

“A STUDY TO ASSESS THE KNOWLEDGE REGARDING WARNING SIGNS OF OSTEOPOROSIS AMONG GERIATRIC IN SELECTED AREAS OF PUNE CITY.”

Ramesh Bidari^{1a*}, Ketaki Kadam^{2b}, Shweta Bandal^{3b}, Dhiraj Gawali^{4b}.

a. Clinical Instructor, Bharati Vidyapeeth (Deemed to be University) College of Nursing, Pune.

b. GNM Nursing, Bharati Vidyapeeth School of Nursing, Pune.

*Corresponding Author

ABSTRACT

Introduction: Osteoporosis is a condition that causes bones to become weak and brittle, and it can increase the risk of fractures. Some of the common causes of osteoporosis are age, sex, menopause, family history, low body weight, smoking, alcohol consumption, poor nutrition, lack of exercise, and certain medications or diseases. Osteoporosis can be caused by various factors such as age, sex, menopause, family history, low body weight, smoking, alcohol consumption, poor nutrition, lack of exercise, and certain medications or diseases. **The objectives of the study:** To assess the knowledge regarding warning signs of osteoporosis among the geriatric & to associate knowledge findings with their demographic variables. **Research methodology:** In this study we used quantitative research approach. A descriptive research design was selected as the investigation's study methodology. The non-probability convenient sampling technique was used. The sample consists of 100 geriatric in the selected areas of Pune city who had fulfilled the inclusion criteria. The reliability of tool was done on 10 participants the value was 0.84 and tool found reliable. **Result:** Knowledge regarding warning sign of osteoporosis, which reflects that majority 63% of samples, were having average knowledge, 37% were having good knowledge. Mean score was 10.21 along with 1.18 SD. Demographic variables such as no any significant association with age, Occupation, gender and past history of bone disease. Qualification has significant association with knowledge as the p value is more than 0.05.

Key words: Warning signs, Osteoporosis, Weak and brittle, Alcohol consumption, Menopause.

INTRODUCTION

Osteoporosis is a debilitating skeletal disorder characterized by low bone mass and deterioration of bone tissue, leading to increased susceptibility to fractures. It is a major public health concern due to its high prevalence and significant impact on morbidity, mortality, and healthcare costs. Osteoporosis is a multifactorial disease influenced by various genetic, hormonal, and environmental factors. Bone mass reaches its peak during early adulthood and gradually declines with advancing age. This age-related bone loss is influenced by a complex interplay of genetic and environmental factors. Investigating the mechanisms underlying age-related bone loss can provide insights into potential therapeutic targets to prevent or delay the onset of osteoporosis. Lifestyle factors, such as inadequate calcium and vitamin D intake, sedentary behaviour, and smoking, also contribute to the development of osteoporosis.

Calcium and vitamin D deficiencies impair bone mineralization, while physical activity and smoking cessation have been shown to improve bone health. Addressing these modifiable risk factors through lifestyle modifications and nutritional interventions can significantly reduce the burden of osteoporosis.

NEED OF THE STUDY

Osteoporosis is a significant public health concern, affecting a large number of individuals worldwide. There is a need for comprehensive research to address the various aspects of osteoporosis in order to improve prevention, diagnosis and management strategies. Osteoporosis is a highly prevalent condition, particularly among postmenopausal women and older adults. It is associated with a substantial burden on individuals, healthcare systems, and society as a whole (Hernlund et al., 2013). Understanding the epidemiology, risk factors, and consequences of osteoporosis is essential for effective resource allocation, public health planning, and development of preventive measures. The aim of the study was to assess the knowledge regarding warning signs of osteoporosis among the geriatric in selected areas of Pune city.

Osteoporosis is a debilitating skeletal disorder characterized by low bone mass and deterioration of bone tissue, leading to increased susceptibility to fractures. It is a major public health concern due to its high prevalence and significant impact on morbidity, mortality, and healthcare costs. These genetic factors contribute to the individual's susceptibility to osteoporosis and can help identify high-risk populations for targeted interventions. Hormonal imbalances play a critical role in the pathogenesis of osteoporosis. The genetic factors contribute to the individual's susceptibility to osteoporosis and can help to identify high-risk populations for targeted interventions. Hormonal imbalances play a critical role in the pathogenesis of osteoporosis. Particularly in postmenopausal women, experience a decline in oestrogen levels, leading to accelerated bone loss and an increased risk of fractures. Low testosterone levels in men can contribute to the development of osteoporosis.

Understanding the hormonal mechanisms involved in bone metabolism is essential for developing the hormone-based therapies and preventive strategies. Age-related bone loss is another significant factor in the development of osteoporosis. Genetic studies have identified that several candidate genes associated with bone mineral density and osteoporotic fractures.

RESEARCH METHODOLOGY

In this study we used quantitative research approach. A descriptive research design was selected as the investigation's study methodology. The non-probability convenient sampling technique was used. The sample consists of 100 geriatric in the selected areas of Pune city who had fulfilled the inclusion criteria. The reliability of tool was done on 10 participants the value was 0.84 and tool found reliable.

RESULTS

1. Analysis of demographic data of Geriatric people

1. Majority 81% of subjects belongs to 60 to 70 years, 18% were from 71 to 80 years, 1% were from 81years and above age group.

