



RESEARCH ARTICLE

A STUDY TO ASSESS THE AWARENESS REGARDING OSTEOPOROSIS AMONG POSTMENOPAUSAL WOMEN RESIDING IN SELECTED AREA OF CITY LUDHIANA, PUNJAB

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ABSTRACT

Background: Osteoporosis is one of the emerging health issues worldwide. It is a silent disease and can cause fractures of bones. Due to an increase in longevity of life in India, osteoporotic fracture is becoming a major cause of morbidity and mortality, which is similar to the western part of the world. Every year, millions of people are affected by osteoporosis, the majority of them are women. **Objectives:** 1. To assess the level of awareness regarding osteoporosis among postmenopausal women. 2. To find out association of awareness regarding osteoporosis among postmenopausal women with their selected socio-demographic variables. 3. To plan and disseminate IEC material on prevention of osteoporosis among postmenopausal women. **Methodology:** A descriptive study was conducted on 300 postmenopausal women residing in Guru Gobind Singh Nagar, Shimlapuri, Ludhiana, Punjab. The sample was selected using purposive sampling technique. The structured questionnaire was used to assess the awareness regarding osteoporosis among postmenopausal women. The data was obtained by using interview technique. Analysis & interpretation of data was done by using descriptive and inferential statistics as per the objectives of the study. **Results:** The study revealed that out of 300 postmenopausal women, more than half i.e., 173 (57.7%) had average level of awareness whereas 123 (41%) women had poor level of awareness and only 4 (1.3%) women had good level of awareness regarding osteoporosis. **Conclusion:** The present study concluded that more than half of the postmenopausal women had average level of awareness regarding osteoporosis. So, it is important to provide awareness regarding osteoporosis and its contributing factors among postmenopausal women.

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INTRODUCTION

Menopause is caused by the loss of ovarian follicular function and a decline in circulating blood estrogen levels (Ergin Ahmet, 2017). During the menopausal transition period, the drop of estrogen leads to more bone resorption than formation resulting in osteoporosis (Ji, 2021). Bones in the body are in the constant state of formed and destroyed. While the process of new bone formation is rapid when we are young, as we age, it gradually slows down, causing new bone to form slowly and old bone to break down more quickly (Abutaima, 2021). Bones fracture develop more often in specific areas of the body, such as the hip, spine, and wrist (Nelapati, 2023). According to WHO, osteoporosis is defined as a disease characterized by low bone mass and deterioration of the micro-architecture of bone tissue leading to increased fracture risk. It is the common metabolic disease that appear only after considerable damage has occurred (Sundaravalli, 2012). There are many risk factors for osteoporosis out of which are modifiable and some are non-modifiable. Non-modifiable includes age, sex, race, genetic predisposition and long-term use of steroids whereas, modifiable risk factors include sedentary lifestyle, smoking, exercise, insufficient calcium and vitamin D intake, alcohol

consumption (Saadeh Rami, 2022). A women aged more than 40-45 years old should have a bone density test. It is mostly recommended to women during menopause. An X-ray is a safe and painless technique to assess the bone density (Khalid ElTohami). Some of the best ways to prevent osteoporosis are to get a lot of calcium and vitamin D, performing exercises such as walking, lifting weights, stoppage of cigarette use, limiting caffeine to three cups of coffee per day and losing weight (Salari Nader, 2021).

Objectives of the Study

1. To assess the level of awareness regarding osteoporosis among postmenopausal women.
2. To find out association of awareness regarding osteoporosis among postmenopausal women with their selected socio-demographic variables.
3. To plan and disseminate IEC material on prevention of osteoporosis among postmenopausal women.

Assumption: Postmenopausal women may have awareness regarding osteoporosis.

Criteria for Sample Selection

Inclusion Criteria

Postmenopausal women who were:

1. Above or equal to 45 years of age.
2. Attained menopause naturally from last one year.
3. Able to understand hindi, punjabi, english.
4. Willing to participate in study.

Exclusion Criteria: Postmenopausal women who had:

1. Attained premature menopause due to ovarian failure, hysterectomy and bilateral oophorectomy.
2. Already diagnosed with osteoporosis.
3. Diagnosed with psychiatric illness.

MATERIALS AND METHODS

The sample for this study comprised of 300 postmenopausal women with age group ≥ 45 years. These 300 participants were residing in Guru Gobind Singh Nagar, Shimlapuri, Ludhiana, Punjab. Purposive sampling technique was used in the study. The structured questionnaire was used to assess the awareness regarding osteoporosis among postmenopausal women.

