ORIGINAL RESEARCH PAPER

Education

A PRE-EXPERIMENTAL STUDY ON EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE OF OSTEOPOROSIS AMONG MENOPAUSAL WOMEN IN SELECTED RURAL COMMUNITY, OF DISTRICT-TARN TARAN, PUNJAB. 2021

KEY WORDS:

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ABSTRACT

Background of the study:- Osteoporosis is a major health and economic problem. An international consensus development conference has stated that osteoporosis is a systemic skeletal disease characterized by low bone mass and micro architect deterioration of bone tissue, with a consequent increase in bone fragility and susceptible to fracture. During menopause estrogen level become significant lowered. Estrogen hormone help to control the osteoclasts, which are the bone cell producers. When estrogen level decrease in menopausal women that can ultimately leads to osteoporosis. The investigator while working in the field of community and hospital setting found that menopausal women had very little knowledge regarding osteoporosis. The lack of awareness about osteoporosis reflects the need to impart educational programs to menopausal women regarding prevention of disease. Hence, the present study was undertaken to assess the effectiveness of structured teaching programme regarding osteoporosis.

Method:- the research design was selected for the study of a pre-experimental one group pre test and post test. The setting was selected in rural community of district, Tarn Taran. The sample includes 60 menopausal women and Non-probability convenience sampling technique was used. Only menopausal women were included for conducting the study. The pilot study was conducted with 10 menopausal women. The reliability of tool was obtained by split half method on samples participating in the pilot study and correlation was done by Karl's Pearson coefficient of correlation. The reliability of tool was 0.98.

Results and interpretation:- The data was analyzed by applying descriptive and inferential statistics. The findings showed that the mean post test knowledge score (21.23) was higher than the mean pre test score(16.3) and found to be highly significant with a calculated 't' value of 7.51 thus the results have validated and structured teaching programme devised. There was statistical significant existing relation between Education, occupation and marital status with the knowledge about osteoporosis among menopausal women. But has no significant relation with knowledge between Age, dietary pattern, monthly family income and source of information with the knowledge of osteoporosis among menopausal women.

Conclusion:- The results of the study indicated that menopausal women were having less knowledge regarding osteoporosis and structured teaching programme had helped them to increase their knowledge.

INTRODUCTION

The health status of women directly reflects the health status of the nation. The concept of women's health today has become a major concern among the developing countries because it deteriorating quality of life. Though India has made considerable progress in social and economic development in recent decades such improvement in life expectancy, infant mortality and literacy demonstrate but it lagged behind in the improvement of women's health.[1]

During menopause estrogen level become significant lowered. Estrogen hormone help to control the osteoclasts, which are the bone cell producers. When estrogen level decrease in menopausal women that can ultimately leads to osteoporosis.[2]

Need of the Study

Osteoporosis is an major health problem in menopausal women. Not only does it give rise to morbidity but also markedly diminishes the quality of life of women after menopause over 65 years of age. In Punjab 80% population is residing in rural areas. and women have lack of awareness so, that they don't know about risk factors and management of osteoporosis .

It is called silent disease because bone loss occur without symptoms. Their bones become so weak that a sudden strain, bump, or fall causes a hip, vertebral or wrist fracture.[3]

AIM OF THE STUDY

The aim of the study is to improve the knowledge of menopausal women regarding osteoporosis in rural community of district-Tarn Taran.

OBJECTIVES

1. To assess the pre test knowledge of menopausal women regarding osteoporosis.

2. To plan and implement STP through lecture cum discussion regarding osteoporosis.
3. To assess the post test knowledge of women regarding osteoporosis.
4. To compare pre test & post test knowledge.
5. To find out association between knowledge score with their selected demographic variables.

Hypothesis

H_1:- There will be a significant difference between pre test and post test mean knowledge score regarding osteoporosis among menopausal women.

H_0:- There will not be significant difference between pre test and post test mean knowledge score regarding osteoporosis among menopausal women.

Delimitations

1- The study was delimited to menopausal women only.
2- This study was delimited to the selected rural community of District Tarn Taran only.

