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"A comparative study to assess the osteoporosis risk awareness and preventive strategies among working and non-working women in selected communities of Kashmir."

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ABSTRACT:

A comparative study to assess the knowledgeof osteoporosis risk awareness and preventive strategies among working and non-working women in selected communities of Kashmir.
Osteoporosis is a bone disease that causes a loss of bone density, which increases your risk of fractures According to research, fractures result from osteoporosis become increasingly common in women after age 55 years and men after age 65 years, resulting in substantialbone-associated morbidities, and increased mortality and health-care costs. The research approach used for this study was quantitative research approach and comparative design was adopted for the study. The setting of the study was in Sarnal community of Anantnag. A Convenient Sampling Technique was used to select the sample. The sample size was 40 women. The data was analyzed and interpreted in terms of objectives formulated comparative and inferential statistics were used for the data analysis.
The study conducted, assess the knowledge of osteoporosis risk awareness which is present in the working and non-working women in Sarnal community of Anantnagand also assess osteoporosis preventive strategies that women are usually taken.

Keywords: Knowledge, osteoporosis

INTRODUCTION

Osteoporosis is clinically diagnosed as having a bone mineral density (BMD) of 2.5 standard deviations below the adult peak mean, which weakens bones and makes them more susceptible to fragility fractures, particularly in the hip, spine, and wrist. Osteoporosis is currently incurable as there is no treatment that can fully replenish reduced BMD caused by the diseaseOsteoporosis is clinically diagnosed as having a bone mineral density (BMD) of 2.5 standard deviations below the adult peak mean, which weakens bones and makes them more susceptible to fragility fractures, particularly in the hip, spine, and wrist. Osteoporosis is currently incurable as there is no treatment that can fully replenish reduced BMD caused by the disease.[1]According to research, it is projected that by 2050, Egypt will be close to 130 million inhabitants, and more than 30% of its population will be aged 50 years and over. Moreover, in Lebanon, Iran and

Tunisia, nearly 40% of the population will be 50 years old and over. Estimating the incidence of Osteoporosis is challenging as it varies significantly between countries, according to the age, sex, and ethnic distribution of the population

Globally,Osteoporosis is recognized as a serious health problem, with about 200 million people being affected worldwide. Over 40% of women and 20% of men are likely to have an osteoporotic (fragility) fracture during their lifespan. Mortality associated with osteoporotic fractures ranges from 15 to 30%.[1]

As Osteoporosis is responsible for more than 1.5 million fractures annually, including 300000 hip fractures, approximately 700000 vertebral fractures, 250000 wrist fractures, and more than 300,000 fractures at other sites. The lifetime risk for any fragility fractures in Caucasian women at age 50 years approaches 40% and 13% in men. Because of osteoporosis, Hip fractures have an overall mortality of 15-30% the majority of excess deaths occurring within the first six months after the fracture.[2]

The number of women with osteoporosis, i.e., with reduced bone mass and the disruption of bone architecture, is increasing in India. While data on prevalence of osteoporosis among women in India come from studies conducted in small groups spread across the country, estimates suggest that of the 230 million Indians expected to be over the age of 50 years in 2015, 20%, that is nearly 46 million, are women with osteoporosis. Thus, osteoporosis is a major public health problem in Indian women.[3]

In Kashmir ladies, expanding life span and hazard factors, for example, low calcium admissions, vitamin D insufficiency, sex disparity, early memo- stop, hereditary inclination, absence of demonstrative offices, what's more, poor information of bone wellbeing, have contributed toward the high pervasiveness of osteoporosis and cracks. Calcium, vitamin D, and bisphosphonates are the commonest first-line treatments utilized. The utilization of different medications, for example, Hormone Replacement Therapy (HRT), estrogens agonists, calcitonin, Parathoromone (PTH), and denosumab, are chosen as per the moderateness and accessibility of treatment choices. Real holes still stay in the determination and administration of osteoporosis, hence featuring the requirement for more organized examine around there.[4]