2. Majority 27% of the subjects were completed secondary education, 25% of subjects were completed primary education, 19% were uneducated, 18% were graduate and 11% of samples were post graduate.
3. Majority 33% were skilled labour, 24% were in government job, and 23% were professional and 20% in private services.
4. Majority 54% of samples were male and 46% of samples were female.

Majority 93% were not having history of bone disease and 7% were having history of bone disease.

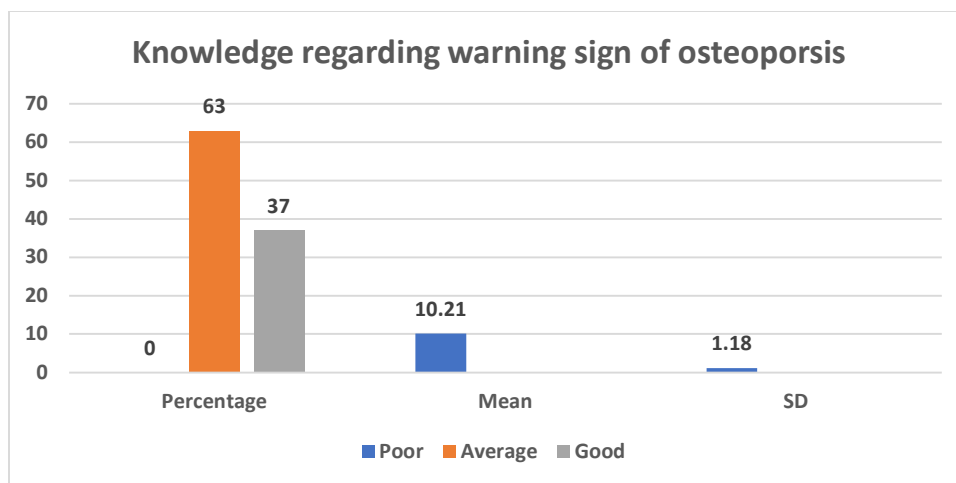
1. Analysis of knowledge regarding Warning signs of osteoporosis among the geriatric

TABLE NO:-01

Knowledge	Frequency	Percentage	Mean	SD
Poor	0	0	10.21	1.18
Average	63	63		
Good	37	37		

Table no 1:-1 shows that majority 63% of samples were having average knowledge, 37% having good knowledge. Mean score was 10.21 along with 1.18 SD.

GRAPH NO:-01



Graph no:-1 shows that majority 63% of samples were having average knowledge, 37% having good knowledge. Mean score was 10.21 along with 1.18 SD.

DISCUSSION

The study aimed to assess the sex-independent association of osteoporosis and cognitive impairment among older adults in Iran. The study used a cross-sectional survey design and collected data from 1508 participants aged 60 years or older. The study used Category Fluency Test and Mini-cog assessment instrument to measure cognitive status, and dual-energy X-ray absorptiometry to measure bone mineral density. The study found that osteoporosis was higher in elderly populations with cognitive impairment, especially in postmenopausal women.

The study concluded that different degrees of bone loss and cognitive impairment may be a risk factor for each other among women but not in men, and suggested that screening and

preventive measures for both conditions should be considered as part of the treatment of patients with cognitive impairment. The study may be conducted within a limited time frame, which can affect the depth and breadth of the research. Longitudinal studies or extensive follow-up periods may be challenging to undertake within the given timeframe, potentially limiting the ability to assess long-term outcomes or changes in disease progression. Osteoporosis is a complex skeletal disorder influenced by genetic, hormonal, age-related, and lifestyle factors. It poses a significant public health challenge due to its high prevalence and the associated burden of fractures. Understanding the epidemiology, risk factors, and consequences of osteoporosis is essential for effective resource allocation, public health planning, and the development of preventive measures. Investigating the underlying mechanisms, risk factors, and consequences of osteoporosis can facilitate the development of targeted prevention, early detection, and management strategies to mitigate its impact on individuals and society. Ethical Considerations: Research on osteoporosis may involve human subjects, and ethical considerations must be adhered to, including informed consent, privacy protection, and compliance with ethical guidelines. These considerations may impose limitations on the study's design, recruitment procedures, and data collection methods.

CONCLUSION

A statistically there is significant association was found with qualification of the selected demographic information regarding warning sign of osteoporosis among geriatrics. The people were having average knowledge of warning signs of osteoporosis. More emphasis is given for health education to create awareness about warning signs of osteoporosis in community by health care professionals. The researchers understand that conflict of interest refers to situations in which financial or other personal considerations may compromise our judgment in evaluating, conducting reporting research. While the study on osteoporosis aims to provide valuable insights into various aspects of the condition, it is important to acknowledge certain limitations or delimitations that may impact the scope and generalizability of the findings.

The study primarily focuses on the prevalence, risk factors and management strategies for osteoporosis within the context of the specific geographic region or population under investigation. The findings may not be applicable to other regions with different demographic characteristics, healthcare systems, and cultural factors. The findings from selected sample can provide valuable insights; they may not represent entire population at risk of osteoporosis. We hereby declare that we do not have any personal conflict of interest that may arise from our application of research study.

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