

Knowledge of Osteoporosis among Women in UAE

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ABSTRACT

Osteoporosis (OP) is a chronic progressive disease. The current study was conducted to assess knowledge about Osteoporosis among women aged more than 40 years in UAE, to identify their source of knowledge and to assess the impact of some variables on their level of knowledge. A cross-sectional, observation study was performed as the method of data collection. Convenient samples of 368 questionnaires were collected out of 500 as the method of data collection. SPSS version 20 was used for data entry and analysis. Participating women were sub-divided into two categories, pre-menopause 232 and post-menopause 136. Out of the 232 pre-menopausal women, (82.76%) scored within the high knowledge category, while only (17.24%) scored within the poor knowledge category. While for the post-menopause women, (72.79%) scored within the high knowledge category, while (27.21%) scored within the poor knowledge category.

Keywords: Osteoporosis, knowledge, pre-menopause, post-menopause, UAE.

I. INTRODUCTION

Osteoporosis (OP) is a chronic progressive disease. It is defined as a systemic skeletal disease characterized by reduced bone density and micro-architectural deterioration of the bone tissue. Thus, bone becomes more fragile and susceptible to fractures. OP is a major public health concern; it is estimated to affect 200 million women worldwide and causes more than 8.9 million fractures annually (1, 4, 9).

Osteoporosis is either primary or secondary. The primary type is the commonest form, it is observed mainly in postmenopausal women. Women lose bone material especially after the menopause when levels of estrogen fall as this hormone helps to protect against bone loss. Secondary OP is mainly due to certain medical conditions, it can occur at any age (2, 5, 8).

Osteoporosis is a significant problem rapidly ageing in Asian populations. Several studies in different populations assessed the knowledge and attitudes toward OP (6, 7, 10). In United Arab Emirates (UAE), there are scanty studies that investigated this area. However, proper epidemiological prevalence data are not available about OP knowledge among women in UAE. For this reason, our current study is the first of its kind in the UAE region was conducted to assess

knowledge about OP among women aged more than 40 years in UAE, to identify their source of knowledge and to assess the impact of some variables on their level of knowledge.

II. MATERIALS AND METHODS

2.1 Study design

A cross-sectional, observation study was performed as the method of data collection. Data collection was conducted in the period between December 2016 to February 2017.

2.2 Sampling method

Convenient samples of 368 questionnaires were collected out of 500 which involved distribution of the study questionnaire to women that fulfil the inclusion and the exclusion criteria. The sampling method was selected because of their convenient accessibility and proximity to the researcher.

2.3 Pilot study

A pilot study of 10 osteoporotic patient was conducted to test the validity and reliability of the questionnaire designed to be used on the main study, determine the time needed by participant to finish the questionnaire and to reveal difficulties in understanding the theme and meaning of the questions included within the three parts of the questionnaire. The data of the participants involved

into the pilot study were not taken into account in the main study.

2.4 Data collection

A total of 368 sample questionnaire were collected in the period from December 2016 to February 2017. Patients willing to participate in the study were given the questionnaire to be filled; in addition they were requested to sign the consent form prior to filling the questionnaire. The questionnaire was available in both Arabic and English for those participants who are Arabic national. Participation was voluntary and no benefits or intensives were given to participants who filled the questionnaire form. The researcher requested from the participants to fill and submit the questionnaire at the same time to exclude the risk of using the internet and other sources to answer the knowledge questions. Intervening from the researcher where done only to clarify any difficulties in understanding a question and self-effort in answering the questions by the participants was applied.

2.5 Data analysis

All analyses were performed using SPSS version 20. Identification numbers were given for the collected questionnaire for counting and organizing purposes. All questions were coded and then imported to SPSS for analysis. All variables categories were coded with numbers (for example, gender: male as 1 and female as 2). Descriptive statistics were used to compute the demographic data and it included: mean, Standard deviation and frequency.

2.6 Ethical issues

Ethical letter to conduct the study was obtained from Ajman University (AU) to allow the researcher to distribute and collect the questionnaires among patients in hospitals after taking permission from the hospital manager. Written and signed consent form was obtained from the patients prior to data collection. Confidentiality of the participants was maintained at all time (as the patients were not asked to provide their names). Participants were informed that participation is voluntary and given the right to withdraw from the study at any time they needed.

