Descriptive Study to Assess the Knowledge and Attitude of Women Regarding Prevention and Management of Osteoporosis in Al-namas, Saudi Arabia

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Abstract: **Osteoporosis is a skeletal disease in which bones become brittle and prone to fracture. More than 200 million women worldwide have osteoporosis, thereby implying an urgent need for preventive strategies.**

Aim: The aim of the study was to assess the knowledge and attitude of women regarding prevention and management of osteoporosis.

Materials And Method: It was a cross sectional study and was conducted in selected nursing colleges in Saudi Arabia. Data analysis was done by using descriptive and inferential statistics.

Result: In this study the data showed out of 54 samples under 18 years of age women's the knowledge mean was 6.0with $\pm$ 1.41, 19-25 years women's the mean was 5.3 with $\pm$ 1.11,in 26-30 years women's mean was 4.5 with $\pm$ 1.65,for 31-35 Years women's mean was 4.8 with $\pm$ 1.16,for 36-40 years women's mean was 5.1 with $\pm$ 2.04.That means in younger age groups knowledge is more as comparing to the elder age groups. In this study most of the samples showed that they were agreed (69.15%) with the opinions. A very few samples were disagreed (6.5%) with the opinions and (24.38%) showed a do not know response. Our study revealed that there is no co-relation between knowledge and attitude. Knowledge has significant positive correlation with Prevention and Management .There was no association between knowledge with their age and no association between attitudes with their educational status. It is concluded that majority of women in this study were not having adequate knowledge regarding osteoporosis.

Keywords: **Osteoporosis, worldwide, Prevention and Management, educational status.**

1. INTRODUCTION

According to the international osteoporosis foundation (2012), osteoporosis is defined as a disease in which the density and quality of bone are reduced, leading to weakness of the skeleton and increased risk of fracture, particularly of the spine, wrist, hip, pelvis, and upper arm. Osteoporosis, often referred to as "The Silent Disease," is a painless weakening of the bones that allows bones to fracture and break more easily. [1]

Lifestyle factors such as diet and exercise are another risk factor. Diet plays an important role in preventing and speeding up bone loss in men and women .A balanced diet including adequate calcium and vitamin D must be consumed. Physical activity in youth promotes the achievement of optimal peak bone mass. It is not ever too late, or too quick to treat or prevent osteoporosis. Building strong bones when you are young is the best defense against getting osteoporosis later on in life [11]

In Saudi Arabia, osteoporosis is already a serious issue a report in the eastern region of Saudi Arabia indicates an incidence of postmenopausal osteoporosis (PMO) of 30 percent to 40 percent, with over 60 percent of postmenopausal women by currently having certain degree of osteopenia. Lifestyle reasons show a significant role in the extraordinary prevalence of this disease, with little calcium intake, deficiency of physical activity and a great prevalence of vitamin D

deficiency, being amongst the main culprits. Despite the fact that post-menopausal women are considered a high-risk group in terms of osteoporosis, awareness of the disease still remains low. Nearly half the women in Saudi are at threat of developing osteoporosis, and now have the warning signs, such as low bone density levels. If we are to actually address this issue in Saudi, we must jump to educate citizens on the finest ways to prevent the development of this disease. (SAUDI GAZETTE 22 OCT 2012)

Need for the Study: As the average age of the world's population shifts upward, the incidence and prevalence of osteoporosis and its economic burden on society will increase further. Estimates indicate that the number of osteoporotic hip fractures occurring in the world each year will rise from 1.66 million to 6.26 million by the year 2050, thereby implying an urgent need for preventive strategies. (MIKEGIBSON, 2014) All these above mentioned factors have urged the investigator to conduct a study to assess the knowledge and practice of women regarding the management of osteoporosis.

Statement of the Problem:

A descriptive study to assess the knowledge and attitude of women regarding prevention and management of osteoporosis in Al Namas, Saudi Arabia.

Objectives:

1. To assess the knowledge of women regarding prevention and management of osteoporosis.

2. To assess the attitude of women regarding prevention and management of osteoporosis.

2. METHODOLOGY

Research Approach:

The research approach adopted for the present study was Qualitative evaluative research design.

Research Design: The research design selected for the present study was Cross-sectional Study.

Settings: The study was conducted in selected Female colleges.

Population: In this study the population consists of all the female working women and students.

Sample: In this present study the sample consists of 54 women who are working and studying in selected nursing colleges

Sampling Technique and Sample Size:

In this study Non-probability convenient sampling method was used to select subjects as they fulfill the inclusion criteria. The total sample size consists of 54 females.

