



Research Paper

## A Study To Assess The Effectiveness Of Structured Teaching Programme On Prevention Of Osteoporosis Induced Risk Of Fracture Among Patients Visiting Medical And Surgical Opd At Smvmch.

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### I. INTRODUCTION

“Love your bones, protect your future “

-Marry Ann Liebert

Osteoporosis is a disease which reduces the density and quality of bone. Density means the bone mass (bone mineral density) and quality means the bone fibres. With osteoporosis, bones lose their strength, become more porous and fragile and there is an increased risk of fracture. Osteoporosis occurs silently and progressively, very often without any symptoms or pain until the first fracture happens. Osteoporosis is related to the aging process in conjunction with decreasing sex hormones.

The bones demonstrate deterioration in microarchitecture, leading to loss of bone mineral density and increased risk of a fracture. Other diseases or their treatments cause secondary osteoporosis. Men are much more likely than women to have secondary osteoporosis. Medications that can lead to secondary osteoporosis include glucocorticoids and anti- epileptics. Other medications such as chemotherapy agents, proton pump inhibitors, and thiazolidines are less well studied but suspected to also contribute to osteoporosis.

Disease states that can cause osteoporosis include hyperparathyroidism, anorexia, malabsorption, hyperthyroidism, or overtreatment of hypothyroidism, chronic renal failure, Cushing, and any disease that can lead to long-term immobilization. Secondary amenorrhea formore than one year from various causes, including non-estrogen hormonal therapy, low body weight, and excessive exercise, can also lead to rapid loss of bone mass

### II. REVIEW OF LITERATURE:

**Katharina Kersch-Schindl et.al., (2018)** Osteoporosis is a frequent disease in postmenopausal women. Despite the fact that fragility fractures cause many problems, osteoporosis is still underdiagnosed and undertreated. This manuscript outlines the topics diagnosis of osteoporosis. Fracture risk prevention, and therapy after fracture. Regular physical activities, asufficient intake of calcium, and a normal vitamin D level are important for bone health. Depending on the personal fracture risk, the patient may also be prescribed bone-specific medication to prevent fragility fractures. In case of a prevalent osteoporotic fracture, the initiation or adaptation of Hone-specific therapy is indispensable. Since most osteoporotic fractures occur during a fall, fall Crisk reduction is an important measure to inhibit a new fracture. Rehabilitation of patients with fragility fractures varies with different localizations ofthe fracture and should be performed by a Rey team

**Paul D Miller et.al., (2016)** Severe osteoporosis represents a disease of high mortality and morbidity. Recognition of what constitutes and causes severe osteoporosis and aggressive intervention with pharmacological agents with evidence to reduce fracture risk are outlined in this review. Management of severe osteoporosis: pharmacological therapy of severe osteoporosis; severe osteoporosis, treatment of high-risk osteoporotic patients

### STATEMEMENT OF THE PROBLEM

“A study to assess the effectiveness of structured teaching programme on prevention of osteoporosis induced risk of fracture among patients visiting medical surgical OPD at SMVMCH”

**OBJECTIVES OF THE STUDY:**

- To assess the effectiveness of structured teaching programme on prevention of osteoporosis.
- To evaluate the effectiveness of structured teaching programme among patients visiting medical surgical OPD.
- To associate the post-test level of prevention of osteoporosis induced risk of fracture among patients with selected demographic variables.

**ASSUMPTIONS**

- There will be a significant difference between the pretest test and post test knowledge regarding induced risk for fracture in osteoporosis among OPD client.
- There will be a significant association between the knowledge of structured teaching programme regarding prevention of induced risk for fracture in osteoporosis among OPD client with their selected demographic variables.

**III. MATERIALS AND METHODS**

**Section a:** demographic variables

**Section b:** structured teaching programme on prevention of osteoporosis induced risk of fracture among patients visiting medical surgical OPD at SMVMCH

**RESEARCH APPROACH**

A quantitative research approach is appropriate for the present study.

**RESEARCH DESIGN:**

The research design is pre- experimental (one group pretest and post test design).

**STUDY VARIABLES:**

An abstract concept when defined in terms that can be measured is called a variable.

**Independent variable:** Structured Teaching Programme.

**Dependent variable:** Knowledge of the OPD Clients

**SETTING OF THE STUDY:**

The study was conducted at SMVMCH kalitheerthalkuppam, Puducherry.

**POPULATION:**

The population for the present study comprises of patients visiting medical surgical OPD at SMVMCH

**SAMPLE:**

The sample for the study is patients visiting medical surgical OPD at SMVMCH who are fulfilling the inclusion criteria during the period of study.

