



**ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF OSTEOPOROSIS
AMONG FEMALES OF A TERTIARY CARE TEACHING HOSPITAL**

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ABSTRACT

Background: The objectives of the study is to assess the knowledge, attitude and practice of osteoporosis among females of a tertiary care teaching hospital. **Materials and methods:** A prospective study was conducted in the Orthopaedics ward at Navodaya Medical College Hospital & Research Centre, Raichur, Karnataka. Concurrent study was performed on awareness about osteoporosis among in-patients and outpatients during the course with prior consent from patients. Scores were collected from questionnaires and analysed using suitable statistical methods. **Results:** The results showed that question wise most of the women didn't knew and heard about osteoporosis 50.90%, its causes 48.8% and its symptoms 47.27% more than half of the women were not aware of the risk of osteoporosis 56.36% and did not answered the question correctly whether osteoporosis is common among women or men 42.72%. Almost 81.81% of the participants did not had the desire to undergo required investigations and proper consultation regarding osteoporosis. They also showed low interest to read about osteoporosis 90%. Most of women were not drinking soft drinks 54.54%, eating food rich of calcium and vitamins 29.09%. **Conclusion:** Overall, females had poor level of knowledge, attitude and preventive practices towards osteoporosis. The results suggested the need to implement proper health education programs to raise the awareness on osteoporosis, motivate healthy practices about osteoporosis, and screen for the early signs and symptoms of osteoporosis.

KEYWORDS: Osteoporosis, knowledge, attitude, practice and awareness.

INTRODUCTION

Osteoporosis is a disease of bones in which the bone mineral density (BMD) is reduced, bone microarchitecture deteriorates, and the amount and variety of proteins in bone are altered. Osteoporosis is defined by the World Health Organization (WHO) as a bone mineral density of 2.5 standard deviations or more below the mean peak bone mass (average of young, healthy adults) as measured by dual-energy X-ray absorptiometry¹. The primary is a form of osteoporosis most common in women after menopause. The secondary occurs after age 75 and is seen in both females and males at a ratio of 2:1. Its cause is related to certain diseases such as metabolic diseases, vitamin deficiencies or usage of specific drugs.^[1]

The prevalence of osteoporosis has reached to endemic proportions. As projected by WHO, approximately 75 million people in Europe and America are suffering from osteoporosis and worldwide 9 million fractures are solely due to osteoporosis every year. Although osteoporosis is more prevalent among Caucasians, it has been estimated that by 2050, more than 50 percent of all osteoporotic fractures will occur in Asia.^[6]

Osteoporosis causes are multifactorial such as low intake of calcium in diet, smoking, sedentary lifestyle, female sex, Asians and Caucasians race, advancing age, menopause before 45 years, family history, multiparity and prolonged lactation.^[3]

Risk factors include age, female sex, family history, low weight, decrease mobility, low calcium intake, cigarette smoking, predisposing medical problem such as liver disease, hyperthyroidism and long-term consumption of glucocorticoids.^[4]

Treatment involve both nonpharmacological and pharmacological, in nonpharmacological a well balanced diet with nutrients and minerals, adequate calcium intake for the development of bone mass, vitamin D, alcohol and smoking cessation, regular exercise, prevent fall etc. Pharmacological treatment involve calcium supplements, vitamin D supplements, RANK ligand inhibitor (Denosumab), estrogen agonist antagonist (Raloxifene, Bazedoxifen etc.), recombinant human parathyroid hormone (Teriparatide) and bisphosphonates.^[9]

OBJECTIVES OF STUDY

The proposed study on "Assessment of Knowledge, Attitude And Practice Of Osteoporosis Among Females

Of A Tertiary Care Teaching Hospital”is planned with the below mentioned specific objectives.

- To evaluate knowledge and perceptions of causes and prevention of osteoporosis among females.
- To identify range of age groups and educational degrees who need more education on osteoporosis.
- To assess the knowledge, attitude and practice of females regarding osteoporosis and increase medication adherence among females.
- To create awareness among females about osteoporosis.
- To improve the quality of life and to minimize the morbidity in patients.

MATERIALS AND METHODS

Inclusion Criteria

- All females above 18 years of age (inpatient and outpatient of orthopaedic department)