Data Collection Procedure: Data was collected from a period of 1 month

Data Analysis: The collected data analyzed in terms of objectives of study by using descriptive and inferential statistics.

3. RESULTS

SECTION-I Table: 1 Frequency and percentage distribution of samples based on demographic variables n=54

Variable	Group of variable	Frequency	Percentage
Age	< 18 Years	2	3.7
	19-25 Years	23	42.6
	26-30 Years	14	25.9
	31-35 Years	9	16.7
	36-40 Years	6	11.1
NATIONALITY	Saudi	50	92
	Non Saudi	4	8
MARIETAL STATUS	Married	35	64.8
	Unmarried	19	35.2
EDUCATIONAL STATUS	Uneducated	5	9.3
	Primary	5	9.3

	Secondary	6	11.1
	High school	12	22.2
	Graduated	24	44.4
	Post-Graduated	2	3.7
MONTHLY INCOME	Less than 3000 SR	34	63.0
	More than 5000 SR	20	37.0
	More than 10000 SR	0	0

This table Shows out of 54 subjects 2(3.7%) were in the age group < 18Years, 23(42.6%) were in 19-25 Years, 14 (25.9%) included in 26-30 Years, 9 (16.7%) were 31-35 Years and 6(11.1%) in 36-40 Years age group. The table revealed that most of the subject's nationality was Saudi 50(92%) and a very few4 (8%) were Non-Saudis. In regard to marital status, 35(64.8%) subjects were married and 19(35.2%) were single. Based on Educational Status nearly half of the subjects had graduation 24(44.4%), 12(22.2%) had high school education, 6(11.1%) had secondary education, 5(9.35%) had primary education, 5(9.35%) were uneducated and 2(3.7%) had post-graduation. In terms of Income Status, more than half of the subjects have an income 34(63%) less than 3000 SAR, 20(37%)

SECTION-II: Table: 2 Distribution of samples knowledge based on their age. n=54

Age gruops	N	knowledeMean	StandardDeviation*	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
< 18 Years	2	6.0000	1.41421	-6.7062	18.7062	5.00	7.00
19-25 Years	23	5.3913	1.11759	4.9080	5.8746	3.00	7.00
26-30 Years	14	4.5000	1.65250	3.5459	5.4541	.00	7.00
31-35 Years	9	4.8889	1.16667	3.9921	5.7857	4.00	7.00
36-40 Years	6	5.1667	2.04124	3.0245	7.3088	2.00	8.00
Total	54	5.0741	1.41224	4.6886	5.4595	.00	8.00

* A higher score indicates more knowledge

The data showed in table 4-2 shows that out of 54 samples under 18 years of age women's the knowledge mean was 6.0with ± 1.41, 19-25 Years women's the mean was 5.3 with ± 1.11,in 26-30 Years women's mean was 4.5 with ± 1.65,for 31-35 Years women's mean was 4.8 with ± 1.16,for 36-40 Years women's mean was 5.1 with ± 2.04.That means in younger age groups the knowledge is more as comparing to the elder group age groups.

SECTION-III: Table: 3Total percentage distribution of samples based on attitude n=54

SI.NO	OPINION	AGREE		DON'T KNOW		DISAGREE	
		N	%	N	%	N	%
1	I am concerned that i may get osteoporosis sometimes in my life	42	77.8	10	18.5	2	3.7
2	I believe that i have some influence over whether or not i get osteoporosis	20	37	25	46.3	9	16.7
3	I believe that diet can influence my risk of osteoporosis	46	85.2	7	13	1	1.9
4	I believe that direct exposure of face and hands to sunlight for more than 30 minutes a week is beneficial	40	74.1	10	18.5	4	7.4
5	I believe that if i get adequate education concerning osteoporosis, I can able to prevent osteoporosis	45	83.3	7	13	2	3.7
6	I believe smoking will lead to osteoporosis	31	57.4	20	37	3	5.6

This indicates that the frequency and percentage distribution of samples based on their attitudes. Here most of the samples showed that they were agreed (69.15%) with the opinions. A very few samples were disagreed (6.5%) with the opinions and (24.38%) showed a do not know response. That means most of the samples are having a positive attitude towards the prevention and management of osteoporosis.

SECTION-IV: Table: 4 Correlation between subjects knowledge score level to their attitude about osteoporosis prevention & its prevention. n=54

Correlations		Attitude Score	Total Knowledge	Prevention Score	Management Score
Attitude Score	Pearson Correlation	1	.000	-.251	-.275[*]
	P-value.		.998	.067	.044
Total Knowledge	Pearson Correlation	.000	1	.632[**]	.429[**]
	P-value.	.998		.000	.001
Prevention Score	Pearson Correlation	-.251	.632[**]	1	.667[**]
	P-value. (2-tailed)	.067	.000		.000
Management Score	Pearson Correlation	-.275[*]	.429[**]	.667[**]	1
	Sig. (2-tailed)	.044	.001	.000	
*. Correlation is significant at the 0.05 level (2-tailed).					