**SAMPLE SIZE:**

The sample size of the study consists of 30 OPD Patients

**SAMPLING TECHNIQUE:**

In this study, convenient sampling technique is used. Subjects are chosen to be part of the sample with a specific purpose in mind. (Dr. Suresh K Sharma 2011).

**SAMPLING CRITERIA**

**INCLUSION CRITERIA**

- OPD Patients who are all available at the period of data collection
- OPD Patients who are all visiting SMVMCH

**EXCLUSION CRITERIA**

- OPD Patients who are all not willing to participate in the study
- OPD Patients who are all under co-morbid disease treatment

**IV. RESULTS:**

The findings of the study revealed that out of 50 geriatric clients. In post- test, Majority of geriatric clients 23(76.6%) had Adequate and 5(16.7%) had moderate level of knowledge and the mean and standard deviation of the level of knowledge regarding prevention of osteoporosis induced risk of fracture among patients visiting medical surgical OPD at SMVMCH is 18.3+4.655. The demographic variable, Educational Status, Dietary status and Previous Source of Information had shown statistically significant association between the post-test level of knowledge regarding prevention of osteoporosis induced risk of fracture with selected demographic variables at SMVMCH kalitheerthalkuppam Puducherry.

Assessment of the pretest and post test level of knowledge regarding prevention of osteoporosis induced risk of fracture among patients visiting medical surgical OPD at SMVMCH

(N=30)

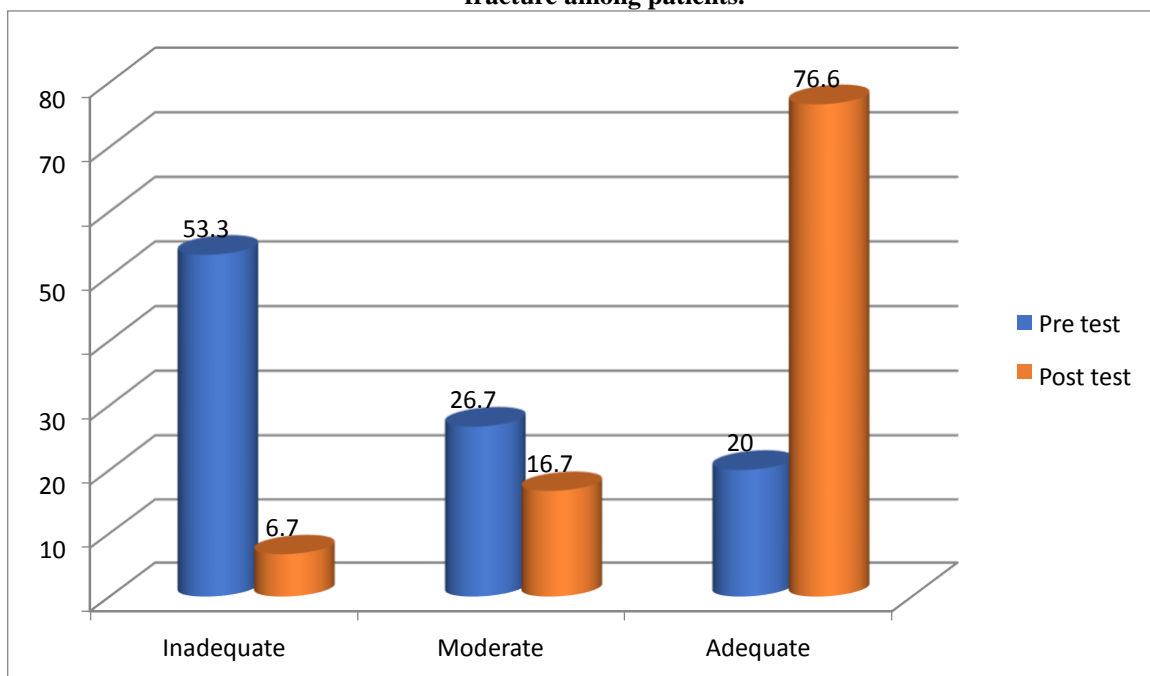
LEVEL OF KNOWLEDGE	PRETEST		POST TEST	
	N	%	N	%
INADEQUATE	16	53.3	2	6.7
MODERATE	8	26.7	5	16.7
ADEQUATE	6	20	23	76.6
<b>Mean Standard deviation</b>	9.66±4.86		18.3±4.655	

**Frequency and percentage wise distribution Percentage wise distribution of Pre-test and post- test of the prevention of Osteoporosisinduced risk of fracture among patients.**

**In pretest**, Majority of the patients 16(53%) had inadequate level of knowledge, 8(26%) had moderate level of knowledge and 6(20%) had adequate level of knowledge. The mean and standard deviation of the knowledge on Osteoporosis induced risk of fracture among patients in pre-test is (9.66±4.86).

