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KNOWLEDGE REGARDING OSTEOPOROSIS AMONG WOMEN RESIDING IN VILLAGE SOHANA, DISTRICT MOHALI, PUNJAB: A DESCRIPTIVE STUDY

Author's Name: [1]Ms.Sukhdeep kaur, [2]Ms. Anjali Bhardwaj

Affiliation: [1]Assistant professor, Amar Professional college of Nursing, Dyalpura Punjab, India

[2]Lecturer, Amar Professional College of Nursing, Dyalpura Punjab, India

E-Mail: anjalibhardwaj227@gmail.com

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Abstract

According to WHO, "Osteoporosis is a medical condition in which the bones become brittle and fragile from loss of tissue, typically as a result of hormonal changes, or deficiency of Calcium or Vitamin D." Worldwide, osteoporosis causes more than 8.9 million fractures annually, resulting in an osteoporotic fracture every 3 seconds. In 2013, sources estimate that 50 million people in India are either osteoporotic (T-score lower than -2.5) or have low bone mass (T-score between -1.0and -2.5). Studies indicate that osteoporosis and osteopenia or low bone mass may occur at a relatively younger age in Indian population. To assess the knowledge regarding Osteoporosis among women residing in village Sohana, District Mohali, Punjab and to find out the association between knowledge regarding Osteoporosis among women and their selected demographic variables. Quantitative Descriptive research study was carried out at village sohana, district Mohali, Punjab on 100 women above the age of 45 years was selected by convenient sampling technique and structured knowledge questionnaire was used to assess the knowledge regarding osteoporosis. Prior the data collection, the tool was given to the experts for validation and the reliability of tool (r = 0.99) was checked with Karl's Pearson correlation coefficient method. Informed written consent was taken from the study subjects and then tool was distributed to collect data. Data was analysed with descriptive and inferential statistics The findings depicted the score of knowledge regarding osteoporosis among women in village Sohana, District Mohali, Punjab. Among total, majority 66% of study subjects had average knowledge score, whereas 34% of study subjects had poor knowledge score and 0% of study subjects had good knowledge score. Association of knowledge score with their selected socio-demographic variables such as age, occupation, Family income/month, educational status, marital status, age of menopause, diet, source of information was non-significant at 0.05 level of significance. It was concluded that majority of study subjects had average knowledge score.

Keyword: *Knowledge, Osteoporosis, Women*

INTRODUCTION

Osteoporosis or 'porous bone' is a disease characterized by low bone mass and structural deterioration of bone tissue leading to bone fragility and an increased susceptibility to fractures.[1] So today this silent epidemic is recognized as a matter of great concern due to associated high morbidity and mortality.[2]

Prevalence rate is more than 10 million cases per year in India. Women 45 years old or less 14.3%, Over the age of 45 years old 50.7%. The advancement of age increases the risk for osteoporosis.[3]

The risk factors for a fracture include: low bone mass density, advanced age, lack of exercise menopause, Vitamin D or Calcium deficiency, use of hard drinks and junk food with lesser

nutritional ingredients, excessive use of tea, carbonated drinks, alcohol and heparin, a history of fracture over the age of 50, a family history of hip fractures, long term use of steroids, rheumatoid arthritis and smoking.[4]

The leading cause of osteoporosis is a **lack of certain hormones, particularly estrogen in women and androgen in men.** Women, especially those older than 60 years of age, are frequently diagnosed with the disease**. Menopause** is accompanied by lower estrogen levels and increases a woman's risk for osteoporosis.

There typically are no symptoms in the early stages of bone loss. But once bones have been weakened by osteoporosis, individual might have signs and symptoms such as back pain caused by a fractured or collapsed vertebra, loss of height over time stooped posture, bone that breaks much more easily than expected.[5]

The major consequence of osteoporosis is a fracture. Hip fractures are a particularly dangerous consequence of osteoporosis in the elderly. Approximately 20% of those who experience a hip fracture will die in the year following the fracture and only one-third of hip-fracture patients regain their pre-fracture level of function.[4]

The following actions can be taken in order to prevent osteoporosis: Healthy eating and regular exercise are crucial for maintaining strong bones over the course of your life. One of the components that makes up bone is protein. sources of protein, including dairy, eggs, soy, almonds, and legumes. For a variety of reasons, older persons may consume less protein; in such circumstances, supplementing is an option.