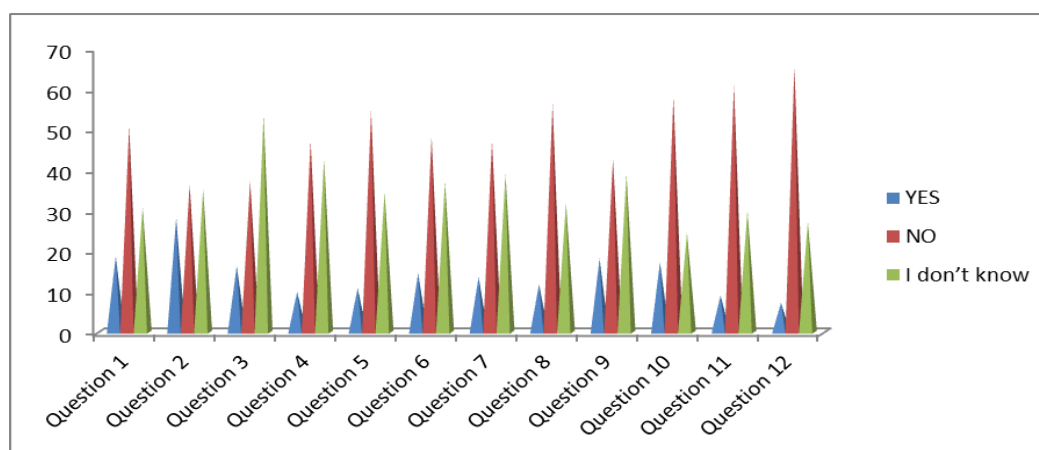
Exclusion Criteria

- All females above 75 years of age.
- Females not willing to participate.
- Pediatric patients.

RESULTS

Table 1: Participants knowledge about Osteoporosis.

| SL.NO | Knowledge Questions | Yes (%) | No (%) | I don't know (%) |
|-------|---|---------|--------|------------------|
| 1 | Do you know about osteoporosis? | 18.8 | 50.90 | 30.90 |
| 2 | Are affected with osteoporosis? | 28.18 | 36.36 | 35.4 |
| 3 | Is there a positive family history of osteoporosis? | 16.36 | 37.27 | 53.63 |
| 4 | Have you ever had a fracture because of a simple effort? | 10 | 47.27 | 42.72 |
| 5 | Did you do a bone density test for osteoporosis? | 10.90 | 54.54 | 34.54 |
| 6 | Do you know the causes of osteoporosis? | 14.54 | 48.18 | 37.27 |
| 7 | Do you know the symptoms of osteoporosis? | 13.63 | 47.27 | 39.09 |
| 8 | Are you aware of the risk of osteoporosis? | 11.81 | 56.36 | 31.81 |
| 9 | Do you know that women are more prone to have osteoporosis? | 18.18 | 42.72 | 39.09 |
| 10 | Do you know that less sun exposure can lead to Osteoporosis? | 17.27 | 58.18 | 24.54 |
| 11 | Have you ever attended educational Programmes/campaigns about osteoporosis? | 9.09 | 60.90 | 30 |
| 12 | Is osteoporosis wide spread in the community? | 7.27 | 65.45 | 27.27 |



The study was focused on knowledge, attitude and practice (KAP) of participants. **Table 1** shows that most

Statistical analysis

- Data collected was analysed using descriptive statistics.

Study materials

- Patient profile form (includes patient case sheets and administration details).
- A pre-tested, pre-coded self-administered KAP questionnaire will be used.

Operational Modality

The prospective study was conducted for a period of three months from March 2019 to May 2019 in NMCHRC Raichur. Permission was obtained from ethical clearance committee before beginning the study. Case records of eligible patients was reviewed on daily basis from the hospital. Concurrent study was performed on awareness about osteoporosis among in-patients and outpatients during the course with prior consent from patients. Scores were collected from questionnaires and analysed using suitable statistical methods.

of the participants had poor knowledge about osteoporosis. Question wise most of the women didn't

knew and heard about osteoporosis 50.90%, its causes 48.8% and its symptoms 47.27%. more than half of the women were not aware of the risk of osteoporosis 56.36% and did not answered the question correctly whether osteoporosis is common among women or men 42.72%. Moreover women were not aware about the role

of sun exposure in osteoporosis and its spread in the community 58.18% and 60.90% respectively. Although poor knowledge scores had been reported, majority of the participants never attended educational campaigns/programmes about osteoporosis 65.45%.

Table 2: Participants attitude about Osteoporosis.

| SL.NO | Attitude Questions | Yes (%) | No (%) |
|-------|--|---------|--------|
| 1 | Are you thinking of protecting yourself against Osteoporosis? | 22.72 | 77.27 |
| 2 | Do you want to undergo required investigations and consult a physician for osteoporosis? | 18.18 | 81.81 |
| 3 | Are you going to look for/read about osteoporosis? | 10 | 90 |

