

A Pre-Experimental Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Menopausal Osteoporosis Among Premenopausal Women Of Age Group 30-45 Years In Selected Areas Of The Pune City

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ABSTRACT

INTRODUCTION: Osteoporosis in menopause period is becoming problem so giving guidance in advance or at time of age around menopause. **AIM OF THE STUDY:** To assess the effectiveness of structured teaching programme on knowledge regarding menopausal osteoporosis among premenopausal women of age group 30-45 years in selected areas of the Pune City” was conducted for the partial fulfillment of Master’s Degree of Nursing, Bharati Vidyapeeth (Deemed to be University), Pune during the year 2024-2025. Osteoporosis in menopause period is becoming problem so giving guidance in advance or at time of age around menopause. **MATERIAL AND METHODS-**The study was approved by the institutional research committee. The quantitative research approach with quasi-experimental research design was adopted for this study the study was conducted in selected areas of Pune city. The data was collected 200 samples of pretest and posttest by using non-probability purposive sampling technique. Descriptive and inferential statistics were used for analysis. (Fisher’s exact test). **RESULT** – Majority of participants (69.5 %) belong to the age groups 30 to 35. And 44.5 % women has completed graduation, 40.5 % women are post graduate and none of them is illiterate. Most of participants (77.5 %) are employed, 19.5% participants are unemployed and very few (3%) women are self- employed. Lot of women (70%) from nuclear family, and only 10% women are from extended family. 20% women are from joint family. Large quantity of participants (40%) belong to Income group rs.20, 000/- to rs.30, 000/-. And only 6% women are from Income above rs. 40,000/- And 40.5% participants who have knowledge from the family and friends. And 38% women have multimedia as a information source. Since p-values corresponding to educational qualification was small (less than 0.05), the demographic variables educational qualification was found to have significant associations with knowledge regarding menopausal osteoporosis among premenopausal women. **CONCLUSION:** study revealed that there is improvement in knowledge after giving structured teaching program about menopausal osteoporosis among the premenopausal women.

KEYWORDS: Assess, Menopausal Osteoporosis, Structure Teaching Program, Premenopause.

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INTRODUCTION

Osteoporosis is characterized by low bone mass and is associated with deterioration of bone structure. Osteoporosis cause the bones to be fragile and increase susceptibility to fracture even with simple trauma. Osteoporosis is often known as the silent thief because bone losses occur without symptoms and progressive loss and thinning of bone tissue happens over many years. Women are four times more likely than men, because around perimenopausal age there is decrease of estrogen hormone leads to osteoporosis.

Estrogen helps to regulate bone cell activity promoting bone growth and strength. During menopausal period estrogen level drops and leading to accelerate bone mass loss and decreases bone density and becomes brittle and prone to fractures mainly spine, hip, wrist etc.¹

Factors like advance age, unawareness, early menopause, modifiable, nonmodifiable lifestyle and medical conditions can be problem for osteoporosis.

DEXA scan and physical examination helps to determine the bone status.²

Information, guidance about modification of lifestyle, hormone therapy, calcium, mineral rich diet and home care is needed. Awareness among premenopausal women is beneficial to prevent the future problems and also manifest with knowledge regarding causes, symptoms, care and prevention about menopausal osteoporosis.

According to National center for biotechnology information (4march2022), it has been reported that 61 million peoples

have osteoporosis and out of these 80% are women. Among postmenopausal women overall osteoporosis prevalence was around 33.1%.³

BACKGROUND OF THE STUDY:

Information, guidance about modification of lifestyle, hormone therapy, calcium, mineral rich diet and home care is needed.

Awareness among premenopausal women is beneficial to prevent the future problems and also manifest with knowledge regarding causes, symptoms, care and prevention about menopausal osteoporosis.

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OBJECTIVES

1. To assess the pretest level of knowledge regarding menopausal osteoporosis among Premenopausal women in experimental group.
2. To assess the posttest level of knowledge regarding menopausal osteoporosis among Premenopausal women in experimental group.
3. To determine the effectiveness of self-structured teaching program on menopausal osteoporosis in experimental group.
4. To associate the findings of knowledge regarding menopausal osteoporosis With selected demographic variables of the premenopausal women.

