

# Osteoporosis Prevalence among Women in a Selected Hospital, Ludhiana, Punjab

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**Abstract:** Women's health recognizes that the health of women is related to the biological, social and cultural dimensions of women's lives. Moreover, women's normal life events or rites of passages, such as menstruation, children, and menopause are considered part of normal female development, rather than syndromes as diseases requiring only medical treatment. The objective of this study is to assess the prevalence of osteoporosis among women, to identify the risk of osteoporosis among women, to find out the relationship of prevalence with selected variables such as age, number of children, education, income, residence, occupation, to find out the association of osteoporosis risk with selected variables such as age, number of children, education, income, residence, occupation of women, and to prepare a pamphlet on preventive measures of osteoporosis for women.

**Keywords:** osteoporosis among women, preventive measures of osteoporosis, women health.

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## I. INTRODUCTION

Women's Health Primary focuses on women's psychosocial and physiological well being, functional abilities and experiences of symptoms and health problems. This broad emphasis on women's health is in distinct contrast to viewing women in terms of their reproductive health or their role in parenting children. Women's health recognizes that the health of women is related to the biological, social and cultural dimensions of women's lives. Moreover, women's normal life events or rites of passages, such as menstruation, children, and menopause are considered part of normal female development, rather than syndromes as diseases requiring only medical treatment. (Standhope, Landcaster 1996)<sup>1</sup>

Important health issues related to women are still not well understood. The rate of breast cancer deaths has increased, yet no one knows why (sharp, 1990)<sup>2</sup>. Heart disease is a major killer of women, but until recently virtually all research has been conducted on men.

The Fifth International Congress on women's Health Issues in 1992 affirmed that health is primarily determined by adequate economic and social conditions that ensure adequate food, water, shelter and other necessary resources (Dan, 1994)<sup>3</sup>.

In the United States, the situation for women is also bleak. Men are more likely to be employed than women and women are more likely to be employed in lower – paying service sector jobs. Women are also less likely to have job sponsored medical benefits, likely to depend on assistance programs such as Medicaid and Medicare. When women do perform the same work as men, they earn less than 80% of the salaries of men. (Whest 1993)<sup>4</sup>.

## II. STATEMENT OF PROBLEM

“A Descriptive Study of Osteoporosis Prevalence Among Women in a Selected Hospital, Ludhiana, Punjab.

### Objectives:

1. To assess the prevalence of osteoporosis among women.
2. To identify the risk of osteoporosis among women.

3. To find out the relationship of prevalence with selected variables such as age, number of children, education, income, residence, occupation.
4. To find out the association of osteoporosis risk with selected variables such as age, number of children, education, income, residence, occupation of women.
5. To prepare a pamphlet on preventive measures of osteoporosis for women.

**Assumption:**

After 30 years of age women are prone to develop osteoporosis.

**Delimitations: -**

The study was limited to the women visiting the OPDs in Christian Medical College and Hospital, Ludhiana, Punjab.

### III. METHODOLOGY

**Research approach:** A descriptive approach was used for the present study.

**Research design:** Non –Experimental research design was used for the present study.

**Study setting:** The study was conducted in Christian Medical College and Hospital, Ludhiana, Punjab.

**Sample:** The study was conducted on all adult married women visiting the General and Private OPDs of Christian Medical College and Hospital.

**Sample size:** The study was conducted on 200 adult married women visiting the General and Private OPDs of Christian Medical College and Hospital.

**Sampling technique:** Purposive sampling technique was used for the selection of samples.

**Tool for data collection:** Data was collected using a self structured questionnaire in the form of multiple choice questions on a 5 point Likert's Scale.

The tool has three parts:-

**Part 1:** - consisted of items for obtaining the information on socio-demographic variables.

**Part 2:** - consisted of 30 items to assess the prevalence of osteoporosis among women.

**Part 3:** - consisted of 20 multiple choice questions having four options to identify the risk of osteoporosis among women.