**In post- test**, Majority of the patients 23(77%) had adequate level of knowledge and 5(17%) had moderate level of knowledge. The mean and standard deviation of the knowledge on Osteoporosis induced risk of fracture among patients in post-test is (18.3±4.65)

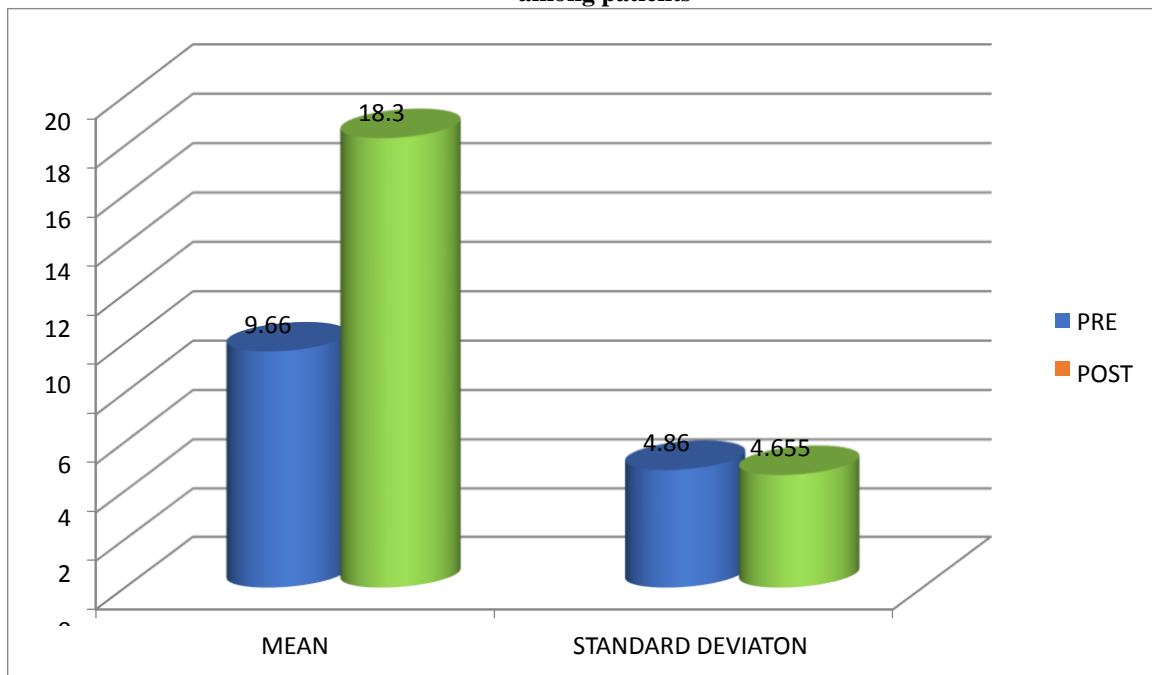
**Percentage wise distribution of Pre-test and post- test of the prevention of Osteoporosis induced risk of fracture among patients.**



**Comparison of the Pre-test and post- test of the prevention of Osteoporosis induced risk of fracture among patients.  
(N=30)**

SL.NO	Comparison of the Pre-test and post- test of the prevention of Osteoporosis induced risk of fracture among patients	MEAN		STANDARD DEVIATION		“T” VALUE	“P” VALUE
		Pre-test	Post-test	Pre-test	Post-test		
1		9.66	18.3	4.86	4.655	7.0356	0.001**

**Comparison of the Pre-test and post- test of the prevention of Osteoporosis induced risk of fracture among patients**



**Associate between the post level of the effectiveness of structured teaching program on prevention of Osteoporosis induced risk of fracture among patients.**

(N=30)

S.NO	DEMOGRAPHIC DATA	Inadequate		Moderate		Adequate		X <sup>2</sup>
		N	%	N	%	N	%	
1.	<b>Age</b>							X <sup>2</sup> =4.049 Df=6 P=.6700
	Above 30years	0	0	0		4	13.3	
	Above 40years	2	6.7	2	6.7	9	30	
	50-55 years	0	0	2	6.7	6	20	
	Above 55years	0	0	1	3.6	4	13.3	
2.	<b>Gender</b>							X <sup>2</sup> =.243 Df=2 P=.8854
	Male	1	3.3	2	6.7	12	40	
	Female	1	3.3	3	10	11	36.6	
	Transgender	0	0	0	0	0	0	

