



AWARENESS REGARDING PREVENTION OF OSTEOPOROSIS AMONG FEMALE ADULTS RESIDING AT SELECTED COMMUNITY, MANGALORE

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ABSTRACT

Background: Osteoporosis is often thought of as an older person's disease, it can strike at any age women, eighty percent of those affected by osteoporosis are women. Twenty percent of non Hispanic white and Asian women aged 50 and older are estimated to have osteoporosis and 52 percent are estimated to have low bone mass. Five percent of non Hispanic black women over age 50 are estimated to have osteoporosis. Ten percent of Hispanic women aged 50 and older are estimated to have osteoporosis and 79 percent are estimated to have low bone mass osteoporosis the aim of the present study is to assess the awareness and regarding the Prevention of osteoporosis among the Female adults of selected community, Mangalore.

Objectives: To assess the awareness on prevention of osteoporosis among female adults and then to find out the association between awareness on prevention of osteoporosis among female Adults.

Methodology: In view of the problem under study and to accomplish the objectives of the study a non-experimental descriptive survey research approach was adopted to conduct study in a selected community at Mangalore. A total of 100 samples of female adults were selected by using non probability purposive sampling technique. Structured self administration questionnaire for assessing the awareness was used to collect data from samples.

Result: Descriptive and Inferential statistics were used to analyze the data. The analysis revealed that 64% of the sample had good awareness and 36% of the sample had average awareness regarding prevention of osteoporosis with total mean and SD of 17.47+3.15. The awareness scores in relation to selected demographic variables. were compared and tested statistically using chi- square test and found that there is no significant association between awareness.

Conclusion: The overall findings of the study revealed that more than half of the female adults had good awareness regarding prevention of osteoporosis. Hence, it is concluded that further improvement of awareness on prevention of osteoporosis is needed in this area. The researcher here emphasis that more research is needed to understand how to improve the awareness and regarding prevention of osteoporosis.

Key words: Awareness; Prevention of Osteoporosis, Adults

Introduction:

The Women's body is wonderfully complex & delicate, however, multiple roles as the mother daughter, wife homemaker, and wage earner can be physically & mentally quite taxing, poverty tends to yield a higher burden on women & girls health. Women are an "Angel of mercy". Bone begins to form long before birth, ossification is the process by which the bone matrix (collagen fibers & ground substance) is formed & hardening minerals (eg. Calcium salts) are deposited on the collagen fibers. The collagen fibers give tensile strength to the bone and the calcium provides compression strength. The important regulating factors that determine the balance between bone formation and bone resorption include local stress, Vitamin- D, parathyroid hormone, calcitonin.¹⁻² Local stress (weight bearing) acts to stimulate bone formation and remodeling weight bearing bones are thick and strong without weight bearing or stress as in prolonged bed rest the bone loses calcium (resorption) and becomes osteopenic and weak to weak bone may fracture easily. 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.³

people around the world and is a major cause of morbidity osteoporosis is a major public health threat for an estimated 44 million American or 55 percent of the people 50 years of age and older, in the US 10 million individuals are estimated to already have the disease and almost 31 million more are estimated to have low bone mass, placing them at increased risk for osteoporosis multiple compression fractures of the vertebrae result in skeletal deformity, osteoporosis is a costly disorder not only in terms of health care dollars but also in terms of human suffering, pain, disability and death.⁴ Life style modification should be used in patient with osteoporosis, the life style modification include regular weight bearing exercise, resistance training exercises. A healthy life style with no smoking, reduced use of Caffeine and avoiding excessive alcohol intake.⁵ a study of disease management in a rural health care population demonstrated that a preventive program was able to reduce hip fractures and save money.

Objectives of the study:

- To assess the awareness on prevention of osteoporosis among female adults.
- To find out the association between awareness on prevention of osteoporosis among female Adults

Hypotheses:

Hypotheses is tested at 0.05 level of significance

- **H1:** There is a significant association between the levels of awareness on prevention of osteoporosis among female adults with selected demographic variables.

Materials and Methods: a non-experimental descriptive survey research approach was adopted to conduct study in a selected community at Mangalore. A total of 100 samples of female adults were selected by using non probability purposive sampling technique. Structured self administration questionnaire for assessing the awareness was used to collect data from samples.

Result:**Section I:** Description of demographic variables**Table 1:** Frequency and percentage distribution of the sample according to selected demographic variables

SL.NO	Demographic variable	Frequency (f)	Percentage (%)
01	Age in years		
	a) 20-35 year	19	19
	b) 36-50 years.	39	39
	c) 51 years and above.	42	42
02	Religion		
	a) Hindu	41	41
	b) Muslim	34	34
	c) Christian	25	25
03	Education		
	a) No formal Education	00	00
	b) Primary Education	05	05
	c) Secondary Education	27	27
	d) PUC	27	27
	e) Degree and above	41	41
04	Type of family		
	a) Nuclear family	66	66
	b) Joint Family	23	23
	c) Extended family	11	11
05	Family Income		
	a) Less than Rs. 10000	29	29
	b) Rs. 10001-20000	49	49
	c) Rs. 20001 and above	22	22
	Source of information		
	a) Mass media	21	21
	b) Health personnel	28	28
	c) Academics	19	19
	d) Friends and relatives	32	32
06	Type of Diet		
	a) Vegetarian	23	23
	b) Mixed	77	77
07	Doing regular Exercise		
	a) Yes	34	34
	b) No	66	66