Review of Literature

1. Miura S, Yagi M et al. (2010) conducted a study on cross sectional association of knowledge was found with selected socio-demographic variables like age, educational background and family income status. Total sample of study was 1151 urban women. The results shows that 80.3% of the women had heard about osteoporosis but only 24% were aware about the locally available calcium rich foods. Thus the study concluded that older age was a positive predictor, whereas higher educational background was a negative predictor. so, more emphasis should be placed on information regarding locally available calcium rich foods as part of nutritional education for young women.[33]

2. Amer Shakil, Nora E et al.(2010) conducted a Quasi experimental study assessing knowledge about osteoporosis

among south Asian women. Administered a baseline knowledge test, followed by a health education intervention and 2 weeks later by a post test. Results indicate the efficacy of educational intervention in improving osteoporosis awareness and point to the potential for knowledge acquisition aimed at developing community based prevention strategies at the community level.[4]
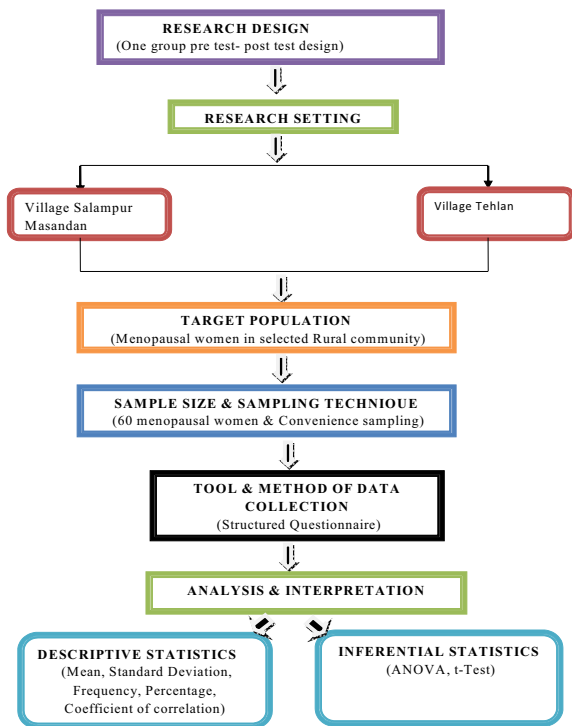

Figure 2: Schematic diagram of Research Design

Research Design & Setting
One group pre test and post test research design was used. The Study was conducted in rural community villages Goindwal Sahib & Khadoor Sahib of District-Tarn Taran, Punjab.

Population & Sample
The Target population includes Menopausal women who were residing in rural community of district Taran Taran. Total 60 menopausal women were selected from rural community using convenience sampling technique.

Inclusion &exclusion Criteria
Inclusion Criteria
1. All Menopausal women of selected rural community.
2. Women who are willing to participate in the study.

Exclusion Criteria
1. Those who were not present at the time of data collection.
2. Mentally retarded and cognitive impairment women.

Description of Tool:-
The tool was constructed to assess the knowledge of osteoporosis among menopausal women. The tool was divided into three sections:-

Section A:- Socio- demographic variables.
Section B:- This section comprised of knowledge questionnaire in which 30 question were prepared.

Table 1. Criterion measure for knowledge:-

Level of knowledge	Score	%
Good	26-30	>83.33
Average	16-25	>50-83.33
Poor	≤15	≤50

Reliability of Tool
The reliability of tool was obtained by split half method on samples participating in the pilot study and correlation was done by Karl's Pearson Coefficient of correlation. The reliability of tool was 0.98

Ethical considerations
- Prior information and explanation was given to concerned higher authority and samples.
- Written informed consent was taken from samples. and assured them their responses& anonymity will be kept confidential.

Data Analysis:-
Data was analyzed by Descriptive statistics (mean, standard deviation frequency, percentage, correlation coefficient, split half method)and Inferential statistics was done by using 't'-test, and ANOVA.

Table 2 Comparison Of Pre Test And Post Test Mean Knowledge Score.

N	Pre test mean	SD	Post test mean	SD	t-value
60	16.3	4.01	21.23	3.127	7.51

Maximum score=30   *
significant at p<0.05
Minimum score=0

Table 2 depicts that tcal 7.51 > 1.960 at 5% level of significance. The mean score of the post test 21.23 were more than mean score of pre test that was 16.3.this shows that with structured teaching programme, knowledge had improved regarding osteoporosis among menopausal women in selected rural community.

H1 was accepted at 5% level of significance and H0 was rejected. This shows that there was significant difference between level of knowledge scores regarding osteoporosis.