<b>3.</b>	<b>Religion</b>							
	Hindu	2	6.7	3	10	19	<b>63.3</b>	X <sup>2</sup> =2.457Df=4 P=.6524
	Muslim	0	0	1	3.3	3	<b>10</b>	
	Christian	0	0	1	3.3	1	<b>3.3</b>	
	Others	0	0	0		0		
<b>4.</b>	<b>Education</b>							X <sup>2</sup> =2.293Df=6 P=.8908
	Illiterate	0	0	1	3.3	5	<b>16.7</b>	
	Primary school	1	3.3	1	3.3	6	<b>20</b>	

	Secondary school	1	3.3	1	3.3	6	<b>20</b>	X <sup>2</sup> =4.368Df=6 P=.6269
	Graduate	0	0	2	6.7	6	<b>20</b>	
<b>5.</b>	<b>Job type</b>							
	Government job	0	0	1	3.3	4	<b>13.3</b>	
	Private job	0	0	2	6.7	10	<b>33.3</b>	
	Own business	1	3.3	2	6.7	5	<b>16.7</b>	X <sup>2</sup> =1.312Df=4 P=.8593
	Unemployed	1	3.3	0	0	4	<b>16.3</b>	
<b>6.</b>	<b>Marital status</b>							
	Unmarried	0	0	1	3.3	5	<b>16.7</b>	
	Married	2	6.7	4	13.3	16	<b>53.3</b>	X <sup>2</sup> =3.837Df=4 P=.4285
	Divorced	0	0	0	0	2	<b>6.7</b>	
<b>7.</b>	<b>Socio economic status</b>							
	High	1	3.3	5	16.7	13	<b>43.3</b>	X <sup>2</sup> =1.985Df=4 P=.7385
	Middle class	1	3.3	0	0	8	<b>26.7</b>	
	Poor	0	0	0	0	2	<b>6.7</b>	
<b>8.</b>	<b>Income</b>							X <sup>2</sup> =1.033Df=2 P=.5967
	Rs,5000	0	0	0	0	0	<b>0</b>	
	Rs,5001 - Rs,10000	0	0	2	6.7	4	<b>13.3</b>	
	Rs,10001 - Rs,15000	1	3.3	2	6.7	11	<b>36.7</b>	
	Above 15000	1	3.3	1	3.3	8	<b>26.7</b>	X <sup>2</sup> =1.033Df=2 P=.5967
<b>9</b>	<b>Type of residence</b>							
	Rural	1	3.3	4	13.3	13	<b>43.3</b>	
	Urban	1	3.3	1	3.3	10	<b>33.3</b>	

	Semi urban							
<b>10</b>	<b>Diet</b>							X <sup>2</sup> =1.621Df=2 P=.7330
	Vegetarian diet	1	3.3	1	3.3	7	<b>23.3</b>	
	Non-vegetarian diet	1	3.3	4	13.3	16	<b>53.3</b>	

### V. CONCLUSION:

A study to assess the effectiveness of structured teaching programme on prevention of osteoporosis induced risk of fracture among patients visiting medical surgical OPD at SMVNCH. The findings of the study were in **Pre-test**, Majority of the patients 16(53%) had inadequate level of knowledge, 8(26%) had moderate level of knowledge and 6(20%) had adequate level of knowledge. The mean and standard deviation of the knowledge on Osteoporosis induced risk of fracture among patients in pre-test is (9.66±4.86).

**In post-test**, Majority of the patients 23(77%) had adequate level of knowledge and 5(17%) had moderate level of knowledge. The mean and standard deviation of the knowledge on Osteoporosis induced risk of fracture among patients in post-test is (18.3±4.65).

**NURSING IMPLICATIONS:**

The investigator drawn the following implication from the study that are vital concerns for nursing services, nursing education, nursing administration and nursing research.

**NURSING PRACTICE:**

Further studies can be conducted to promote awareness regarding the prevention of osteoporosis among geriatric clients.

**NURSING EDUCATION:**

Nursing educator motivates and encourages the students to take their conditions of medical, clinical, life-style and nutritional factor affect geriatrics by prevention of osteoporosis.

The nursing management of patients with osteoporosis risk factor should be included in detail in nursing curriculum.

**NURSING RESEARCH:**

The investigator needs a lot of review materials and one obtained by using the study report. Various methods may be used to strengthen the knowledge of the people by the researcher, which should be published for the benefits of those who are not able to participate in the study.

The finding of the study can be utilized for conducting further study on find out the prevalence and factors related to osteoporosis among geriatrics. Further research articles should be carried out in improving health status among geriatrics.

**NURSING ADMINISTRATION:**

As a nurse, administer encourage to conducting inservice and continuing nursing education to promote knowledge regarding prevention of osteoporosis.

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