**Data collection method:** The method was as follows: -

- The investigator had explained about the importance and nature of the study.
- Directions were given to the subjects and they were assured that their responses would be kept confidential.
- The investigator first introduced self to the respondents and explained the purpose of gathering information.
- The investigator spent 30-40 minutes with each of them.

**Data analysis:** The collected data was tabulated and analysed according to the objectives of the study using descriptive and inferential statistics.

### IV. RESULTS

The major findings of the study were as follows: -

- Subjects comprising of 200 women were distributed into various categories of age, number of children, education, income, residence and occupation. Maximum women were in age group of 41-50 years (53.5%) followed by age group of 30-40 years (30%). As per number of children, women having 2-3 children were (61%) followed by women

having children 0-1 (29%) and 4-5 (10%) respectively. As for women's education concerned (24.5%) were illiterate followed by matriculate up to (48.5%) and (27%) had above 10+2 education. Least sample were (26%) whose family income was Rs >10,000/- followed by Rs < 5000/- (28.5%) and (45%) were having income Rs 5000-10,000/- respectively. Regarding residence, women living in rural area were (54%) followed by women in urban (46%). Maximum women were service/employee (51.5%) followed by housewives (42%). None of the women was self employed or a shopkeepers whereas 6.5% were having 'any other' category of occupation.

- The women with positive symptoms were (48%) and those with positive signs of osteoporosis were (63%). Women showed negative symptoms based on subjective data was (52%) and (37%) negative objective data respectively. Overall prevalence was (55%) among women visiting to OPD's.
- The symptoms always complained (98.0%) were less energetic in evening / exhausted and their Rank order was 1<sup>st</sup>. (86.2%) tiredness complained and their rank falls in 2<sup>nd</sup> rank, (74.7%) pain radiates back to side of body according to rank order falls in 3<sup>rd</sup> rank, (71.5%) acute pain in back/hip/wrist according to rank order falls in 4<sup>th</sup> rank, (70.0%) chronic backache according to rank order falls in 5<sup>th</sup> rank. The symptoms frequently complained were unable prolonged standing (64.0%) according to rank falls in 6<sup>th</sup> rank, joint pain on awakening (59.0%) according to rank order falls in 7<sup>th</sup> rank. The symptoms sometimes complained were legs and feet weakness (58.2%) according to rank order falls in 8<sup>th</sup> rank, low backache (45.1%) according to rank order falls in 9<sup>th</sup> rank. The symptoms were never and rarely complained by women fracture of hip (24.1%) according to rank order falls in 11<sup>th</sup> rank, fracture of wrist, knee (21.3%) according to rank order falls in 12<sup>th</sup> rank respectively.
- Signs (95.6%) were clinically diagnosed to have osteoporosis / osteopenia and X – ray report revealed osteoporosis, X – Ray showed 30-50% decrease in bone mass density from the normal level were (79.8%).
- The majority of women were at moderate risk (87.5%) of osteoporosis followed by low risk (5.5%). Women having high risk of osteoporosis were 7.0%.
- Women were not physically active (31.4%) risk falls in 6<sup>th</sup> rank and women were taking high caffeine intake falls in 5<sup>th</sup> rank (32%). And those who are having less sunlight exposure (38.5%) fall in 4<sup>th</sup> rank. Low calcium intake (life long) (47.6%) risk falls in 4<sup>th</sup> rank. Chronic steroid medication for other diseases (54.87%) falls in 2<sup>nd</sup> rank respectively.
- The maximum (56.3%) women population had prevalence of positive symptoms in the age group of 41-50 years and had prevalence of positive signs (57.9%) respectively.
- The symptoms prevalence of osteoporosis among women having (2-3) children were 58 (60.4%) as that of women having (0-1) children were 26 (27.1%) and according to signs women having (2-3) children were 79 (62.7%) as that of women having (0-1) children were 31 (24.6%).
- Symptoms the women 46 (47.9%) had studied up to matric who were more prone to have osteoporosis, women up to matric were (53.2%) educated respectively according to signs.
- Symptoms prevalence of osteoporosis was (45.8%) in women having monthly family income Rs. 5001-10,000/- as that of (32.3%) whose monthly income was Rs. < 5000/-. According to signs prevalence of osteoporosis was (48.4%) in women having Rs. 5001-10,000/- family income as that of (20.6%) whose family income was above Rs. 10,000/-
- According to symptoms equal numbers of (50%) women were living in urban area as well as in the rural area. According to signs (49%) of women residing in urban and (51%) in rural area.
- According to symptoms service/employee (51%) had prevalence of osteoporosis followed by (39.6%) housewife and any other occupation (9.4%). According to signs service/employee (52.4%) had prevalence to osteoporosis followed by (38.9%) housewife and any other occupation (8.7%).
- Risk of osteoporosis was highest in women in the age group of 41-50 years (53.5%) followed by low risk in 30-40 years (16.5%) and moderate risk (30.3%) among 51-60 years age.
- Women having 2-3 children were at high risk (61.0%) followed by moderate risk (29%) of women having 0-1 child and (10%) women who were having 4-5 children were at lowest risk.