Body mass index - Bone loss and fractures are more likely to occur in those who are underweight. It is now understood that carrying extra weight increases the risk of wrist and arm fractures. As a result, keeping a healthy body weight is beneficial for both bones and overall health.

Between the ages of 18 and 50, both men and women need 1,000 mg of calcium daily. When women reach the age of 50 and males reach the age of 70, this daily intake rises to 1,200 milligrams. Low-fat dairy products, dark green leafy vegetables, canned salmon or sardines with bones, soy products like tofu, calcium-fortified cereals, and orange juice are all excellent sources of calcium. People should think about using calcium supplements if they have trouble getting adequate calcium from their diets. However, kidney stones have been connected to an excess of calcium.

PROBLEM STATEMENT

A Descriptive Study to assess the knowledge regarding Osteoporosis among women residing in village Sohana, District Mohali, Punjab.

OBJECTIVES

1) To assess the knowledge regarding Osteoporosis among women residing in village Sohana, District Mohali, Punjab.
2) To find out the association between knowledge regarding Osteoporosis among women and their selected demographic variables.

OPERATIONAL DEFINITIONS-

1) **Assess:** In this study, it refers to deliberates systematic and logical collection of data that are helpful to identify factor influencing osteoporosis and its post-menopausal woman.
2) **Knowledge**: In this study, it refers to the correct response of the subjects to the structured questionnaire schedule related to osteoporosis and its management.
3) **Osteoporosis**: Osteoporosis is a medical condition in which the bones become brittle and fragile from loss of tissue, typically as a result of hormonal changes, or deficiency of Calcium or Vitamin D.
4) **Women**: It refers to the women who are above the age of 45 years, residing in Village Sohana, District Mohali, Punjab.

ASSUMPTIONS

- The study assumes that women may have some knowledge regarding osteoporosis.
- Women above age of 45 years are adopting some measures to prevent osteoporosis.

DELIMITATIONS

The study will be delimited to:

- The study is limited to the women.
- The study is limited to those women who are above age of 45 years.
- The study is limited to those who are willing to participate in the study at Village Sohana.

METHODS

Research Approach

The research approach adopted for the study was quantitative research approach.

Research Design

The research design used for the research was descriptive research design.

Setting of the research study The study was conducted in selected areas from village Sohana, Mohali.

Target population

Target population was the all women above 45 years of age residing in village Sohana, Mohali, Punjab.

SAMPLE AND SAMPLING TECHNIQUE

Samples are the representative unit of a target population, which is to be worked upon by the researcher during the study. Sampling is the process of selecting a representative part of the population.

Convenience sampling was used to select 100 subjects.

ELIGIBILITY CRITERIA

Inclusion criteria**:** Women who were:

- Available at the time of data collection.
- Willing to participate in the study.

Exclusion criteria: Women who were:

Not Available at the time of data

Not willing to participate in the study.

DEVELOPMENT AND DESCRIPTION OF TOOL

The tools for this study were developed after extensive review of literature, expert's opinion in the field of medical surgical nursing and investigators own experience in the clinical area. In the present study structured knowledge questionnaire was used to assess the knowledge of women regarding Osteoporosis.

Tool consisted of two sections.

Section A: Demographic profile

Demographic profile was used to collect personal information about women such as age, occupation, family income, education, marital status, diet, age of menopause and sources of information.

Section B: Structured knowledge questionnaire

This part consisted of multiple-choice questions, each item consisted of 4 options, out of which only one was correct. It included total 30 items of the tool.

SCORING

For each item of correct answer carry maximum score-ONE and wrong answer carry minimum score-ZERO. There was no negative scoring.