A study conducted by Nicky Wilson1, Emilie Hurkmans2, on preventive and management of osteoporotic fractures. Results of 15917 records, 43 articles were included. Studies identified sufficient evidence that structured exercise, incorporating progressive resistance training delivered to people who had undergone hip fracture surgery, and multi component exercise, delivered to people at risk of primary fracture, reduced risk of falling. The effectiveness of multidisciplinary fracture liaison services in reducing fracture rate was confirmed. There was insufficient evidence found to support the effectiveness of nutrients and falls prevention programmes in this patient population.[5]

A survey conducted by B. Vivekbabu, V. Vishnu Priya, R. Gayathri at Saveetha institute of Medical and Technical Sciences, Chennai , Tamil Nadu regarding awareness of risk factors of osteoporosis among homemakers shows that Large number of women is aware about osteoporosis and their effects. They also know about the preventions of osteoporosis such as taking diet rich in calcium and Vitamin D, mild exercise, and also aware that women >45 are at high risk of osteoporosis. 40 % of participants have joint pain and 66% was tired while walking or standing for a long duration . 51% of women are aware that back

pain and joint pain may be the early symptoms of osteoporosis. 63% of participants are aware that women aged above 45 years should take calcium rich diet to prevent osteoporosis. 70% are aware that bone health improves by regular exercise. 65% of participants are aware that vitamin D is essential for calcium absorption in the body. Although most of them are aware about the osteoporosis, formal curricular teaching is an effective way to increase their knowledge of osteoporosis, its risk factors, diagnosis, treatment, and prevention.[6]

STATEMENT OF PROBLEM

"A comparative study to assess the osteoporosis risk awareness and preventive strategies among working and non-working women in selected communities of Kashmir."

OBJECTIVES OF THE STUDY

1. To assess the osteoporosis risk awareness and its preventive strategies among working women.
2. To assess the osteoporosis risk awareness and its preventive strategies among non-working women.
3. To associate osteoporosis risk awareness with various demographic variables.

HYPOTHESIS

Working and non-working women may have inadequate knowledge about osteoporosis risk and preventive strategies.

DELIMITATION

The study is delimited to

- Working and non-working women above 35 years of age.
- Working and non-working women residing in selected communities of Kashmir.

PROJECTED OUTCOME

The study findings will help to improve the knowledge regarding osteoporosis risk awareness and preventive strategies.

REVIEW OF LITERATURE:

The review of literature for this study was organized under following headings.

- Osteoporosis risk awareness among women.
- Osteoporosis preventive strategies among women.

Research Methodology:

A comparative study is carried out for the purpose of providing and accurate portrayal of a group of subjects with specific characteristics, situations or group and frequency with which certain phenomenon occurs.

POPULATION

Target population

Target population for the present study was comprised of working and non-working womenat Sarnal Community of Anantnag. The total number of sample was 40 women.

Accessible Population

Accessible population for the present study was consists of working women and non-working women of Sarnal area of Anatnag..

SAMPLING TECHNIQUE:

Convenient sampling technique was used to select the subjects. A total number of 40 subjects were selected for the present study.

CRITERIAFOR SAMPLE SELECTION:

The samples were selected based on the following inclusion and exclusion criteria

Inclusion criteria

- Working and non-working women age above 35 years
- Present at the time of data collection and are willing to participate in the study.

- **Exclusion criteria**
  - Those below 35 years of age
  - Working women who don't belong to sarnal community of anantnag.

VARIABLES:

An independent variable is the "cause" or the variable thought to influence the dependent variable. The dependent variable is the "effect", a response or behaviour that is influenced by independent variable. The research design incorporates some of the most important methodological decisions that the researcher makes in conducting research study. For the present study survey design was found appropriate to achieve objectives of the study.

RELIABILTY OF THE TOOL

The tool was tested to ensure the reliability. It has been administered of the interview schedule to six(6) womens to assess knowledge regarding osteoporosis. us tool were established to be reliable for study.

DATA COLLECTION PROCEDURE:

The data had been collected by investigators in the month of Sep-Oct, 2021 from 40 subjects using structured interview schedule in selected community of Anantnag. The respondents were oriented and explained the purpose and importance of the study. They were assured about the confidentiality of their responses. The convenient sampling has been used to select the subjects for structured interview schedule. Average time taken was 10 minutes per subject.

