Determine of Osteoporosis Knowledge among Female Students at Institutes in Middle Al-Furat at Iraq

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ABSTRACT

Objectives: To determine the knowledge among osteoporosis for female students and identify the association between overall assessment knowledge osteoporosis with demographic characteristics among female students. The study design a quantitative research by a descriptive study, the sampling it is non-Probability "purposive" sample was conducted on 200 Female Students among Osteoporosis Knowledge at Institutes in Al-Furat of Middle for the period from February 7, 2018 to March 16, 2018. A questionnaire it has used as a tool of data collection to fulfill the study, which consist of three parts, include demographic characteristics, medical history, and the health Protective behaviors. A content validity, which is carried out through 13 panel of experts. A panel of experts determines validity, while reliability use split half. A descriptive and inferential statistics are used to analyze the data. Results: Findings stated that the higher percentage were (68%) at age group (18-20) years, (91.5%) from urban areas, (74.5%) singles, and relative to source of information (48.5%) had more than source, followed by (23.5%) internet and social networking web. Also majority of those students (54%) were in fair level knowledge about osteoporosis disease, followed by (46%) had a good level of knowledge.

Keyword: osteoporosis, risk factors of osteoporosis, complication of osteoporosis.

Introduction

Osteoporosis defined as a reduction in bone mass per unit volume such that fractures may occur with minimal trauma. It is the most common metabolic bone disease in the Western world. There are many causes, but by far the most common and most important is postmenopausal osteoporosis, which affects most women by the end of their lives [1]. Osteoporosis is the most common silent disease in the world, where it is estimated that a woman of every (3) women, and a man of every (5) men will suffer from fractures resulting from the disease after the age of fifty years [2]. Osteoporosis is a disease that causes the bones to become fragile and weak, leading to increased risk of fractures in the bones. Osteoporosis patients may be fractured due to a minor collision or falling from a rise during daily activities [3]. Osteoporosis refers to it's often affects the elderly. Bone loss with aging process is a global phenomenon, but it becomes a disease when bones become more vulnerable to breakage [4]. Despite an increasing awareness of the importance of osteoporosis in some sections of the population, many women are still not sufficiently aware of the condition, do not appreciate the way in which it may affect their lives and, most importantly, do not understand that it is preventable. It is the duty of healthcare professionals to provide women with an impartial account of the current knowledge regarding osteoporosis [1]. Osteoporosis can be defined as low bone mass leading to structural fragility; it is difficult to determine the extent of the condition described in these qualitative terms. Using the World Health Organization's quantitative definition based on bone density measurement, there are roughly 10 million Americans over age 50 with osteoporosis

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and an additional 34 million with low bone mass or "osteopenia" of the hip, which puts them at risk for osteoporosis, fractures, and their potential complications later in life [5]. Osteoporosis was defined previously by a consensus panel as a "disease characterized by low bone mass and micro architectural deterioration of bone tissue leading to enhanced bone fragility and a consequent increase in fracture incidence." According to this definition, the diagnosis of osteoporosis requires the presence of a fracture [6]. Osteoporosis develops in older adults when the normal processes of bone formation and resorption become uncoupled or unbalanced, resulting in bone loss. Fractures are the result of decreased bone mass and strength, and, in the case of wrist and hip fractures, they usually involve a fall. Osteoporosis prevention and treatment programs should therefore focus on strategies that minimize bone resorption and maximize bone formation, as well as on strategies that reduce falls. Optimal treatment and prevention of osteoporosis require modification of risk factors, particularly smoking, physical activity, and diet, in addition to pharmacologic intervention. Osteomalacia, a less common disorder, occurs when bone is inadequately mineralized; the result is a syndrome of bone loss accompanied by bone pain, myopathy, fatigue, and fractures [6]. Osteoporosis unless the patient has a fracture, so it is disease is often called silent disease. The fracture due to osteoporosis often occurs in several areas such as the wrist, upper arm, pelvis, thigh, spine, and can cause severe pain and inability to move significantly and may cause death [3]. Aims of the study: To assessment the knowledge regarding osteoporosis of a selected sample of female students. To find out the relationship between knowledge osteoporosis with demographic characteristics of female students.