- Maximum score = 30
- Minimum score = 0

Score	Level of Knowledge
0-10	Poor knowledge
11-20	Average knowledge
21-30	Good knowledge

VALIDITY OF TOOL

Validity refers to the degree to which an instrument measures what it is supposed to being measured. The Structured knowledge questionnaire to assess the knowledge regarding osteoporosis among women age above 45 years along with objectives was given to 8 experts from the different field of nursing, there were 41 items in the questionnaire related to knowledge. Therefore, certain additions, deletions and refinement of the tool was done after the suggestion of experts, 30 items were finalized in tool.

RESULTS

Section- A

TABLE No.1 Frequency and percentage distribution of study subjects according to demographic characteristics N = 100

Sr.no.	DEMOGRAPHIC CHARCTERISTICS	FREQUENCY	PERCENTAGE
1)	**Age in years**		
	45-50 years	24	24%
	51-55 years	27	27%
	56-60 years	30	30%
	Above 60 years	19	19%

2)	**Occupation**		
	Government job	21	21%
	Private job	15	15%
	Housewife	45	45%
	Self employed	19	19%
3)	**Family Income/month (in Rs.)**		
	Below 10,000	37	37%
	11,000-20,000	25	25%
	21,000-30,000	11	11%
	Above 31,000	27	27%
4)	**Educational status**		
	Primary	40	40%
	Matric	15	15%
	Senior secondary	17	17%
	Graduation or above	18	18%
	No formal education	10	10%
5)	**Marital status**		
	Married	77	77%
	Unmarried	06	06%
	Separated	08	08%
	Widowed	09	09%
6)	**Age of menopause**		
	35-40 years	08	08%
	41-45 years	60	60%
	46-50 years	24	24%
	Above 50 years	08	08%
7)	**Diet**		
	Vegetarian	48	48%
	Non-vegetarian	02	02%
	Both	50	50%
8)	**Source of information**		
	Books or newspaper	22	22%
	Health personal	27	27%
	Mass media	18	18%
	Family and relatives	33	33%

Table 1 depicts the socio-demographic characteristics of the study subject. Majority of the respondents (30 %) were women of age group 56-60 years. As per occupation, (45%) women were housewives. Income per month (37%) of families was below Rs.10,000. Out of 100 (40%) 0f women was having primary educational status. Majority of women (77%) were married. More than half (60%) women's age of menopause was 41-45 years. Half of women (50%) were both vegetarian and non-vegetarian. About (33%) of women got information from family and relatives.

So, it is inferred that majority of respondents were women age group 56-60 years, most of them were housewives and primarily educated, half of women were both vegetarian and non-vegetarian.