Results: Part a:

Assessment of the level of knowledge:

In order to find out existing level of knowledge of working and non-working women, a three point scale was used. Scoring of the of working and non-working women was done as follows: 0-6 scores –poor knowledge, 7-12 scores –average knowledge and 13-18 scores- good knowledge.

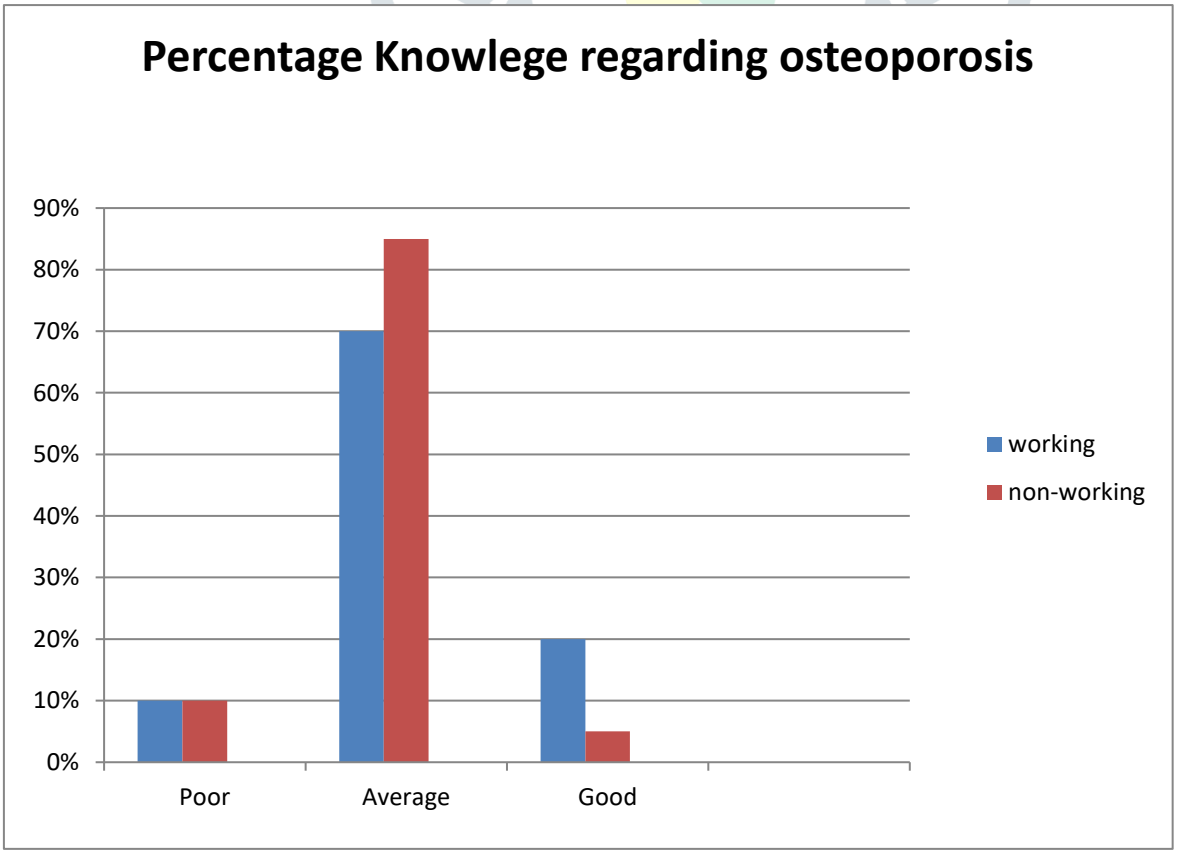
S. No	Grade	Score	Percentage
1	POOR KNOWLEDGE	0-06	0-33
2	AVERAGE KNOWLEDGE	07-12	33-66
3	GOOD KNOWLEDGE	13-18	66-100

This table comprises the score obtained into three grades with score less than or equal to 0-33 % labeled as poor and a score above 66-100% as good. Anything between these is labeled as average.