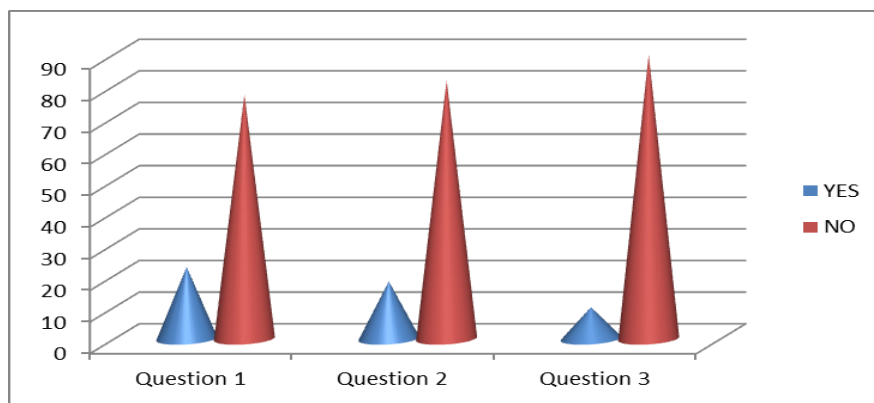


Table 2: shows that regarding attitude participants were not critically thinking of protecting themselves against osteoporosis by various mean 77.27%. Almost 81.81% of the participants did not had the desire to undergo

required investigations and proper proper consultation regarding osteoporosis. They also showed low interest to read about osteoporosis 90%.

Table 3: Participants practice about Osteoporosis.

| SL.NO | Practice questions | Daily (%) | Sometimes (%) | Rarely (%) | Never (%) |
|-------|--|-----------|---------------|------------|-----------|
| 1 | Exposing to sun (before 10 a.m.)? | 47.27 | 25.45 | 16.36 | 10.90 |
| 2 | Performing physical exercises/physical Activities? | 22.72 | 18.18 | 11.81 | 47.27 |
| 3 | Drinking soft drinks? | 20 | 15.45 | 10 | 54.54 |
| 4 | Eating food rich of calcium and vitamins? | 29.09 | 25.45 | 15.45 | 30 |

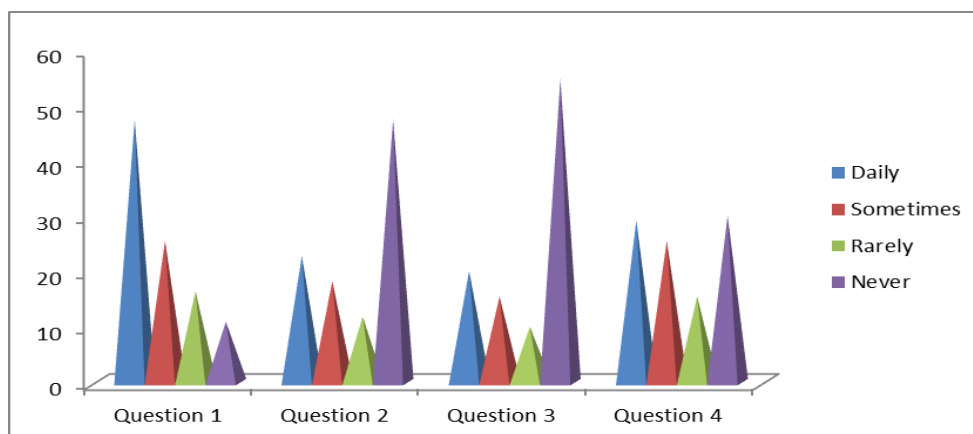


Table 3 shows that question wise women were exposing themselves to sun before 10 a.m on daily basis 47.27%, they sometimes expose themselves 25.45%. however,

most of them rarely performed physical activities 47.27%. Most of women were not drinking soft drinks

54.54%, eating food rich of calcium and vitamins 29.09%.

DISCUSSION

In order to prevent osteoporosis effectively, it is necessary to have knowledge about lifestyle, risk factors, positive attitude towards them and to practice in a corresponding suitable way. Hence increasing knowledge should be a priority for future intervention in programs in order to promote specific behavioral strategies for osteoporosis prevention. Knowledge, attitude and practice showed a low level of knowledge about osteoporosis, poor attitude towards osteoporosis and a poor practice towards osteoporosis. In contrast, other studies reported poor levels of KAP towards osteoporosis. Majority of the participants doesn't know about osteoporosis, which is consistent with other study results. Awareness of osteoporosis was low in which more than half of the sample were not aware of risk of osteoporosis. Moreover in our study most of the participants were daily exposed to the sunlight. In regard to physical activity and eating food rich in calcium and vitamins, results were variant. Women who were performing physical activities represented a small fraction. For calcium and vitamins rich food intake, our study populations were poor. Women showed a negative attitude towards osteoporosis in a matter of reading materials about osteoporosis compared to other studies which showed lower attitude towards osteoporosis. Our study recommend to guide further researchers of the same field with larger sample size to enhance the accuracy of the findings, to enroll male sample to have a more comprehensive and comparative view of KAP of osteoporosis and to arrange educational programmes to increase the level of awareness towards osteoporosis.

CONCLUSION

Overall, females had poor level of knowledge, attitude and preventive practices towards osteoporosis. Ministry of education should be involved in health education about osteoporosis and its related factors. Health authorities should create program to upraise the awareness of the community for this important disease, especially at primary health care levels and community pharmacies. The results suggested the need to implement proper health education programs to raise the awareness on osteoporosis, motivate healthy practices about osteoporosis, and screen for the early signs and symptoms of osteoporosis.

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