**Research Article**

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# Effect of Structured Instructional Module Regarding Osteoporosis on Knowledge among Postmenopausal Women in Selected Hospital

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**ABSTRACT**

According to World Health Organization (WHO) over 200 million people worldwide are affected As per Indian census population above 50yrs, there is an estimate that 20% of women and 10-15% men are osteoporosis. The key factor to avoid severe effects from osteoporosis is prevention. The main objectives of the study was to assess and compare the knowledge of postmenopausal women regarding prevention of Osteoporosis.Pre experimental one group pretest posttest design was used. The study was conducted at Deepam Hospital, Chennai.30 Female were selected using convenient sampling. Structured knowledge questionnaire was used to assess the knowledge of postmenopausal women regarding prevention of osteoporosis. Descriptive and inferential statistics were used to analyze the data. The findings of the study. It is evident from the data present was significant difference between the overall pre and posttest which implies gain in knowledge level about osteoporosis among Postmenopausal women. The total mean score in pre-test knowledge was 11.733 and total mean score in post test knowledge was 16.4. The mean difference (-4.667) between total pre and post knowledge shows a true difference. Since the calculated't' value (18.95) was greater than the table value. The research hypothesis was accepted at 0.001 level of significance. Instructional module is an effective strategy in enhancing knowledge improving practices of postmenopausal women regarding prevention of osteoporosis.

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## Introduction

A bone is a rigid organ that constitutes part of the vertebrate skeleton. Bones provide Support for the body, Protection for vital structures. Bone is a living, dynamic tissue that undergoes constant remodeling throughout life. Osteoporosis which literally means porous bone in the disease in which the density and quality of the bone are reduced. As the bones become more porous and fragile, the risk of fracture greatly increased. A woman reaches 30 years of age her body gains more bone than it loses. Around age 30, this process balances out. The onset of menopause around 50 years of age may speed up the rate of bone loss. If bone loss becomes severe, women may develop osteoporosis. According to WHO over 200 million people worldwide are affected As per Indian census population above 50 yrs, there is an estimate that 20% of women and 10-15% men are osteoporosis. In Tamil Nadu over 20% are affected by osteoporosis. The key factor to avoid severe effects from osteoporosis is prevention. Women may protect themselves from severe bone loss by maintaining a balanced diet rich in calcium, performing regular weight-bearing exercise, limiting alcohol intake, not smoking. Clinicians can help identify therapy goals for short term relief of menopausal symptoms and long term relief and prevention of osteoporosis and fractures. The condition can be prevented by exercising regularly and making some other lifestyle changes. While planning treatment for an osteoporotic patient, non-pharmacological management options should be considered and integrated to the conventional treatment in order to maximize its effects and improve the quality of life of these patients. Osteoporosis is a preventable disease. Education and lifestyle changes, the incidence of osteoporosis can be reduced. It is important that women should have knowledge regarding risk factors for osteoporosis and preventive health behaviors. Researcher strongly felt that since the postmenopausal women are at risk and unaware about this silent killer, imparting knowledge. Osteoporosis becomes a serious health threat for aging postmenopausal women by predisposing them to an increased risk of fracture. Osteoporotic fractures are associated with substantial morbidity and mortality in postmenopausal women, especially older women. The need for prevention of this silent killer is must, as this has become the major life threatening disease. A nurse being health care personnel shares the responsibility in the formation of a healthy society [1-10].

## Objectives

➢ To assess the pretest level of knowledge regarding prevention of osteoporosis among postmenopausal women.
➢ To assess the effectiveness of Instructional module regarding prevention of osteoporosis among postmenopausal women.
➢ To find out the association between the posttest level of knowledge with selected demographic variables.

## Material and Methods

The research design used in the study was pre-experimental, one group pretest posttest design. The population of the present study comprised of postmenopausal women in Deepam Hospital. A study was conducted after getting the approval from the Nursing

Superintendent in Deepam Hospital at Chennai. A well oral and written informed consent was obtained from each study participant after giving full information about the study. Anonymity was assured to each participant and maintained by the researcher. The data was collected by structured knowledge questionnaire, Both Descriptive and inferential statistics were used for data analysis.

## Results

The purpose of the present study was to assess the level of knowledge among postmenopausal women. The data was collected from 30 postmenopausal women from Deepam Hospital chrompet at Chennai. Analysis is done by both descriptive and inferential statistics.

Table:1 Reveals that Demographic variables of postmenopausal women shows Frequency and percentage distribution by their characteristics such as age, food, religion, education, body mass and exercises.14(36%) of the women were in the age group of 45-60 years, the food habits women 22 (73%) have mixed foods, were Hindu 15(50%) Christians 10(33%), graduates 16 (53%), Body mass index 17(57%), 21(70%) will do exercises sometimes. Fig ;1 shows that During pretest, 10(33%) of Postmenopausal women were in Inadequate level of knowledge regarding osteoporosis.3(10%) postmenopausal women were in Adequate level of knowledge.17(57%) postmenopausal women were in moderate level of knowledge. Fig;2 states that During posttest 0(0%) of Postmenopausal women were in Inadequate level of knowledge regarding osteoporosis.18(60%) postmenopausal women were in Adequate level of knowledge.12(40%) postmenopausal women were in Moderately level of knowledge regarding osteoporosis. Association was not found by using Chi – square test. There is no association with any of the demographic variables like age, food, religion, education, body mass and exercises. The total mean score in pre-test knowledge was 11.733 and total mean score in post test knowledge was 16.4. Table;2 enables that the mean difference (-4.667) between total pre and post knowledge shows a true difference. Since the calculated 't' value (18.95) was greater than the table value. The research hypothesis was accepted at 0.001 level of significance.