Section II: Assessment of awareness regarding Prevention of osteoporosis among Female adults residing in selected area of Mangalore

Table 2.1: Frequency and percentage distribution of samples according to their level of awareness.

n = 100

Grading of knowledge	Range	Percentage	Frequency	Percentage
Excellent	17-22	73 – 100	00	00.00
Good	11 – 16	46 – 72	64	64.00
Average	5 – 10	19 – 45	36	36.00
Poor	0 – 4	0 – 18	00	00.00

Maximum score=31

Table 2-2: Range, mean, SD and mean percentage of awareness score of Prevention of osteoporosis

n=100

Variable	Maximum possible score	Range	Mean	SD	Mean percentage
Definition, Incidence & Classification	05	01- 04	2.96	0.77	59.2
Causes & Risk factors	06	02-05	3.59	0.85	59.83
Signs, Symptoms,Diagnosis,Complication	04	00-04	2.22	0.90	55.55
Prevention & management of Osteoporosis	16	03-14	8.70	2.46	54.35
Overall Awareness	31	13-23	17.47	3.15	56.35

Maximum Score=31

Section III: Association between awareness score with selected demographic variables**Table 3:** Chi-square test to find out association between awareness score and selected demographic variables

n=100

Si. no	Demographic variable	Frequency	<(18) median (55)	>(18) median (45)	χ^2 value	"P" value	df	Table value	Inference
01	Age in years								
	20-35 year	19	12	07	0.72	0.694	03	7.82	NS
	36-50 years.	39	20	19					
	51 years and above.	42	23	19					
02	Religion								
	Hindu	41	22	19	0.34	0.843	03	7.82	NS
	Muslim	34	18	16					
	Christian	25	15	10					
03	Education								
	Primary Education	05	03	02	0.77	0.855	03	7.82	NS
	Secondary Education	27	13	14					
	PUC	27	15	12					
	Degree and above	41	24	17					
04	Type of family								
	Nuclear family	66	37	29	0.10	0.948	02	5.99	NS
	Joint Family	23	12	11					
	Extended family	11	06	05					
05	Family Income								
	Less than Rs. 10000	29	18	11	0.90	0.637	03	7.82	NS
	Rs. 10001-20000	49	25	24					
	Rs. 20001 and above	22	12	10					
06	Source of information								
	Mass media	21	10	11	1.50	0.681	03	7.82	NS
	Health personnel	28	14	14					
	Academics	19	12	07					
	Friends and relatives	32	19	13					
07	Dietary pattern								
	Vegetarian	23	11	12	0.62	0.430	01	3.84	NS
	Mixed	77	44	33					
08	Doing Regular exercise								
	Yes	34	20	14	0.30	0.581	01	3.84	NS
	No	66	35	31					

This section deals with the association between awareness score and selected demographic variables. To find out the association Chi-square test was done.

- **H0:** There will be no significant association between awareness score and selected demographic variables.
- **H1:** There will be significant association between awareness score and selected demographic variables.
- The table 3 reveals that there is no significant association between awareness score and selected demographic variables like Age, Education, occupation, Religion, Type of family, family income and sources of information and regular outdoor activity and dietary pattern. Therefore research hypothesis H1 is rejected.

Discussion: Findings related to objectives and hypothesis

Section I: Demographic characteristics of the subjects

- A age, Religion, Educational qualification, Type of family, , Monthly income, Sources of information of prevention of osteoporosis, Dietary pattern and doing regular research.
- 42% of subjects were in the age group of 51 yrs and above
- 41% of subjects were Hindus
- 41% of subjects have primary education.
- 66% of subjects belong to nuclear family.
- 49% had monthly income of Rs10001-Rs20000.
- 32% subjects had no information regarding prevention of osteoporosis.
- 77% subjects were following mixed method diet
- 66% subjects were not doing regular exercise
- The findings are comparable to a study conducted to assess the awareness regarding osteoporosis screening in Gabonese women). The results showed that highest percentage (48.3%) belonged to the age group of 40 -49 years, 67% of the subjects belong to nuclear family and 62% had primary education.

Section II: Awareness score obtained by the subjects regarding prevention of osteoporosis.

In the present study the level of a awareness regarding prevention of osteoporosis was assessed where in 36% of the female adult had average awareness and 64% had good awareness Results obtained from this study contradicts to the results reported in another study which was conducted in Oya state Nigeria to assess the existing awareness of women on osteoporosis. The study showed that 58% of subjects were aware of osteoporosis 30% had average awareness.

Section III: Association between awareness score of subjects and selected demographic variables.

There is no significant association between awareness score with demographic variables. A study was conducted to assess the awareness and attitude regarding osteoporosis in selected areas of riyadh city by using descriptive survey method. The study result reveals that aged between 20-40 years (88%)and were married (94.1%)educated 45.6%and housewives 64.5%The study concluded that there was no significant association between awareness score of subjects with selected demographic variables.

Conclusion: The overall findings of the study revealed that more than half of the female adults had good awareness regarding prevention of osteoporosis. Hence, it is concluded that further improvement of awareness on prevention of osteoporosis is needed in this area. The researcher here emphasis that more research is needed to understand how to improve the awareness and regarding prevention of osteoporosis.

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