

“Effectiveness of Planned teaching programme on knowledge regarding osteoporosis and its prevention among school teachers in selected senior secondary schools in udaipur city, Rajasthan”

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Abstract: A quasi experimental One group pre-test post-test study to assess the effectiveness of planned teaching programme on knowledge regarding osteoporosis and its prevention among school teachers in selected senior secondary school at Udaipur, Rajasthan The sample consisting of 140 school teachers in selected senior secondary school at Udaipur by using simple random sampling technique method. The tool comprised of by using structured knowledge questionnaire. The pretest was conducted and the planned teaching programme was administered .The post test was conducted after one week .The data obtained were analyzed by using differential and inferential statistics. The mean score of post-test knowledge 22.70) 75.71 (%was apparently higher than the mean score of pre-test knowledge 17.56)58.54 (% , suggesting that the planned teaching programme was effective in increasing the knowledge of the school teachers regarding osteoporosis and its prevention .The mean difference 5.14 between pre-test and post-test knowledge score of the school teachers was found to be significant.

Key words – Osteoporosis and its prevention, quasi experimental research design (One group pre –test post – test) and school teachers

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I. Introduction

National osteoporosis awareness and prevention month is celebrated each May, and becomes a chance for our Nation to become more familiar with the effects of this disease, and about the preventable steps that we can to deal with it osteoporosis is often known as "The silent thief because bone loss occurs without symptoms and progressive loss and thinning of bone tissue happens over many years. This disease affects millions of people throughout the world. Women are four time more likely than men to develop this disease. According to the National osteoporosis foundation (NOF), primary defense is important before the age of 30. It is evident in most of the cases that between the age of 30 and 40, one should start taking care to avoid osteoporosis. In current situation, working women especially school teachers won't give much attention to their health due to lack of time and other overload activities in their daily life. Most often, they rely on junk or processed food instead of regular balanced diet which has calcium, vitamin D and other minerals.

Osteoporosis means porous bone. It is derived from Greek word osteon meaning "bone", and pores meaning "pore". It is a disease of bones that leads to an increased risk of fractures. In osteoporosis, the bone mineral density (BMD) is reduced, bone micro -architecture is deteriorating, and the amount and the variety of proteins in bone is altered. Osteoporosis is defined by World Health Organization (WHO) as a bone mineral density that is 2.5 standard deviations or more below the mean peak bone mass (average of young, healthy adults); the term "established osteoporosis" includes the presence of a fragility fracture. The disease may be classified as primary type 1, primary type 2 or secondary. The form of osteoporosis is common in women after menopause..

II. Research Elaborations

Statement of problem –

"A study to assess the effectiveness of planned teaching programme on knowledge regarding osteoporosis and its prevention among school teachers in selected senior secondary schools in Udaipur City, Rajasthan"

III. Objectives

1. To assess the pre - test knowledge score of the school teachers on osteoporosis and its prevention.
2. To administer planned teaching programme for school teachers on osteoporosis and its prevention.
3. To assess the post -test knowledge score of the school teachers on osteoporosis and its prevention.
4. To determine the effectiveness of planned teaching programme on osteoporosis and its prevention.
5. To find out the association between pre – test knowledge with selected socio demographic variable.

IV. Hypothesis

H₁- There is significant difference between the pre-test and post-test knowledge scores regarding osteoporosis and its prevention among school teachers

H₂- There is significant association between pre-test knowledge score with selected socio demographic variables.

V. Materials And Methods

Population – School teachers.

Sample– School teachers in selected senior secondary school at Udaipur, Rajasthan”.

Sample Size – 140 .

Setting –Govt. Sen. Sec. School Aayad and Govt. Fateh Sen. Sec. School Udaipur Rajasthan.

The conceptual framework for the present study is based on CIIP Model

VI. Research Design

The research design selected for the present study was a quasi experimental research design (one group pre-test post-test research design)

PRE-TEST	TREATMENT	POST –TEST
)Dependent variable()Independent variable()Dependent variable(
RO1	X	RO2
Knowledge of school teachers.	Planned Teaching programme.	Knowledge of school teachers

Table 1 :Quasi experimental one group pre and post-test research design

The interpretations of the symbol are as below:

RO1 - Administration of pre-test knowledge questionnaire

RO2 - Administration of post-test knowledge questionnaire

X - Intervention, treatment)independent variable(i.e. Planned Teaching programme

ETHICAL CONSIDERATION

After obtaining permission from research committee of Geetanjali College of Nursing, prior permission was obtained from principal of Govt. Sen. Sec. School Aayad and Govt. Fateh Sen. Sec. School, Udaipur Rajasthan. Consent was taken from each participant who had participated in the study.