Criterion Measure:

S. No.	Awareness Level	Score	%age
1.	Good	17-24	66.7-99.9%
2.	Average	9-16	33.4-66.6%
3.	Poor	0-8	0-33.3%

Maximum score=24

Minimum score = 0

Data Collection Procedure: Final data was collected in the month of August 2023 from 28.8.2023-2.9.2023. Written permission from concerned authority was obtained. The sample was selected using purposive sampling technique. Self-introduction was given to the selected subjects. Subject information sheet was used to explain the purpose and procedure of the study. Written informed consent was taken from each subject. Data was collected by interview method. IEC material was disseminated to the subjects regarding prevention of osteoporosis.

RESULTS

The study revealed that out of 300 postmenopausal women, more than half i.e., 173 (57.7%) had average level of awareness whereas, 123 (41%) women had poor level of awareness and only 4 (1.3%) women had good level of awareness regarding osteoporosis.

Table 1. To assess the level of awareness regarding osteoporosis among postmenopausal women

S.no.	Level of awareness	Awareness score	n	f (%)	Mean \pm S.D.
1.	GOOD	17-24	4	1.3	17.50 \pm 0.57
2.	AVERAGE	9-16	173	57.7	11.29 \pm 1.88
3.	POOR	0-8	123	41	6.41 \pm 1.40

Maximum score=24

Minimum score=00

*Mean \pm S.D. = 9.37 \pm 3.07

Table 1 explains the level of awareness regarding osteoporosis among postmenopausal women. It was found that out of 300 postmenopausal women, more than half 173 (57.7%) of the women had average level of awareness, 123 (41%) of the women had poor level of awareness and only 4 (1.3%) of the women had good level of awareness. The mean score and standard deviation of awareness regarding osteoporosis among postmenopausal women was found out to be (9.37 \pm 3.07).

Hence, it can be concluded that more than half of the postmenopausal women had average level of awareness. Thus, it was inferred that educational status, milk consumption and socio-economic status were statistically significant at $p < 0.05$ level whereas age, marital status, working status, dietary pattern, age at menopause, sun exposure, history of hormonal issues, maternal history, history of fracture, information about osteoporosis were statistically non-significant.

DISCUSSION

The study findings revealed that 58% postmenopausal women had average level of awareness, 41% had poor and only 1% had good level of awareness regarding osteoporosis. The association of awareness regarding osteoporosis among postmenopausal women with selected socio-demographic variables was found to be significant with educational status, milk consumption per day & socio-economic status was found to be $p < 0.05$. The contrary results reported by Shaki Omna, Rai K. Barun and Negi R.S (2021) which showed that in 757 samples, only 37.85% postmenopausal women had awareness regarding osteoporosis.

CONCLUSION

From the present study, it can be concluded that more than half of the postmenopausal women 173 (57.7%) had average level of awareness regarding osteoporosis. Therefore, it was important to provide awareness regarding osteoporosis and its contributing factors to postmenopausal women. Educational status, milk consumption and socio-economic status were found to be statistically significant at level $p < 0.05$. The current study findings highlight the importance and need to focus on health promotion and IEC activities in postmenopausal population, so as to reduce future burden of the disease. There was an urgent requirement of early identification and to increase awareness, so that intervention viz. dietary modification, lifestyle modifications and exercises can prevent osteoporosis.

Recommendations

1. Similar study can be carried out on larger sample.
2. An exploratory study can be done to assess prevalence and risk factors associated with osteoporosis in premenopausal and postmenopausal women.
3. An experimental study can be done in postmenopausal women to assess the effectiveness regarding treatment and dietary modifications for osteoporosis.
4. A longitudinal study can be done on the experiences of postmenopausal women learning to live with osteoporosis.
5. A comparative study can be done on prevention of osteoporosis in early and late identified postmenopausal women.

Abbreviation

WHO= World Health Organization

IEC =Information Education & Communication

f= Frequency

SD= Standard Deviation

SPSS= Statistical Package for Social Services

NS= Non-Significant

ANOVA= Analysis of Variance

*= Significant

df= Degree of Freedom

t =t-test

p= Level of Significance

N= Total Number of Subjects

n= Number of subjects specify multiple responses

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