Methodology

A descriptive quantitative study was carried out in order to achieve the stated objective. The study was begun from February 7, 2018 to March 16, 2018, Study Sample. A non-probability Purposive sample of 200 female students of institute in Al-Furat of middle. Several statements of this questionnaire were modified and developed to increase the validity of this instrument and to be more appropriate for achieving the aims of the present study. The study instrument consisted of (4) parts as the following: Demographic data, risk factors, etiology of osteoporosis, treatment of osteoporosis and

complication of osteoporosis, Each item answered by one of these (Always, Sometime, Never). The collected data were statistically analyzed by two methods:

1. A descriptive statistical method (frequencies and percentages).

2. Inferential statistical method (Correlation Coefficient and P. Value).

Results and Discusion

The observed frequencies and percentages of the studied demographic characteristics variables which are distributed according to the study sample. Findings stated that the higher percentage were (68%) at age group (18-20) years, (91.5%) from urban areas, (74.5%) singles, and relative to source of information (48.5%) had more than source, followed by (23.5%) internet and social networking web. Table 1 shows that the majority of risk factors for study subject responded for women are more exposed than men, over-drinking coffee and tea, family history of disease, lack of exercise, lack of calcium and vitamin d, increased salt intake, lack of exposure to sunlight, increased intake of dietary fiber, non-pregnancy, refrain from breastfeeding, extreme thinness respectively. Table (1) indicated that most of the study sample had responded as (Don't know) (46%, 39.5%, 45.5%, 46%) for kidney disease, thyroid diseases, psychological diseases, surgical removal of ovaries respectively. the highest percentage (64.5%), (66%), (56.5%) majority of these students had responded as (Yes) to backache and arching, decrease in length, exposed body bones to fracture respectively. the vast majority of the study sample had responded as (Yes) (63%, 70.5%, 68%, 72%, 69.5%, 72.5%, 61.5%, 53%) for regular exercise, refrain from smoking and alcohol, drink milk and eat its products, adequate exposure to sunlight, hormonal therapy, follow the doctor, encourage breastfeeding, surgical treatment respectively. Table (3) shows that majority of those students (54%) were in fair level knowledge about osteoporosis disease, followed by (46%) had a good level of knowledge. The study finding observed frequencies and percentages of the studied demographic characteristics variables, which are distributes according to the study sample. The Findings of the study indicate that the higher percentage age group (18-20) years within age groups. Concerned with residence of the study sample are urban areas which inconsistence with Awan and others (2016) in their study

they mentions the majority of study sample from the rural settings of our study which has early sleeping habits and less room for electronic media entertainment [7]. This result consistent with Kamran, and others (2016), who studies knowledge and behavior regarding osteoporosis in women [8]. Also regarding the marital status are singles this results are disagree with of studied that indicate the women related marital that about three quarters (75.9%, n =404) of them were married, 16.5%, n = 87 were widows, 5.3%, n =28 were single and 21% divorces by El-Tawab and others (2016) [9]. Relative to source of information had more than source, followed by internet and social networking web. Many studies is consistent with such as Jalili and others (2007) that findings high percentage for sources information from internet and media [10]. The study finding concerned with overall assessment knowledge about osteoporosis indicate that the majority of the study sample responses are fair of knowledge. This finding of the study are come with study that indicate Knowledge, attitudes and activity regarding osteoporosis among Iranian women (n=729) Knowledge score (total) mean and stander division (44.3) (21.5) by Askari1 and others (2016) [11]. Also another studies such Green and others (2005) who there is not enough knowledge about risk factors, one does not consider them as serious threats and so does not look for prevention and treatment [12]. Hossien and others (2014), who founding through study osteoporosis knowledge among female adolescents in Egypt, that indicate knowledge of about osteoporosis, it was found that 38.4 % of the studied sample didn't know the meaning of osteoporosis, more over 75.9 % of them didn't know what to do in the case of osteoporosis this results is agree with finding of the study [13]. Concerned with correlation between knowledge among osteoporosis and their demographic characteristics for study sample the finding of the study that the indicate there is no significant between demographic characteristics variables (residence, source of information, age) which disagree with Riaz and others (2008), in their study found the association between the knowledge score for osteoporosis and women's age its non-significant (P =0.075) [14]. Also others study are agree with study finding such El-Tawab and others (2016) in their study they mention no correlation between age groups and sources information with knowledge for osteoporosis disease [9]. The study findings that the indicate the marital status which showed a highly significant difference at which come with Pluskiewicz and others (2014), who studies

influence of education, marital status, occupation, and the place of living on skeletal status, fracture prevalence, and the course and effectiveness of osteoporotic and founded correlation between marital status and osteoporosis that agree with study findings; but residence its disagree with same study [1].