Score criteria for knowledge regarding Osteoporosis

Grade	Numbers		Percentage Of respondents (%)	
	Working women	Non-working women	Working women	Non-working women
POOR	2	2	10	10
AVERAGE	14	17	70	85
GOOD	4	1	20	5

In order to assess the knowledge regarding osteoporosis risk awareness and preventive strategies of working women, 10% of both working and non-working women have poor knowledge, while 5% in non-working and 20 % in working women have good knowledge and 85% in non-working and 70% in working women have average knowledge. This specifies there is more average level of Knowledge among working and non-working women as depicted by the diagram.



Part b: Area wise analysis of knowledge scores.

S. no	Area's based questions	Maximum possible score	Working	Non-working
			Mean ± SD	Mean ± SD
1	Knowledge based	6	12.1 ± 6.46	8.1 ± 6.30
2	Preventive based	3	12 ± 6.6	6 ± 4
3	Causes based	5		9.4 ± 8.08
4	Manifestations and diagnosis	2	2.5 ± 2.12	3 ± 2.8
5	Treatment based	2	11 ± 12.7	16.5 ± 2.12
TOTAL		18	51.5 ± 31.8	43 ± 23.3

Comparison of area wise mean and SD of the knowledge score among working and non-working women showed that in the area 'knowledge based' the working women have mean ± SD as 12.1 ± 6.46 where as in non-working women have mean ± SD as 8.1 ± 6.30, showing an increase in mean knowledge score of working women.

In the area 'preventive based' the working women have knowledge score mean ± SD as 12 ± 6.6 where as in non-working women have mean ± SD as 6 ± 4, showing an increase in mean knowledge score of working women.

In the area 'causes based' the working women have knowledge score mean ± SD as 13,6 ± 3.2 where as in non-working women have mean ± SD as 9.4 ± 8.08, showing an increase in mean knowledge score of working women

In the area 'manifestation and diagnosis' the working women have knowledge score mean ± SD as 2.5 ± 2.12, where as in non-working women have mean ± SD as 3 ± 2.8, showing an increase in mean knowledge score of non-working women

In the area 'treatment based' the working women have knowledge score mean ± SD as 11 ± 12.7, where as in non-working women have mean ± SD as 16.5 ± 2.12, showing an increase in mean knowledge score of non-working women.

The total mean and SD of the knowledge score in working women was 51.5 ± 31.8 while in non-working women it is 43 ± 23.3.

However the results revealed that overall percentage of knowledge among working and non working women was more in working women.

Hypothesis:

Hypothesis was tested by using paired 't' test. The value of t was calculated to analyse the difference in knowledge score percentage about osteoporosis risk and preventive strategies between working and non-working women. To evaluate on osteoporosis risk and preventive strategies a null hypothesis (H_0) and research hypothesis (H_1) was framed.

Table: 4

H_0	Working and non-working women may have inadequate knowledge about osteoporosis risk and preventive strategies.
H_1	Working women have adequate knowledge as compared to non-working women

Table: 5

Areas	Mean of non-working	Mean of working	T value %
Knowledge based	8.1	12.1	33.05
Preventive based	6	12	50
Causes based	9.4	13.6	30.88
Manifestations and diagnosis	3	2.5	-20
Treatment based	16.5	11	-50
Total	43	51.5	

Overall and area wise difference was found to be very highly significant. The adequate knowledge score was observed in the area 'preventive based' 50% in working women and 'treatment based' 50% in non-working women. Hence null hypothesis rejected and research hypothesis accepted which shows that there is adequate knowledge in both working women and non-working women.

CONCLUSION:

The conclusions drawn from the study have been presented as

- Assessment of the level of knowledge of osteoporosis risk awareness and preventive strategies 70% of respondents had average knowledge in working women while 85% in non-working women
- Comparison of area wise mean and SD of the knowledge score, in the area's 'knowledge based', 'preventive based' and 'causes based' an increase in mean knowledge score of working women is seen as compared to non-working women.
- Comparison of area wise mean and SD of the knowledge score, in the area's 'manifestation based' and 'treatment based' an increase in mean knowledge score of non-working women is seen as compared to non working women.

Overall and area wise difference was found to be very highly significant. There is adequate knowledge in both working women and non-working women

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