MATERIAL AND METHODS:

The study was approved by the institutional research committee. The quantitative research approach with quasi-experimental research design was adopted for this study the study was conducted in selected areas of Pune city. The data was collected 200 samples of pretest and posttest by using non-probability purposive sampling technique.

Descriptive and inferential statistics were used for analysis. (Fisher's exact test).

Validity was received from 19 experts. Content validity index was 0.95 and the reliability of assessment tool was calculated by test retest method using Karl Pearson formula.

RESULT

Section I: Analysis of the data related to demographic variables under study Table 1 Demographic characteristics of group n=200

DEMOGRAPHIC VARIABLES		FREQUENCY (f)	PERCENTAGE (%)
Age (in year)	30-35	139	69.5
	36-40	51	25.5
	41-45	10	5
Education	Informal	0	0
	Primary	11	5.5
	Secondary	19	9.5
	Graduate	89	44.5
Occupation	Post graduate	81	40.5
	Employed	155	77.5
	Unemployed	39	19.5
	Self-employed	6	3
Type of family	Nuclear	140	70
	Joint	40	20
	Extended	20	10
Family Income /Month	below rs.20000/-	67	33.5
	rs.200001/- - 30000/-	80	40
	rs.300001/- - 40000/-	41	20.5
	Above rs. 40000/-	12	6
source of information	Information booklet	20	10
	family and friends	81	40.5
	Multimedia	76	38

	Health professionals	23	11.5
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Interpretation: The Majority of participants (69.5 %) belong to the age groups 30 to 35. And 44.5 % women has completed graduation, 40.5 % women are post graduate and none of them is illiterate. Most of participants (77.5 %) are employed, 19.5% participants are unemployed and very few (3%) women are self-employed. Lot of women (70%) from nuclear family, and only 10% women are from extended family. 20% women are from joint family. Large quantity of participants (40%) belong to Income group rs.20, 000/- to rs.30, 000/-. And only 6% women are from Income above rs. 40,000/- And 40.5% participants who have knowledge from the family and friends. And 38% women have multimedia as an information source.

Section IIA: Pretest knowledge score regarding menopausal osteoporosis among premenopausal women

n= 200

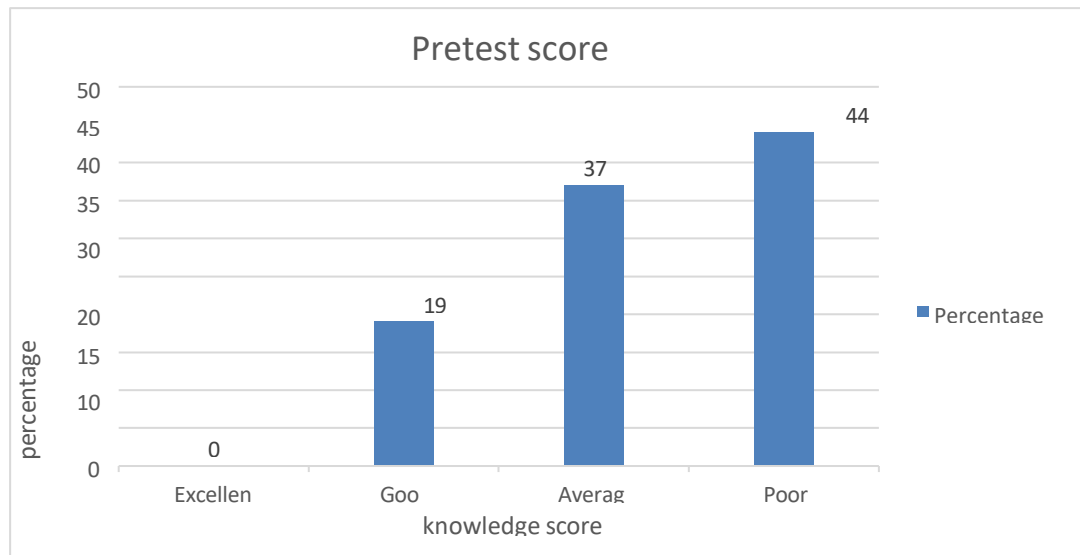


Figure 1 shows before structure teaching, 44% women poor knowledge, 0% of the participants have excellent knowledge.