Table 3 Association between pre test and post test knowledge score according to education

N=60

Education	n	Pre test Mean	SD	variance	t-value	Post-test Mean	SD	variance	t-value
illiterate	7	12.57	4.92	24.24	t=2.03[s]	16.43	1.17	1.38	9.36[s]
Literate (5th and above graduation)	53	16.49	3.88	15.17		21.86	2.72	7.43	

S=Significant at p<0.05

This table depicts that the pre test mean knowledge score was highest (16.49) in literate, followed by illiterate(12.57) On the other hand, the post test mean knowledge score was highest (21.86)in literate followed by illiterate(16.43).The difference of pre test as well as post test mean knowledge score between and within the education was statistically significant. the value of pre test was t=2.03S>1.960 and 't' value of post-test=9.36S>1.960 . the variables of Education Qualification was significant at 5% level of significance with knowledge of osteoporosis. Hence, it was inferred that there was influence of education on knowledge of osteoporosis among menopausal women.

Table 4 Association between pre test and post test knowledge score according to occupation.

occupation	n	Pre test Mean	SD	variance	t-value	Post-test Mean	SD	variance	t-value
housewife	42	15.785	3.454	11.93	t=2.55[s]	20.35	3.03	9.189	4.08[s]

working	18	18.63	4.524	20.47		22.27	3.14	9.867	

S=Significant at p<0.05

This table reveals that the pre test mean knowledge score was highest (18.63) in working women, followed by housewife (15.785) On the other hand, the post test mean knowledge score was highest in working women (22.27), followed by housewife (20.35) The difference of pre test as well as post test mean knowledge score between and within the occupation was statistically significant. The value at the level of of pre test was t=2.55^s>1.960 and T value of post-test= 4.08^s>1.960. The variables of occupation were significant at 5% level of significance with knowledge of osteoporosis. Hence, it was inferred that there was influence of occupation on knowledge of osteoporosis among menopausal women.

Major Findings and Conclusion:
Majority of menopausal women were literate 53(88.33%) followed by 7(11.67%) were illiterate.

For their occupation majority of menopausal women were housewife 42(70%) followed by 18(30%) were working.

Majority of menopausal women were vegetarian 50(83.33%) followed by 7 (11.67%) menopausal women were non vegetarian and very less 5.0% were eggeterian.

For their source of information, majority of menopausal women had information through mass media 23 (38.83) followed by 19 (30%) of through health professional and 19(31.07%) had no information about osteoporosis.

The mean post test knowledge score 21.23 was comparatively higher than the mean pre test knowledge score 16.3. this shows that structured teaching programme regarding knowledge of osteoporosis among menopausal women was effective in increasing the mean score of knowledge from pre test to post -test. Paired t-test was used to find out effectiveness of STP among menopausal women. Result of t-test shows that there was significance change in knowledge due to structured teaching programme.

There was statistical relation between Education, occupation and marital status with the knowledge about osteoporosis among menopausal women. There was no significant relation between Age, dietary pattern, monthly family income and source of information with the knowledge of osteoporosis among menopausal women.

Recommendations
Based on the findings of the study the investigator proposed the following recommendations
1. The study can be done in large sample
2. A comparative study to assess the knowledge of osteoporosis among menopausal women in rural and urban community of district, Tarn Taran
3. A quasi experimental study on effectiveness of structured teaching programme on knowledge of osteoporosis among menopausal women in selected rural community.
4. Multicentric larger study should be conducted to assess the knowledge of osteoporosis among menopausal women in rural community.

Nursing Implication
1. Present study can help investigator to enrich knowledge of osteoporosis in community setting.
2. Present study would help to understand the level of knowledge among menopausal women regarding osteoporosis. so, increase awareness program about importance of prevention of osteoporosis can be organized for the general public and other health professionals.

Nursing Service
Community Health Nursing Service
1. All the health care providers such as the auxiliary nurses and midwives, village health nurses, nurses working in community centers should be educated the people regarding osteoporosis.
2. Facilities to be made available for managing clients with osteoporosis in all hospital including community setup.
3. Through mass media information provided to menopausal women regarding osteoporosis. Article in newspapers and magazines is also helpful to give information about osteoporosis.

Nursing Research
1. Findings of the study will serve as a catalyst for further research on this concept and plan for educational programme on prevention of osteoporosis among menopausal women.
2. The study will serve as available reference materials for future investigators. Very few studies of this kind have be done in Indian setting. Through publication of the research findings menopausal women health can be promoted by nurse investigator.

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