

Knowledge, Attitude and Practice of Osteoporosis Prevention among Female Medical Students

FAREEHA TANVEER¹, ZUMAR KHALID², MUHAMMAD SULAIMAN³

ABSTRACT

Aim: To study the KAP of Osteoporosis among female medical students.

Study Design: Cross-sectional study.

Study Setting and duration: Allama Iqbal Medical College , Lahore and duration is from March to June.

Methods: Ethical approval was obtained and all study participants provided informed consent without being forced. Following informed consent and explaining the study procedure, a questionnaire was designed to elicit information from the participants regarding Knowledge, Attitude and Practice of osteoporosis. We asked about knowledge of Osteoporosis, family history of Osteoporosis , life style , intake of dairy products like milk , Calcium and Vit D supplemental intake and exercise. We asked about the avoidance of sunlight and steroids. Data was analyzed using SPSS version 17 frequency, % and mean , SD were calculated accordingly Chi-Square was applied and P value < 0.05 was considered statistically significant.

Results: Three hundred female medical students were included in the study. Age range was from 18 years to 23 years. Frequencies of KAP of osteoporosis among female medical students was lesser than expected in medical students.

Conclusions: Knowledge, attitude and practice among female medical students about Osteoporosis is very low. Prevention programs should aim to increase knowledge and to decrease the risk factor behaviours in adults .

Keywords: Knowledge , Attitude, Practice and Osteoporosis.

INTRODUCTION

Osteoporosis is a metabolic bone disease that has a world-wide prevalence affecting both men and women. Due to sharp decline in Estrogen production at menopause women are at a higher risk than men¹ According to WHO [World Health Organization], every year 9 million fractures occur worldwide due to osteoporosis. It has been estimated that by 2050 more than 50 percent of osteoporotic fractures will occur in Asia²

In osteoporosis bone mineral density is reduced leading to brittleness and increased risk of fractures. WHO defines osteoporosis as bone mineral density of 2.5 standard deviations or more below the peak bone mass as measured by dual energy X-ray absorptiometry³.

Its causes are multifactorial; low intake of calcium in diet, smoking, sedentary lifestyle etc. Some certain factors are female sex, Asians and Caucasians race, advancing age, menopause before 45 years, family history, multiparity and prolonged lactation. The main factor is low calcium intake during

childhood, adolescence and early adulthood. The body creates maximum calcium deposits till age 25-30 and these deposits affect the quality of bones in later life. Hence, the most important prevention is the primary prevention during childhood and adolescence⁴.

Osteoporosis is a debilitating disease. It has adverse effects on quality of life. It leads to psychological problems such as depression and social isolation. It results in pain, costly rehabilitation and premature death.⁵ There are different treatment strategies offered for osteoporosis but the most effective is its prevention. Its prevention requires information about people's knowledge, attitude and practice concerning osteoporosis⁶.

Previous researches about osteoporosis knowledge were done in Turkey, Australia, Singapore and USA. All these pointed towards a number of commonalities.⁷ The aim of our research was to evaluate the knowledge and perceptions of osteoporosis among female medical students and to categorize knowledge, attitude and practice of study populations on the basis of a scoring system.

The objective of the study is to study the KAP of Osteoporosis among female medical students.

¹WMO BHU Kotli Said Amir.

²WMO, BHU Bharth Photh, Sialkot

³MO BHU, Haslanwala

Correspondence to Dr. Fareeha Tanveer,

Email fareeha.tanveer17@gmail.com, Cell: : 03332611766

MATERIAL AND METHODS

This cross sectional study was conducted in Allama Iqbal Medical College, Lahore during a period of four months on 300 female medical students. Non probability / purposive sampling technique was used. All cooperative students were included while absent students were excluded. Ethical approval was obtained and all study participants provided informed consent without being forced. Following informed consent and explaining the study procedure, a questionnaire was designed to elicit information from the participants regarding Knowledge, Attitude and Practice of osteoporosis. We asked about knowledge of Osteoporosis, family history of Osteoporosis, life style , intake of dairy products like milk , Calcium and Vitamin D supplemental intake and exercise. We asked about the avoidance of sunlight and steroids. Data was analyzed using SPSS version 17 frequency, % and mean , SD were calculated accordingly Chi-Square was applied and P value < 0.05 was considered statistically significant.

RESULTS

In table 1 female medical students of 18 years who answered were 12.7%. Female medical students of 19 years who answered were 13.3%. Female medical students of 20 years who answered were 22%. Female medical students of 21 years who answered were 17%. Female medical students of 22 years who answered were 23.3%. Female medical students of 23 years who answered were 11.7%. In graph 1 clinical students were 40% and preclinical students were 60%.