Section IIB: Posttest knowledge score regarding menopausal osteoporosis among premenopausal women

n= 200

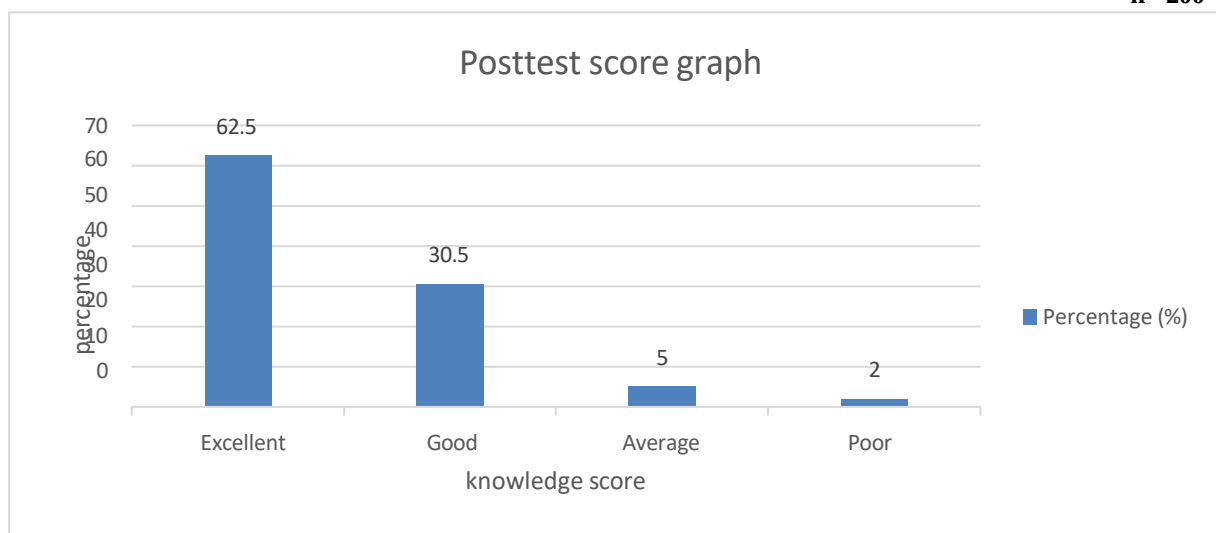


Figure 2 shows There is 62.5% women have excellent knowledge, with good knowledge 30.5% women, 5% women have average knowledge and only 2% women are poor with knowledge related menopausal osteoporosis.

Section III: Finding related to effectiveness of pre test and post test knowledge regarding menopausal osteoporosis among premenopausal women

n=200

	Mean	SD	T	Df	p-value
Pretest	6.9	3.0	28.7	99	0.000
Posttest	16.0	3.7			

Interpretation: By using paired t-test for the effectiveness of self-structured teaching program on menopausal osteoporosis. Average knowledge score in pretest was 6.9 which increased to 16 in posttest-value for this test was 28.7 with 99 degrees of freedom. Corresponding p-value was small(less than 0.05), the null hypothesis is rejected. It is evident that the self-structured teaching program is significantly effective in improving the knowledge regarding menopausal osteoporosis among pre-menopausal women of age group 30-45 years.

Section IV: Association of finding related to level of knowledge with selected demographic variables.

Demographic variable		Knowledge				p-value
		Poor	Average	Good	Excellent	
Age	30-35	51	64	24	0	0.357
	36-40	23	21	6	1	
	41-45	4	6	0	0	
Educational Qualification	Primary	5	6	0	0	0.000
	Secondary	13	6	0	0	
	Graduate	41	44	4	0	
	Post-graduation	19	35	26	1	
Occupation	Employed	54	73	27	1	0.281
	Unemployed	21	15	3	0	
	Self employed	3	3	0	0	
Type of family	Nuclear	52	64	23	1	0.925
	Joint	18	17	5	0	
	Extended	8	10	2	0	
Socio economic status	Below Rs.20000	21	30	15	1	0.162
	Rs.200001-30000	32	38	10	0	
	Rs.300001 - 40000	21	18	2	0	
	Above Rs. 40,001	4	5	3	0	
Source of information	formation booklets	9	9	2	0	0.931
	Family and Friends	35	34	12	0	
	Multimedia	26	36	13	1	
	Health Professionals	8	12	3	0	

Interpretation: Fisher's exact test used for association of knowledge regarding menopausal osteoporosis with selected demographic variables of the premenopausal women. Since p-values corresponding to educational qualification was small (less than 0.05), the demographic variables educational qualification was found to have significant associations with knowledge regarding menopausal osteoporosis among premenopausal women.

