



# **A Study To Evaluate The Effectiveness Of A Structured Teaching Programme On Knowledge Regarding Risk Of Osteoporosis Among Premenopausal Women Attending Opd At Nmch, Jamuhar**

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## **ABSTRACT**

Osteoporosis is a chronic, progressive metabolic bone disorder characterized by reduced bone mass and microarchitectural deterioration, resulting in increased bone fragility and fracture risk. This study was conducted to assess the effectiveness of a Structured Teaching Programme (STP) in improving knowledge regarding osteoporosis risk among premenopausal women attending NMCH, Jamuhar.

**Methodology:** A quasi-experimental one-group pre-test post-test design was adopted. Sixty premenopausal women aged 30–45 years were selected by purposive sampling. A structured knowledge questionnaire was used. The STP was developed based on WHO and ICMR guidelines and delivered using visual aids and interactive sessions. Data were analyzed using descriptive and inferential statistics.

**Results:** Pre-test findings revealed that 40% of participants had poor knowledge, 50% had average knowledge, and 10% had good knowledge (mean score  $9.58 \pm 2.89$ ). Post-test findings showed significant improvement, with 66.7% achieving good knowledge (mean score  $16.60 \pm 3.57$ ). The paired t-test value was 37.69 ( $p < 0.001$ ), confirming statistical significance. No significant association was found between post-test scores and demographic variables.

**Conclusion:** The study demonstrated that a culturally adapted, nurse-led STP is highly effective in enhancing awareness and knowledge regarding osteoporosis risk among premenopausal women.

## INTRODUCTION

Osteoporosis is a chronic, progressive metabolic bone disease characterized by low bone mass and microarchitectural deterioration of bone tissue, which leads to increased bone fragility and susceptibility to fractures. It is often referred to as the 'silent thief' because bone loss occurs gradually and without symptoms until a fracture occurs. Although associated with aging and postmenopausal women, prevention needs to begin earlier during the premenopausal period (30–45 years), which is a critical window for achieving and maintaining bone mass. In India, awareness about osteoporosis is very low, particularly in semi-urban and rural populations. Structured Teaching Programmes (STPs) have emerged as effective interventions to bridge the knowledge gap. This study evaluates the effectiveness of an STP in increasing knowledge among premenopausal women at NMCH, Jamuhar.

## PROBLEM STATEMENT

A study to evaluate the effectiveness of a structured teaching programme on knowledge regarding risk of osteoporosis among premenopausal women attending OPD at NMCH, Jamuhar.

## OBJECTIVES

1. To assess the pre-test level of knowledge regarding the risk of osteoporosis among premenopausal women attending OPD.
2. To administer a structured teaching programme on the risk of osteoporosis.
3. To assess the post-test level of knowledge after the structured teaching programme.
4. To evaluate the effectiveness of the structured teaching programme by comparing pre-test and post-test knowledge scores.
5. To find an association between pre-test knowledge scores and selected demographic variables.

## MATERIALS AND METHODS

Research Approach: Quantitative

Research Design: Quasi-experimental one-group pre-test post-test design

Research Setting: Outpatient Department (OPD), Narayan Medical College and Hospital (NMCH), Jamuhar

Population: Premenopausal women aged 30–45 years

Sample Size: 60

Sampling Technique: Non-probability purposive sampling

Tool: Structured knowledge questionnaire (25 MCQs)

Intervention: Structured Teaching Programme (45 minutes, with visual aids, interactive Q&A)

Data Collection: Pre-test, STP, and post-test after 7 days

Data Analysis: Descriptive statistics (mean, SD, percentage) and inferential statistics (paired t-test, chi-square)

Ethical Considerations: Institutional approval, informed consent, confidentiality maintained.

## RESULTS

Pre-test: 40% had poor knowledge, 50% average, 10% good. Mean =  $9.58 \pm 2.89$ .

Post-test: 3.3% poor, 30% average, 66.7% good. Mean =  $16.60 \pm 3.57$ .

Paired t-test value = 37.69,  $p < 0.001$  (highly significant).

Chi-square analysis: No significant association between post-test scores and demographic variables (education  $p = 0.0759$ ; occupation  $p = 0.9178$ ).

## DISCUSSION

The structured teaching programme proved highly effective in improving knowledge levels regarding osteoporosis risk among premenopausal women. The significant improvement in post-test scores confirms the effectiveness of the intervention. Findings are consistent with previous studies in India and globally that highlight the role of nurse-led educational interventions in enhancing awareness about osteoporosis. Lack of significant association with demographic factors indicates the programme was equally effective across different subgroups.

## IMPLICATIONS FOR PRACTICE

1. Nurse-led STPs should be integrated into routine OPD services to enhance osteoporosis awareness.
2. Health professionals should emphasize preventive strategies such as diet, exercise, and screening during counseling.
3. Similar interventions can be adapted for rural and low-literacy populations using pictorial and multimedia aids.
4. Policymakers should consider including bone health education in national health programmes.

## CONCLUSION

The study concluded that a structured teaching programme significantly improved knowledge regarding osteoporosis risk among premenopausal women. Such culturally adapted, nurse-led interventions are effective tools for preventive health education and can reduce the future burden of osteoporosis.

## REFERENCES

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