III. RESULTS

3.1 Demographics data of the study participants

The demographic characteristics of the study participants are listed in **TABLE (1)**. A response rate of 73.6% for the questionnaire was obtained and included in the study, 65.8% of the study participants were 40-49 years old women with the mean age of 47.98 years old and standard deviation (SD) of 6.58 **Fig.1**.

Table 1: Characteristics of the study participants (N=368)

Characteristics	Sub group	Frequency	Percentage
Age	40-49	242	65.8
	50-59	98	26.63
	60-69	25	6.8
	70 and more	3	0.82
Education level	Read & Write	31	8.4
	High school	89	24.2
	Higher Education	248	67.4
Employment Statuses	Working	189	51.6
	Not Working	178	48.4
Menopausal Stage	Pre-menopausal	232	63.0
	Post-menopausal	136	37.0
Worries from Osteoporosis	Worried	248	67.4
	Not Worried	120	32.6
Medical care of Osteoporosis	Needs medical care	355	96.5
	No need for medical care	13	3.5
Major Source of medical information about Osteoporosis	Mass Media	99	26.9
	Physician	122	33.1
	Friends	44	12.0
	Reading	103	28.0

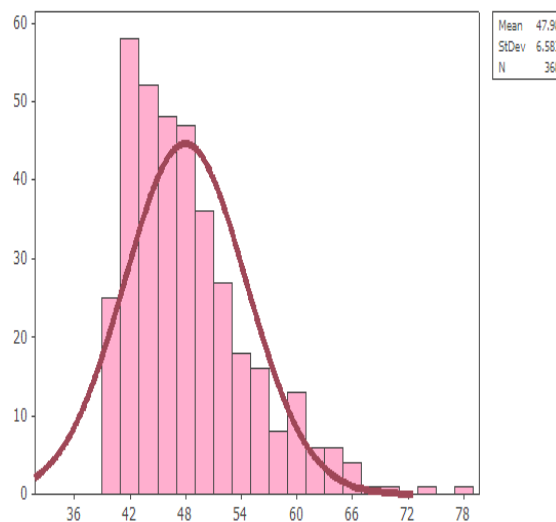


Figure1: Distribution of participants by age (in years)

3.2. Knowledge score

Knowledge category varies with different demographics data of the study. Knowledge score ranged between 0 and 20. Participating women were sub-divided into two categories, pre-menopause 232 and post-menopause 136. Out of the pre-menopausal women (82.76%) scored within the high knowledge category, while only (17.24%) scored within the poor knowledge category. And for the post-menopause women (72.79%) scored within the high knowledge category, while (27.21%) scored within the poor knowledge category (**Fig.2**).

Pre-menopausal women Post-menopausal women

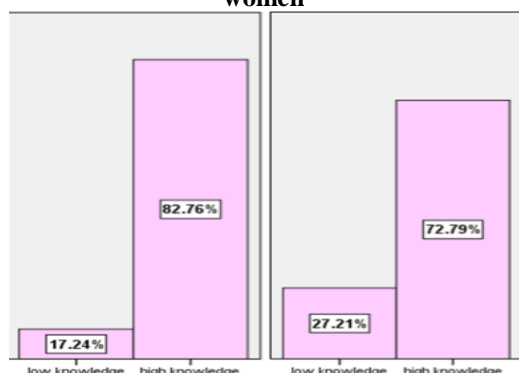


Figure2: Distribution of knowledge category among pre-menopausal and post-menopausal women

Table (2) shows the correct responses of the study participants to FOOQ(3) in descending order, starting with the question that scored the most correct response (question no.13) and ending with the question that scored the least correct response (questions no.2 & no.17). According to the original questionnaire which was distributed to the participants at the data collection period, the highest response rate was 92.9% and the least was 26.1% for the correct answers (good knowledge).