- The most of the women were high at risk to osteoporosis whose education was up to matric (48.5%) followed by illiterate women at low risk (24.5%) and women who were > 10+2 passed were at moderate risk (27%).
- The women having monthly family income Rs. 5001-10,000/- were at high risk (45.5%) and with income Rs. ≤ 5000/- had moderate risk (27.3%) followed by monthly family income Rs. > 10,000 had lowest risk (25.5%) of osteoporosis.
- The women living in rural area had highest (54.1%) risk and women living in urban area had lowest risk of osteoporosis (46.0%).
- The service/employee women were at highest risk of osteoporosis (51.5%) followed by (42%) housewives were at moderate risk and (6.5%) were at lowest risk for any other occupation it was.

## V. SUMMARY

In early days it was focused on osteoporosis prevalence or noticed due to absence of suitable diagnostic facility or clear cut method for osteoporosis diagnosis. WHO defined osteoporosis as a common skeletal disease where bone resorption exceeds bone formation with increased destruction of anatomic structure denoting presence of one or more fragility fracture. As per data about prevalence of disease world-wide, 25% of women over the age of 50 have been found to succumb to breakage of bone due to having low bone mass and half of them (12.5%) are having risk of osteoporosis. In case of men only 8% of them have been found to suffer from osteoporosis. In our country the data was scarce till 1990, though there were several cases of bone fracture and low bone mass, now as per estimation there are about 12 million cases of osteoporosis and also there are chances off increase in many folds due to poor calcium and vitamin D intake, nutritional fads and poor acceptable to Hormone Replacement Therapy. In other words the major causes of osteoporosis are inadequate calcium intake, immobility, alcoholism, smoking and drug effect. (The long term use of some drugs such as steroid, heparin and warfarin etc, propagate the causes of bone loss.)

The treatment of established case of osteoporosis is difficult and is much more time consuming affairs. Since the prevention is better than cure. Hence it is suggested for intake of adequate quantity of calcium, Vitamin D3, exercise, Hormonal Replacement Therapy etc. However the following drugs/methods are usually prescribed for treatment of osteoporosis.

- 1) Calcium supplements
- 2) Intake of Vitamin D3, Calcitriol, Sodium fluoride
- 3) Hormone Replacement Therapy
- 4) Bio phosphates
- 5) Exercise

## VI. RECOMMENDATIONS

- A similar study can be replicated on large sample to validate and generalize findings.
- The study can be conducted at different settings.
- Different instruments can be used for assessing the risk of the osteoporosis.
- A comparative study can be carried out between urban and rural or men and women to assess the sign and symptoms and risk of the osteoporosis.

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