DESCRIPTION OF THE TOOL

The structured knowledge questionnaire consisted of two parts i.e .Part –I & II .

Part -I :consisted of 7 items on socio- demographic data such as age, gender, religion, marital status, habitat, educational qualification, years of working experience, monthly income and source of information.

Part -II :consisted of 30 knowledge items .Each item was multiple choices in nature with 4 choices.

SCORING

The knowledge of school teachers regarding the outcomes of osteoporosis and its prevention was scored as follows, one mark for each correct answer and zero marks for incorrect answer .The maximum score was 30, to interpret level of knowledge the score was distributed as follows;

Interpretation of knowledge:

Level	Range
Inadequate knowledge	0-50 %
Moderate knowledge	51-75 %
Adequate knowledge	76-100 %

An answer key was prepared for scoring answer to the structured knowledge questionnaire.

DATA COLLECTION AND DATA ANALYSIS

The data was presented under the following sections

Section-I :Description of socio-demographic variables of the respondents.

Section-II :Findings related to knowledge scores of respondents on osteoporosis and its prevention

Section-III :Findings related to association between pre-test knowledge score and selected demographic variables of respondents.

VII. Results

Table 2:- Area wise pretest and post test knowledge score of Respondents regarding osteoporosis and its prevention .

N= 140

Area of Knowledge	Max. Score	Pre-test			Post-test		
		Mean score	Mean %	SD	Mean score	Mean %	SD
Introduction and definition of osteoporosis	3	2.21	73.81	0.69	2.63	87.61	0.55
Causes and risk factors.	7	4.17	59.59	1.44	5.3	75.71	1.06
signs and symptoms	2	1.2	60	0.77	1.56	77.85	0.55
Diagnostic evaluation	2	1.23	61.42	0.65	1.58	78.92	0.55
Pathophysiology	2	1.06	53.21	0.74	1.49	74.64	0.57
Complication	1	0.55	55	0.5	0.71	70.71	0.46
Prevention	13	7.14	54.89	2.24	9.45	72.69	1.6
Total	30	17.56	59.70	4.40	22.70	75.71	2.93

Table 2: projected that in pre-test the mean percentage obtained by the respondents was 73.81% and SD=0.69 in the aspect of introduction to and definition of osteoporosis, mean percentage obtained by the respondents was 59.59% and SD=1.44 in the aspect of Causes and risk factors & mean percentage obtained by the respondents was 60.00% and SD=1.77 the aspect of signs and symptoms, the mean percentage obtained by the respondents was 61.42% and SD= 0.65 the aspect of Diagnostic evaluation and the mean percentage obtained by the respondents was 53.21% and SD=0.74 the aspect of Pathophysiology , the mean percentage obtained by the respondents was 55.00% and SD=0.5 in the aspect of complications, the mean percentage obtained by the respondents was 54.89% and SD=2.24 the aspect of prevention.

Projected that in post –test the mean percentage obtained by the respondents was 87.61% and SD=0.55 in the aspect of Introduction and definition of osteoporosis, mean percentage obtained by the respondents was 75.71% and SD=0.06 in the aspect of Causes and risk factors & mean percentage obtained by the respondents was 77.85% and SD=0.55 the signs and symptoms, the mean percentage obtained by the respondents was 78.92% and SD=0.55 the aspect of Diagnostic evaluation and the mean percentage obtained by the respondents was 77.64% and SD=0.57 the aspect of Pathophysiology, the mean percentage obtained by the respondents was 70.71% and SD=0.46 the aspect of complication, the mean percentage obtained by the respondents was 72.69% and SD=1.6 the aspect of prevention.

Table 3:- Distribution of Respondents by the level of knowledge.

N=140

LEVEL OF KNOWLEDGE	FREQUENCY		PERCENTAGE	
	Pre test	Post test	Pre test	Post test
Inadequate knowledge (0-50%)	39	00	27.86	00
Moderate knowledge (51-75%)	85	54	60.72	38.57
Adequate knowledge (76-100%)	16	86	11.42	61.43
Total	140	140	100	100