DISCUSSION

Similar study on Assessment of osteoporosis knowledge in perimenopausal females attending outpatient department at tertiary care hospital at central Gujarat. This is a questionnaire-based survey study. A validated (OKAT) questionnaire was prepared and answered by 300 women (above 40 years.) after consent. Results were tabulated, analysed and presented as frequency and percentage. Association of knowledge score with variables of age, education was analysed. Results shows that Out of total 300 subjects, 158(52.7%) subjects had poor OKAT knowledge score, whereas 121(40.3%) subjects had average knowledge

And 21(7 %) had good knowledge of all aspects of Osteoporosis. There was statistically significant association of good knowledge with age, education level and perimenopausal status, however, strength of association was poor with a

subject's marital status. Researcher concluded that In spite of Osteoporosis being common condition, majority of females are still unaware of its inevitable association with age and menopause, modifiable, non- modifiable risk factors. Majority are unaware about the disease status until they develop fractures secondary to Osteoporosis. Beyond adequate amount of calcium, importance of adequate nutrition, sunlight and exercise needs to be stressed upon. Educative programmes covering preventive and treatment of osteoporosis should be undertaken on routine basis along with other non-communicable diseases.

In this study, by using structured teaching programme regarding menopausal osteoporosis among premenopausal women with pretest and posttest method, effectiveness of knowledge score is checked. Majority of participants (69.5 %) belong to the age groups 30 to 35. And 44.5 % women has completed graduation, 40.5 % women are post graduate and none of them is illiterate. Most of participants (77.5 %) are employed, 19.5% participants are unemployed and very few (3%) women are self-employed. Lot of women (70%) from nuclear family, and only 10% women are from extended family. 20% women are from joint family. Large quantity of participants (40%) belong to Income group rs.20, 000/- to rs.30, 000/-. And only 6% women are from Income above rs. 40,000/- And 40.5% participants who have knowledge from the family and friends. And 38% women have multimedia as an information source. Before structure teaching, 44% women poor knowledge, 0% of the participants have excellent knowledge. There is 62.5% women have excellent knowledge, with good knowledge 30.5% women, 5% women have average knowledge and only 2% women are poor with knowledge related menopausal osteoporosis. The table shows that paired "t" test was carried out by comparing the pretest and posttest in which the calculated "t" value was > table value table "t" with a 99 degree of freedom which proves that Hypothesis HO is reject at 0.05 level of significance.

CONCLUSION

Result shows Majority of participants (69.5 %) belong to the age groups 30 to 35. And 44.5 % women has completed graduation, 40.5 % women are post graduate and none of them is illiterate. Most of participants (77.5 %) are employed, 19.5% participants are unemployed and very few (3%) women are self-employed. Lot of women (70%) from nuclear family, and only 10% women are from extended family. 20% women are from joint family. Large quantity of participants (40%) belong to Income group rs.20, 000/- to rs.30, 000/-. And only 6% women are from Income above rs. 40,000/- And 40.5% participants who have knowledge from the family and friends. And 38% women have multimedia as a information source. Since p-values corresponding to educational qualification was small (less than 0.05), the demographic variables educational qualification was found to have significant associations with knowledge regarding menopausal osteoporosis among premenopausal women.

Authors Contribution: The complete study was carried by ms. Sarika Aher under the guidance of Mrs. Manisha Gadade. The corresponding author for this study is Mrs. Manisha Gadade

Conflict of Interest: None to declare

Statement on human right: This study is approved by Institutional Ethical committee, Bharati Vidyapeeth(Deemed To Be University) college of Nursing, Informed consent was taken from each participant's voluntary participation was the key to sample collection.

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