**Table 1: Analysis of Demographic Data**

| S.No | Demographic Variables | Frequency | Percentage % |
|---|---|---|---|
| 1. | AGE0<br>A) 45 – 50 years<br>B) 50 – 55 years<br>C) 55 – 60 years | 10<br>14<br>6 | 33%<br>46%<br>20% |
| 2. | FOOD<br>A) Vegetarian<br>B) Non-vegetarian<br>C) Mixed | 3<br>5<br>22 | 10%<br>17%<br>73% |
| 3. | RELIGION<br>A) Hindu<br>B) Christian<br>C) Muslim | 15<br>10<br>5 | 50%<br>33%<br>17% |
| 4. | EDUCATION<br>A) Diploma<br>B) Graduate<br>C) Post graduate | 5<br>16<br>4 | 17%<br>53%<br>13% |
| 5. | BODY MASS INDEX<br>A) Below 18<br>B) 18.5 – 25<br>C) Above 25 | 5<br>17<br>8 | 17%<br>57%<br>27% |
| 6. | EXERCISES<br>A) Daily<br>B) Weekly once<br>C) Sometimes | 3<br>6<br>21 | 10%<br>20%<br>70% |
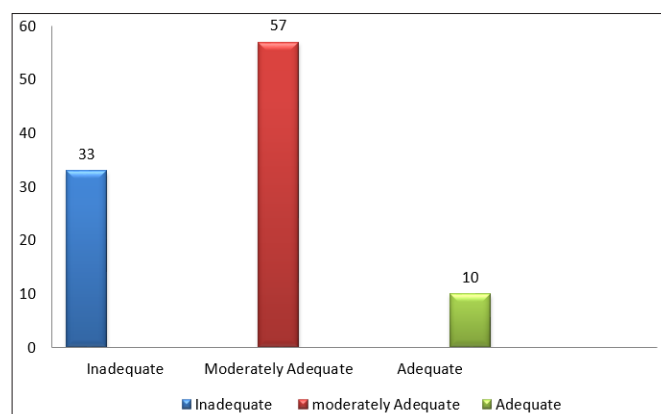


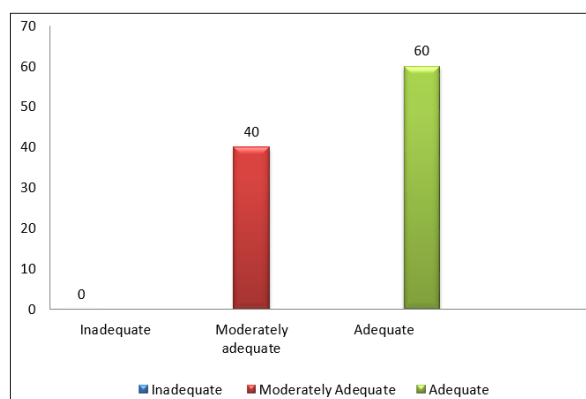**Figure 1:** Pre Test Level of Knowledge Regarding Osteoporosis

**Figure 2:** Post Test Level of Knowledge Regarding Osteoporosis

**Table 2: Mean, Mean Difference, Standard Deviation of Difference between Total Pre and Post Test Knowledge Postmenopausal Women on Osteoporosis and Its Significance**

| Aspect | Total mean Score | | Total Mean difference | Standard Deviation difference | 't' Value | 'p' Value |
|---|---|---|---|---|---|---|
| | Pre-test | Post-test | | | | |
| Knowledge | 11.733 | 16.4 | -4.667 | 1.324974 | 18.95 | P<0.001 |

## Discussion

The aim of the study was to assess the effectiveness of Instructional Module on prevention of osteoporosis among Postmenopausal women. A quantitative approach was used for postmenopausal women. The study population comprised of postmenopausal women between the age of 45-60 years from selected population in Deepam Hospital. The sample size was 30. A convenient sampling technique was used to select the samples. The data collection tools used was demographic variables and knowledge questionnaire. During the period of data collection the data were collected from the administrative staff women by using the tool which had been already prepared by the investigator. The finding of the study have been discussed in terms of objectives and hypothesis is stated for the study [11-14].

**Conflict of Interest:** None.

## Acknowledgement

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## Conclusion

Osteoporosis is a worldwide problem which needs an immediate measure. The Instructional Module given to the postmenopausal women has an effectiveness of knowledge on prevention and control of osteoporosis can help the create awareness among the women in order to prevent osteoporosis which is leading to a major cause of health problems in postmenopausal period.

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