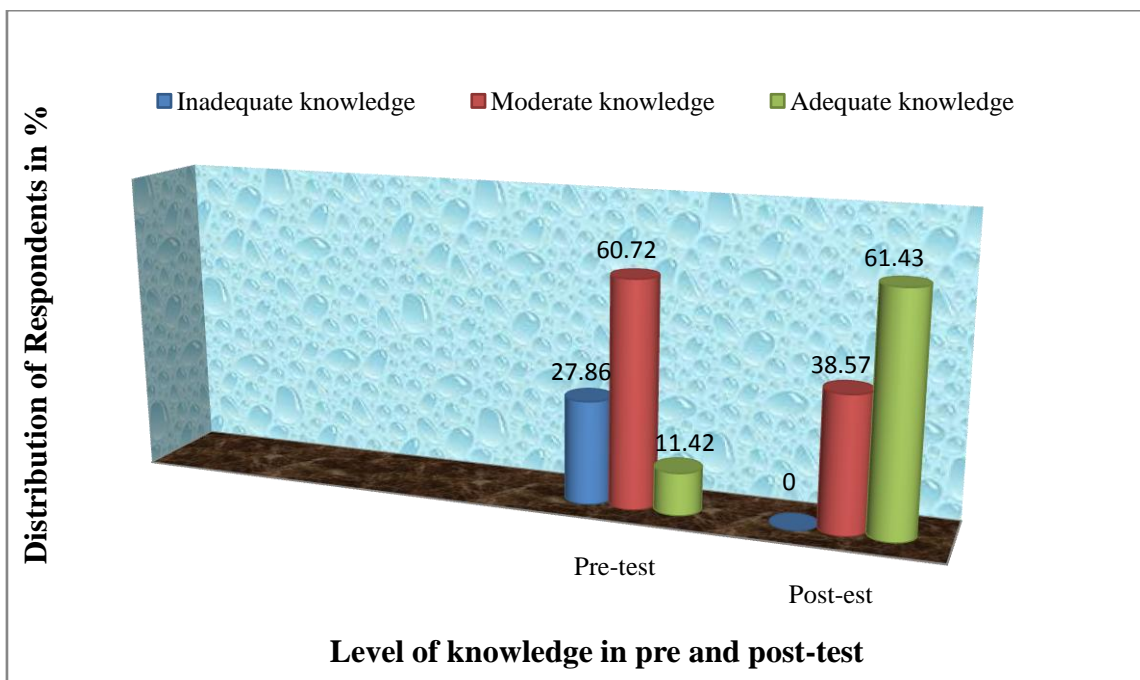


Figure 1: Distribution of Respondents by the level of knowledge.

Table 3 & Figure 1: The table represents the post test knowledge level of respondents regarding osteoporosis. The result showed that 37.57 % of the respondents had moderately knowledge and 61.43% of the respondents had adequate knowledge regarding osteoporosis

Table 4:- Effectiveness of planned teaching programme regarding osteoporosis and its prevention by comparing pre-test and post-test knowledge score of respondents

N=140

	Mean	Mean Percentage (%)	SD	Enhancement	Enhancement percentage (%)	df	T	Inference
Pretest	17.56	58.54	2.23	5.14	17.17	139	28.61	S
Post test	22.70	75.71	2.93					

S = Significant

Table 4:- The result reveals that the mean post test knowledge score 22.72(75.71%) is greater than the mean pre test knowledge score 17.56(58.54 %). The above table also depicts that the enhancement in the knowledge of respondents is 5.14 (17.17 %) supporting the post test knowledge score are higher than the pretest knowledge score. The data further represent that the ‘t’ value of 28.61 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there was difference in pre test and post tests knowledge score and further the data supports that planned teaching programme regarding osteoporosis and its prevention is effective in improving the knowledge score of respondents.

H₁ - There is a significant difference between the pre and post test knowledge score of school teachers on osteoporosis and its prevention. Hypothesis was tested at 0.05 levels. The calculated ‘t’ value 28.61 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there is significant difference between the pre test and post test knowledge score hence the hypothesis H₁ is accepted.

H₂: There is a significant association between pre-test knowledge score regarding osteoporosis and its prevention with selected demographic variables.

The Chi-square test was carried out to determine the association between the pre test knowledge score and demographic variables such demographic data such age, gender, religion, marital status, habitat, educational qualification, years of working experience, monthly income and source of information

In which age, gender, religion, marital status, habitat, educational qualification, years of working experience, monthly income and source of information were found to be significantly associated with pre test knowledge at 0.05% level. Hence research hypotheses H₂ is partially accepted.

VIII. Conclusion

This study concludes that there is improvement in the level of knowledge of school teachers which indicates that the planned teaching programme was effective. The demographic variables of school teachers significantly associated with the pre test knowledge score. The development of planned teaching programme will help the school teachers to enhance their knowledge.

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