Graph 1

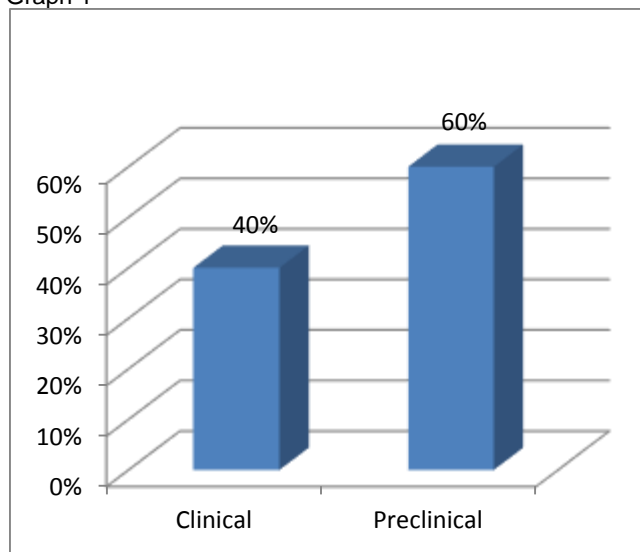


Table 1: Age

Valid	Frequency	%	Valid%	Cumulative%
18 yrs	38	12.7	12.7	12.7
19 yrs	40	13.3	13.3	26.0
20 yrs	66	22.0	22.0	48.0
21 yrs	51	17.0	17.0	65.0
22 yrs	70	23.3	23.3	88.3
23 yrs	35	11.7	11.7	100.0

Table 2: Knowledge frequencies

Knowledge	Response	%cases
Knowledge about Osteoporosis	293(16.9%)	97.7%
Knowledge about Bone Density Scan	160(9.2%)	53.3%
Knowledge about effect of Osteoporosis on gender	39(2.2%)	13%
Knowledge about effect of Diet	275(15.8%)	91.7%
Knowledge about age as a risk factor	281(16.2%)	93.7%
Knowledge about familial influence	188(10.8%)	62.7%
Knowledge about menopause as a risk factor	271(15.6%)	90.3%
Knowledge about lack of exercise as a risk factor	229(13.2%)	76.3%

Dichotomy group tabulated at value 1.

Table 3:

Attitude frequencies	Response	%cases
Attitude towards discussion about osteoporosis and its prevention	52(5%)	17.3%
Attitude towards bone density scan	41(3.9%)	13.7%
Attitude towards spending money for its treatment	273(26.3%)	91%
Attitude towards attending a seminar on osteoporosis	208(20%)	69.3%
Attitude towards avoiding steroids as they have osteoporotic effect	268(25.8%)	89.3%
Attitude towards avoiding sunlight	198(19%)	66%
Total	1040(100%)	346.7%

a. Dichotomy group tabulated at value 1.

Table 4: Practices Frequencies

Practice	Response	%cases
Practice of using dairy products	242(35.2%)	84.9%
Practice of vit D intake	94(13.7%)	33%
Practice of supplemental calcium intake	87(12.6%)	30.5%
Practice of regular exercise	93(13.5%)	32.6%
Practice of an active lifestyle	172(25%)	60.4%
Total	688(100%)	241.4%

a. Dichotomy group tabulated at value 1.

In table 2, Knowledge about osteoporosis among female medical students was 16.9%. Knowledge about bone density scan was 9.2%. Knowledge about effect of osteoporosis on gender was 2.2%. Knowledge about age as a risk factor was 16.2%. Knowledge about familial influence was 10.8%. Knowledge about menopause as a risk was 15.6%. Knowledge about lack of exercise as a risk factor was 13.2%.

In table 3, Attitude towards discussion about osteoporosis and its prevention among female medical students was 5%. Attitude towards bone density scan was 3.9%. Attitude towards spending money for its treatment was 26.3%. Attitude towards attending a seminar on osteoporosis was 20%. Attitude towards avoiding steroid as they have osteoporotic effect was 25.8%. Attitude towards avoiding sunlight was 19%.

In table 4, practice of using dairy products among female medical students was 35.2%. Practice of vit D intake was 13.7%. Practice of supplemental

calcium intake was 12.6%. Practice of regular exercise was 13.5%. Practice of an active lifestyle was 25%.

In table 5, Knowledge about osteoporosis was 96.1% in pre clinical students and 100% in clinical students. Knowledge about bone density scan was 45.0% in pre-clinical students and 65.8% in clinical students. Knowledge about effect of osteoporosis on gender was 15% in pre clinical students and 10.0% in clinical students. Knowledge about effect of diet in pre clinical students was 88.3% and 96.7% in clinical students. Knowledge about age as risk factor was 91.7% in pre clinical students and 96.7% in clinical students. Knowledge about familial influence among clinical students was 61.1% and 65% in clinical students. Knowledge about menopause as a risk factor was 92.2% in pre clinical students and 87.5% in clinical students. Knowledge about lack of exercise as a risk factor was 76.7 % in pre clinical students and 75.8% in clinical students.