Table 4 revealed that there is no co-relation between knowledge and attitude(r=0.000, P value=0.998). Knowledge has significant positive correlation with Prevention (r=0.632, P-value=0.000) and Management (r=0.429, P-value=0.001) .Hence alternative hypothesis was accepted and statistical hypothesis was rejected.

Section-V: Table 5: Association between knowledge with educational status and age.   n=54

Knowledge Score	Education level		Age	
	F test	P-value	F test	P-value
	1.63	0.172	1.41	0.349

*Non –Significant at 0.05 levels

Data showed in this table explored that the calculated F-Test was 1.63 and p-value is 0.172 for educational status. This indicates that there was no association between knowledge with their educational status. The association between knowledge and age shows that the calculated F-Test was 1.41 and p-value is 0.349.That means there was no association between knowledge with their age. Hence alternative hypothesis was rejected and statistical hypothesis was accepted.

Section-VI: Table 6: Association between Attitudes with their selected demographic variables

Attitude Score	Education level		Age	
	F test	P-value	F test	P-value
	0.640	0.670	0.323	0.861

*Non –Significant at 0.05 levels

Data revealed in table 4-6 explored that the calculated F-Test was 0.640 and p-value is 0.670 for educational status. This indicates that there was no association between attitudes with their educational status. The association between attitude and age shows that the calculated F-Test was 0.323 and p-value is 0.861.That means there was no association between attitudes with their age. Hence alternative hypothesis was rejected and statistical hypothesis was accepted.

4. CONCLUSION

It is concluded that majority of women in this study were not having adequate knowledge regarding osteoporosis. According to our study younger age groups the knowledge is more as comparing to the elder age groups. Most of the samples are having a positive attitude towards the prevention and management of osteoporosis. Our study revealed that there is no correlation between knowledge and attitude(r=0.000, P value=0.998). Knowledge has significant positive correlation with Prevention (r=0.632, P-value=0.000) and Management. There is no association between knowledge with their educational status and age. Also there is no association between attitude with their educational status and age.

REFERENCES

[1]   About Osteoporosis by INTERNATIONAL OSTEOPOROSIS FOUNDATION [Cited 2012 May 7]. Available at http://www. osteoporosis.my/aboutOsteo/faq.asp

[2]   Lin J T, Lane J M, Hospital for special surgery, 535 East 70th street Newyork, Ny10021, USA, Aug 2004 126 -134.

[3]   www.emedicine.com/Prevention of Osteoporosis/article em.htm#prevention%20of%20 Osteoporosis introduction.

[4]   M.Jill.Gronholz, medical director, Bone density of North Idaho, 920 Iron wood, "prevention, diagnosis and management of osteoporosis" – related fracture; A multifactorial osteopathic approach.management of osteoporosis" – related fracture; A multifactorial osteopathic approach.

[5]   Potter and Perry, Fundamentals of Nursing, 7th edition, Mosby publications, Page no- 19-20

[6]   Jones, S., 2008. Osteoporosis and Osteoporosis Treatments. Articlesnatch. Retrieved on 2011 from: http://www. articlesnatch.com/Article/Osteoporosis-And-Osteoporosis-Treatments/159084.

[7]   Ungan, M. and M. Tumer, 2001. Turkish Women's knowledge of osteoporosis. Family Practice, 18(2): 199-203.

[8]   Bohaty K, Rocole H, Wehling K, Waltman N. " Testing the effectiveness of an educational intervention to increase dietary intake of calcium and vitamin D in young adult women. Journal of American Academy nurse Practitioner 20(2):93-9. Feb 2008

[9]   International osteoporosis Foundation (IOF). Available from http://www.iofbonehealth.org/patients-public/about-osteoporosis.html.

[10] Postmenopausal Osteoporosis in Saudi Women- A Pilot screening. Available from http://eprints.ktupm.edu.sa/8385/-14k.

[11] Prevalence and Associated factors of Low bone Mass in health check. Available from http://www.cjmed.net/journal/article/id/227?PHPSESSID=601f903d643ebfc92ded7594ee0a2bb.16k

[12] Postmenopausal Osteoporosis in Saudi Women- A Pilot screening. Available from http://eprints.ktupm.edu.sa/8385/-14k