Table 2: Correct responses to FQQQ in descending order

Osteoporosis Knowledge Item	Correct answer	
	N	%
Walking has a great effect on bone health رياضة المشي لها تأثير جيد على صحة العظام	342	92.9
There are many ways to prevent Osteoporosis هناك عدة طرق للوقاية من هشاشة العظام	330	89.7
After menopause, women need calcium supplement (for example, 5 glasses of milk) daily بعد انقطاع الطمث، تحتاج المرأة إلى تناول مكملات الكالسيوم (أو ما يعادل 5 أكواب حليب يوميا)	321	87.2
High caffeine with low calcium intake increases the risk of osteoporosis الإكثار من تناول الأطعمة والمشروبات الغنية بالكافيين وقليلة الكالسيوم تزيد عرضة الإصابة بهشاشة العظام	319	86.7
Osteoporosis affects men and women هشاشة العظام تصيب الرجال والنساء	313	85.1
Sardines are rich in calcium and vitamin D سمك السردين غني بفيتامين د والكالسيوم	308	83.7
Low back pain, fractures, loss of height and loss of teeth are complications of osteoporosis الأم أسفل الظهر، والكسور، وفقدان الطول والأسنان هي من مضاعفات هشاشة العظام	300	81.5
Physical activities increase the risk of osteoporosis الأنشطة البدنية تزيد من عرضة الإصابة بهشاشة العظام	296	80.4
Most important time to build bone strength is between 9 and 30years of age أفضل فترة لبناء عظام قوية وصحية هي بين سن 9 والـ 30 عام	293	79.6
A lifetime of low intake of calcium and vitamin D does not increase the risk of osteoporosis قلة مصادر فيتامين د والكالسيوم على مدى الحياة، لا تزيد من عرضة الإصابة بهشاشة العظام	270	73.4
Normally, bone loss speeds up after menopause فقدان و ضعف العظام يحدث طبيعياً بشكل أسرع بعد انقطاع الطمث (سن اليأس)	261	70.9
Without preventive measures, women older than 50years will have a fracture due to osteoporosis in their lifetime بدون اتخاذ أي إجراءات وقائية، النساء فوق سن الـ 50 يصبن بكسور العظام بسبب الهشاشة	238	64.7
Smoking does not increase the risk of osteoporosis التدخين لا يزيد من فرص الإصابة بهشاشة العظام	214	58.2
Osteoporosis can be treated after it develops يمكن علاج هشاشة العظام بعد حدوثه	205	55.7
Family history of osteoporosis is not a risk factor التاريخ العائلي في الإصابة بهشاشة العظام لا يزيد من عرضة الإصابة لباقي أفراد العائلة	177	48.1
Most people gain bone mass after 30years of age اكتساب الكتلة العظمية عند غالب الناس يكون بعد سن الـ 30	122	33.2
Underweight women have osteoporosis risk more than overweight women النساء ذوات الوزن المنخفض أكثر عرضة للإصابة بهشاشة العظام من ذوات الوزن العالي	119	32.3
Early menopause is not a risk factor for osteoporosis انقطاع الطمث (سن اليأس) المبكر لا يعتبر مؤشر الإصابة بهشاشة العظام	101	27.4
Children 9–17years of age get enough calcium from one glass of milk each day to prevent osteoporosis بالنسبة للأطفال من سن الـ 9 إلى الـ 17 عام، شرب كأس واحد من الحليب يوميا يكفي للحماية من هشاشة العظام	96	26.1
High-impact exercise (weight lifting) improves bone health التمارين الرياضية الشديدة (كرفع الأثقال) تحسن صحة العظام	96	26.1

IV. CONCLUSION

The results of the study clearly showed that there is a good level of knowledge of OP among women in general. It is obvious that pre-menopausal women scored more high knowledge level than post-menopausal women. The lowest responses toward questions were for those concerns about prevention and risk factors of OP.

1.1 Limitations of the study

- The study was targeting women of age 40 years and above, and it was a challenging task to find a large number.
- Some women apologize to do the survey.

1.2 Recommendations

- We think that it would be a good idea to use mass media as a source of good quality health information, and also to encourage health care providers to be involved in educating people.
- Evaluation of attitude among public towards OP management and control.
- We also suggest organizing an annual event about osteoporosis awareness, and offering a free osteoporosis scanning test.

V. CONFLICT OF INTEREST

None declared.

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