Table 5: Knowledge*Q2 Crosstabulation

Knowledge		Class		Total
		Preclinical	Clinical	
Knowledge about Osteoporosis	Count % with Q2	173(96.1%)	120(100%)	293
Knowledge about Bone Density Scan	Count % with Q2	81(45%)	79(65.8%)	160
Knowledge about effect of Osteoporosis on gender	Count % with Q2	27(15%)	12(10%)	39
Knowledge about effect of Diet	Count % with Q2	159(88.3%)	116(96.7%)	275
Knowledge about age as a risk factor	Count % with Q2	165(91.7%)	116(96.7%)	281
Knowledge about familial influence	Count % with Q2	110(61.1%)	78(65%)	188
Knowledge about menopause as a risk factor	Count % with Q2	166(92.2%)	105(87.5%)	271
Knowledge about lack of exercise as a risk factor	Count % with Q2	138(76.7%)	91(75.8%)	229
Total	Count	180	120	300

Percentages and totals are based on respondents

a. Dichotomy group tabulated at value 1.

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. Knowledge results found out in this project were comparable to the article no 1. Knowledge about osteoporosis among clinical students was greater than the pre-clinical students. This was due to an increasing age factor.

In article no 1 , the consumption of milk among adult females was 25.8%. this finding was consistent with the project in which the consumption of dairy products was 35.2% among female medical students. In article no 1, importance of physical activity among adult females was insignificant. This finding was comparable with this study in which practice of regular exercise was only 13.5%.

This study showed that practice of an active lifestyle among female medical students was 25.0%. This finding was consistent with article no 2. Majority of females (71.2%) had no outdoor work at all . None

of them had any regular sport activity. This study showed that knowledge about bone density scan was 9.2% , attitude towards bone density scan was 3.9% , attitude towards spending money for its treatment was 26.3%, practice of supplemental calcium intake was 12.6% in female medical students. These findings were comparable with the findings of article no 2 . The knowledge about bone mineral density measure was similar. Finding of attitude towards diagnosis and treatment of osteoporosis showed some complications with this study . Calcium intake among adult females was 5.6% in article no 2.

This study showed that knowledge about familial influence was 10.8% and knowledge about osteoporosis among female medical students was 16.9%. These findings were comparable with the findings of article no 3. Disagreement with familial influence was 35.4% and chances of getting osteoporosis was 31.2% among college students.

This study showed that attitude towards avoiding sunlight was 19.0% among female medical students.

This was comparable with the finding of Article no 4 in which more than 80% had enough exposure to sunlight. The two main preventive acts i.e., regular exercise and enough calcium consumption was also in low percentage in article no 4.

This study showed that attitude towards avoiding steroid as they have osteoporotic effect was 25.8% among female medical students. This was comparable with the findings of article no 5. 75.7% patients used homeopathic medicines that often contain steroids. In this study knowledge about menopause as a risk was 15.6%. This was comparable with the findings of article no 5 as early onset of menopause and longer duration of post menopausal period were a significant risk factor

CONCLUSION

- Knowledge , attitude and practice among female medical students was very low
- Young adults are heading in a direction that will add them to the national burden of osteoporosis.
- Prevention programs should aim to increase knowledge and to decrease the risk factor behaviours in adults

REFERENCES

1. Edmonds E, Turner LW, Usdan SL. Osteoporosis knowledge, beliefs, and calcium intake of college students: Utilization of the health belief model. *Open Journal of Preventive Medicine* 2012 ;2(1):27-34
2. Khan YH, Sarriff A, Khan AH, Mallhi TH. Knowledge, Attitude and Practice (KAP) survey of osteoporosis among students of a tertiary institution in Malaysia. *Tropical Journal of Pharmaceutical Research* 2014; 13 (1): 155-162.
3. Osman AA. Assessment of Osteoporosis KAP among women in Assir region, Saudi Arabia. *Jour of Med and Med Sci* 2013;4(2): 50-55.
4. Poslusna K, Matejova H, Brezekova V. Risk factors of osteoporosis- Knowledge and Practice among adolescent females. *Social and Health Aspects of Health Education* 2008; 21(3).
5. Mamji MF , Hasan JA, Sabri MS. Risk factors for osteoporosis in post menopausal women with hip fractures. *Journal of Surgery Pakistan (International)* 2010;15(2).
6. Jalili Z, Nakhaee N, Askari R, Sharifi V. Knowledge, attitude and practice of women concerning osteoporosis. *Iranian J Publ Health* 2007;36(2):19-24
7. Von Hurst P, Wham CA. Attitudes and Knowledge about osteoporosis risk prevention: a survey of New Zealand women. *Public Health Nutrition* 2007;10(7): 747–753.