESULT

Statistical analysis

Analysis and interpretation was done according to objectives of study. It was intended to use descriptive and inferential statistics, such as mean, standard deviation, and ANOVA, to arrange, tabulate, analyze, and interpret the data.

DATA ANALYSIS**Table 1: The frequency and distribution in percentages of the subject's individual profile.**

Demographic Variables	N=200	
	f	%
Age (in years)		
25-30	9	4.5
31-35	38	19.0
36-40	60	30.0
41-45	60	30.0
46-50	33	16.5
Education		
Illiterate	5	2.5
Basic education	13	6.5
Secondary education	72	36.0
Senior secondary education	80	40.0
Degree or higher	30	15.0
Work Title		
Government sector	3	1.5
Private sector	31	15.5
Self employed	44	22.0
Homemaker	122	61.0
Monthly earnings		
<5000	8	4.0
5000- 10,000	61	30.5
10,001- 20,000	113	56.5
>20,000	18	9.0
Food preference		
Vegetarian	91	45.5
Non vegetarian	109	54.5
Personal preferences		
No bad habit	190	95.0
Alcoholic	5	2.5
Any further	5	2.5
Menstruation history		
Regular	156	78.0
Irregular	44	22.0
History of contraceptive use		
Yes	24	12.0
No	176	88.0

Table 2: The category scores for knowledge level.

N=200			
GRADE	SCORE	f	%
>80% (Good)	15-20	7	3.5
60-79% (Average)	7-14	55	27.5
<60% (Poor)	0-6	138	69.0

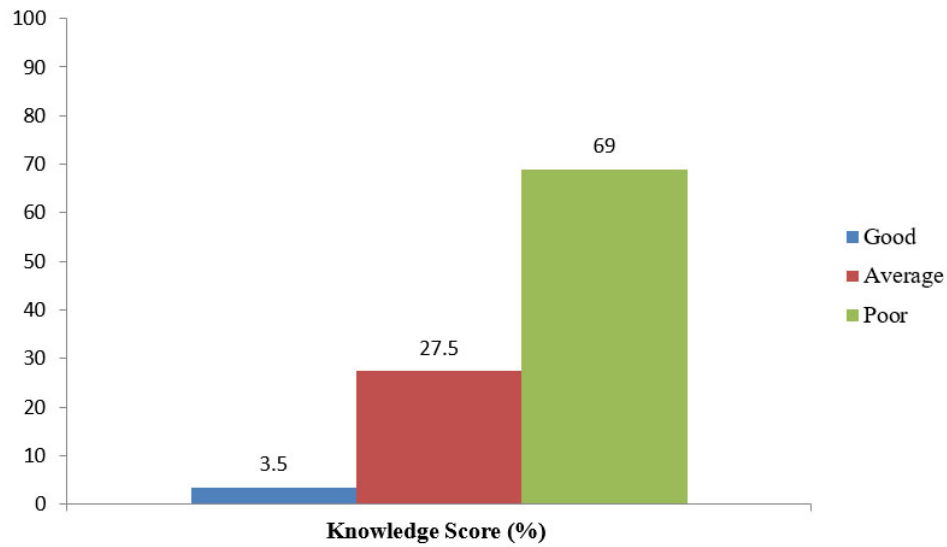


Figure 1: Level of Knowledge.

Table 3: Associations between the chosen demographic factor and women's understanding of post-menopausal osteoporosis prevention

N=200						
Demographic variable	F	Mean	S.D	ANOVA Value (F)	df1, df2	P-value
Age (in years)						
25-30	9	2.444	0.527	1.187	4,195	0.318
31-35	38	2.842	0.369			
36-40	60	2.800	0.480			
41-45	60	2.866	0.430			
46-50	33	2.848	0.441			
Education						
Illiterate	5	3.000	0.000	2.501	4,195	0.044
Basic education	13	2.538	0.877			
Secondary education	72	2.888	0.316			
Senior secondary education	80	2.750	0.490			
Degree or higher	30	2.933	0.253			
Occupation						
Government employee	3	3.000	0.000	1.731	3,196	0.162
Private employee	31	2.645	0.550			
Self employee	44	2.886	0.386			
Homemaker	122	2.820	0.4333			
Monthly earnings						
<5000	8	2.875	0.353	0.108	3,196	0.955
5000- 10,000	61	2.836	0.415			
10,001- 20,000	113	2.814	0.473			
>20,000	18	2.777	0.427			

Table 3: (Continued)

Demographic variable	F	Mean	S.D	ANOVA Value (F)	df1, df2	P-value
Food preference						
Vegetarian	91	2.791	0.483	0.459	1,198	0.499
Non vegetarian	109	2.844	0.412			
Personal preferences						
No bad habit	190	2.815	0.451	0.202	2,197	0.817
Alcoholic	5	2.800	0.447			
Any further	5	3.00	0.000			
Menstruation history						
Regular	156	2.782	0.485	0.464	1,198	0.496
Irregular	44	2.954	0.210			
History of contraceptive use						
Yes	24	2.750	0.531	0.260	1,198	0.611
No	176	2.820	0.433			

DISCUSSION

This study shows that most women lack sufficient awareness of post-menopausal osteoporosis, with 69.0% of them having low knowledge, just 27.5% having average knowledge, and only 3.5% having strong knowledge. In a related study, the knowledge and practices of women were evaluated in order to create a self-educational module on osteoporosis prevention. The findings indicate that the majority of the women, 40 (66.67%), had average knowledge of osteoporosis prevention, while 16 (26.66%) had poor knowledge, and 42 (70%) had average practices, while 10 (16.67%) had poor practices.² This demonstrates the increased need for community development initiatives and awareness campaigns about this issue in rural areas. in order to shield oneself from developing osteoporosis after menopause.

CONCLUSION

In conclusion, preventing post-menopausal osteoporosis is a multifaceted approach that involves a combination of lifestyle changes, proper nutrition, exercise, and medical interventions. As women transition through menopause and experience a decline in estrogen levels, their bone health becomes a significant concern therefore adequate knowledge is necessary in females.

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Conflict of interest

I hereby certify that there are no conflicts of interest in this paper.

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