Table 1: Distribution of the study subjects according to knowledge about risk factors of osteoporosis

Items	Rating	Frequency	Percent
Women are more exposed than men	NO	55	27.5
	Don't know	43	21.5
	Yes	102	51
Aging	NO	79	39.5
	Don't know	68	34
	Yes	53	26.5
Prenatal interruption early	NO	84	42
	Don't know	56	28
	Yes	60	30
Smoking abuse	NO	90	45
	Don't know	94	47
	Yes	16	8
Alcohol abuse	NO	63	31.5
	Don't know	77	38.5
	Yes	60	30
Over-drinking coffee and tea	NO	41	20.5
	Don't know	37	18.5
	Yes	122	61
Over-drinking soft drinks	NO	71	35.5
	Don't know	66	33
	Yes	63	31.5
Family history of disease (hereditary)	NO	56	28
	Don't know	21	10.5
	Yes	123	61.5
Lack of exercise	NO	47	23.5
	Don't know	46	22.5
	Yes	107	53.5
Lack of calcium and vitamin D	NO	55	27.5
	Don't know	66	33
	Yes	79	39.5
Increased salt intake	NO	25	12.5
	Don't know	19	9
	Yes	156	78
Lack of exposure to sunlight	NO	49	24.5
	Don't know	56	28
	Yes	95	47.5

Conted…

Increased intake of dietary fiber such as fruits and vegetables, cereals and legumes	NO	39	19.5
	Don't know	43	21.5
	Yes	118	59
Non-pregnancy	NO	51	25.5
	Don't know	67	33.5
	Yes	82	41
Frequent pregnancy	NO	88	44
	Don't know	55	27.5
	Yes	57	28.5
Refrain from breastfeeding	NO	49	24.5
	Don't know	46	23
	Yes	105	52.5

Table 2: Distribution of the study subjects according to knowledge about medical reasons of osteoporosis

Items	Rating	Frequency	Percent
Heart disease	NO	98	49
	Don't know	72	36
	Yes	30	15
Gastro-intestinal disease	NO	75	37.5
	Don't know	75	37.5
	Yes	50	25
Kidney disease	NO	65	32.5
	Don't know	92	46
	Yes	43	21.5
Thyroid diseases	NO	64	32
	Don't know	79	39.5
	Yes	57	28.5
psychological diseases	NO	75	37.5
	Don't know	91	45.5
	Yes	34	17
Surgical removal of ovaries	NO	74	37
	Don't know	92	46
	Yes	34	17

Table 3: Summery statistics for the knowledge osteoporosis overall domain

	Rating	Frequency	Percent
Overall assessment for knowledge	fair	108	54
	pass	92	46
	Total	200	100

Conclusion

The majority of the study sample is from age group (21-25) years, and place living in urban. The main source of information for study sample about osteoporosis it is from internet. The vast of study sample suffer from deficit of knowledge about osteoporosis.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the College of Nursing, University of Al-Ameed, Ministry of Higher Education and Scientific Research, Iraq and all experiments were carried out in accordance with approved guidelines.

REFERENCES

1. John C, Michael S. An Atlas of Osteoporosis. Third edition, 2007: 1-95.

2. Jamool A, Hanouna M, Pro K. Osteoporosis. National center for the distinguished- Syria.2015; 6.

3. Luntro G. Important strategies for bone care after the age of fifty years. International Foundation for Osteoporosis- Switzerland, 2013; 2.

4. Juliet A. Osteoporosis. Family doctor books. First edition, 2013; 1.

5. Rockville MD and Richard H. Bone Health and Osteoporosis. A Report of the Surgeon General, Department of Health and Human Services, 2004; 6.

6. Karen M. Osteoporosis and Osteomalacia. Chapter (27), 2010; P: 1.

7. Muhammad K, Ammara I, Aamir A. Knowledge And Behaviour Regarding Osteoporosis In Women, Pak Armed Forces Med J. 2016; 66(6): 32-927.

8. Sarah S, Emmanuel K, Heba M, Mona HA. Knowledge of osteoporosis among women in Alexandria (Egypt): A community based survey. Egyptian Society of Rheumatic Diseases, The Egyptian Rheumatologist. 2016; 38: 225-231.

9. Jalili Z, Nakhaee N, Askari R, and Sharifi V. Knowledge, Attitude and Preventive Practice of Women Concerning Osteoporosis, Iranian J Publ Health. 2007; 36:19-24.

10. Green LW, Kreuter MW. Health program Planning: An Educational and Ecological Approach, New York: McGraw-Hill, 2005; P: 67-80.

11. Yosria E, Hanan M, Amirat A. Osteoporosis knowledge among female adolescents in Egypt, American Journal of Nursing Science.2014; 3:13-17.

12. Mehmood R, Naushad A, Junaid P, Muhammad T. Knowledge about Osteoporosis among healthy women attending a tertiary care Hospital, J Pak Med Assoc. 2008; 58: 190-194.

13. Pluskiewicz W, Adamczyk P, Czekajło A, Grzeszczak W, Drozdzowska B. Influence of education, marital status, occupation, and the place of living on skeletal status, fracture prevalence, and the course and effectiveness of osteoporotic therapy in women in the RAC-OST-POL Study. National Institutes of Health/US National Library of Medicine, J Bone Miner Metab.2014; 32: 89-95.