Section-B

Fig-1 Findings related to knowledge of the women regarding osteoporosis

N=100

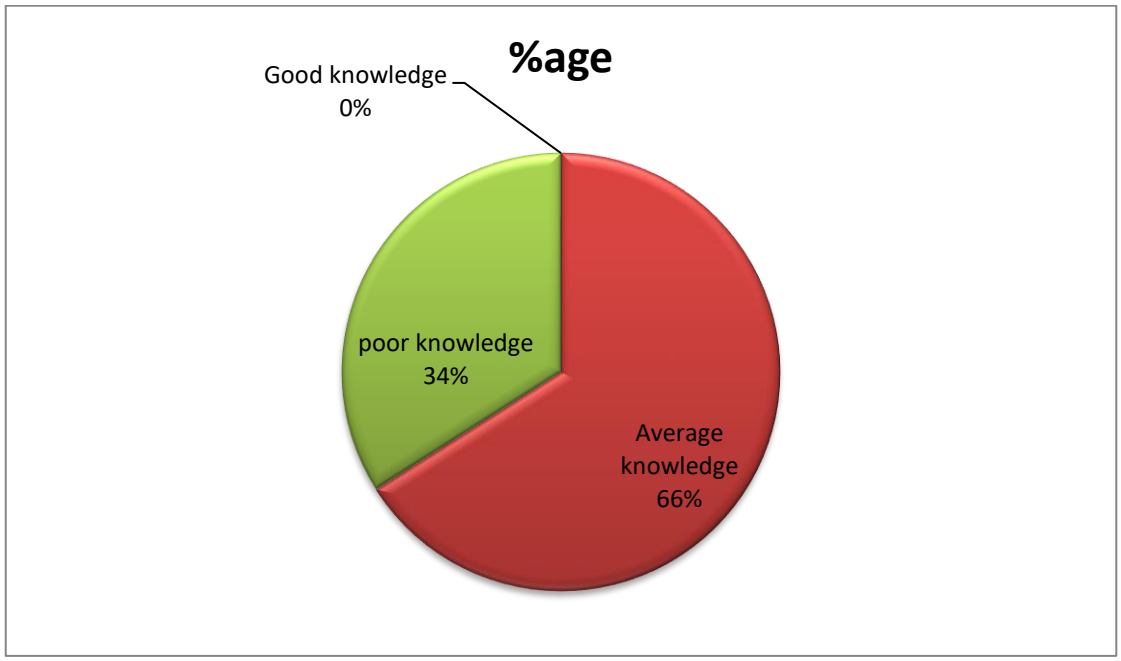

Fig 1: Pie chart representing percentage distribution of subjects on the basis of their knowledge regarding osteoporosis.

Pie chart shows that more than half i.e., 66% of women were having average knowledge, 34% were having poor knowledge regarding osteoporosis and none of the subjects had good knowledge regarding osteoporosis.

Section-C

Finding related to the association between knowledge regarding osteoporosis among women with their selected socio demographic variables.

Table – 2: Association between knowledge regarding osteoporosis among women with their selected socio-demographic variables.

N=100

Demographic variables	**n**	poor	avg.	df	Chi Square	P value
Age in years						
45-50 years	24	10(41.7)	14(58.3)			
51-55 years	27	10(37)	17(62.9)	03	34.85^{NS}	7.82
56-60 years	30	07(23.3)	23(76.7)			
Above 60 years	19	07(36.8)	12(63.1)			
Occupation						
Government Job	21	06(28.6)	15(71.4)			
Private Job	15	08(53.3)	07(46.7)	03	93.0^{NS}	7.82

Housewife	45	12(26.7)	33(73.3)			
Self-employed	19	08(42.1)	11(57.9)			
Family Income/month						
Below 10,000	37	12(32.4)	25(67.6)			
11,000-20,000	25	08(32)	17(68)	03	17104.7^{NS}	7.82
21,000-30,000	11	05(45.4)	06(54.5)			
Above 31,000	27	09(33.3)	18(66.7)			
Educational status						
Primary	40	13(32.5)	27(67.5)			
Matric	15	10(66.7)	05(33.3)	04	128.27^{NS}	9.49
Senior secondary	17	07(41.2)	10(58.8)			
Graduation or above	18	03(16.7)	15(83.3)			
No formal education	10	01(10)	09(90)			
Marital status						
Married	77	28(36.7)	49(63.6)			
Unmarried	06	02(33.3)	04(66.6)	03	1139.8^{NS}	7.82
Separated	08	01(12.5)	07(87.5)			
Widowed	09	03(33.3)	06(66.7)			
Age of menopause						
35-40 years	08	02(25)	06(75)			
41-45 years	60	24(40)	36(60)	03	472.35^{NS}	7.82
46-50 years	24	06(25)	18(75)			
Above 50 years	08	02(25)	06(75)			
Diet						
Vegetarian	48	18(37.5)	30(62.5)			
Non-vegetarian	02	00(0)	02(100)	02	1472.5^{NS}	5.99
Both	50	16(32)	34(68)			
Source of information						
Books or newspaper	22	04(18.2)	18(81.8)			
Health personal	27	12(44.4)	15(55.5)	03	26.2^{NS}	7.82
Mass media	18	04(22.2)	14(77.8)			
Family and relatives	33	14(42.4)	19(57.6)			

Significant at p level ≤ 0.05

This table depicts that there is **no association was** found between knowledge regarding osteoporosis among women with other socio demographic variables like respondent's age, occupation, family income /month, educational status, marital status, age of menopause, diet and source of information.

CONCLUSION

Majority of women had average (66%) knowledge and rest (34%) had poor knowledge regarding osteoporosis. The knowledge of women regarding osteoporosis was non-significantly associated with their socio demographic variables like age, occupation, income/month, educational status, marital status, age of menopause, diet and source of information at ($p \geq 0.05$) level.

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