How to Cite:
Ahmed, A. H., Karem, F. H., & Saleh, M. F. (2022). Knowledge of osteoporosis among females attending primary health care centers in Iraq. *International Journal of Health Sciences*, *6*(S6), 11455–11460. https://doi.org/10.53730/ijhs.v6nS6.13176

Knowledge of osteoporosis among females attending primary health care centers in Iraq

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Abstract---Osteoporosis is among the common diseases affecting bones, it is usually consider as the commonest one. Poor knowledge about its precipitating factors and the means for prevention will result in increasing the burden of the disease in the community; for this reason, the prevalence of osteoporosis in the world will increase. Methodology: Across-sectional study on 203 women attended Primary Health Care Centers in Al Dora District was conducted for the period from the first of March to end of May 2021, in order to determine their knowledge toward osteoporosis causes, complications and prevention. Statistical analysis. The row data were coded and analyzed by SPSS (version 23) software package then tabulated. Descriptive statistics were used to describe the basic features of the data in this study. Results: The all participants were females aged between 40 and 71 years (Mean ±SD 56.40 ±7.77). The majority of them were married (93.1%). Regarding employment status, 155 of them (76.4%) were housewife and the rest were employed. More than half of the participant's (108 ,53.2%) had educated level of primary school, were 46 (22.7%) had intermediate school and 44(21.7%) of the with secondary school graduation, the rest were illiterate(5 ,2.5%). Only 35.47% of participants had a good knowledge (scored 10 and more) while the rest of the participants had a bad knowledge (scored less than 10). Conclusions: Poor knowledge about the osteoporosis causes, complications and prevention were seen among participants

Keywords---knowledge, osteoporosis, Iraq.

Background

Osteoporosis is among the common diseases affecting bones, it is usually consider as the commonest one. With time, the increase in global population, Various factors are related to osteoporosis, these include menopause and age .The main problem with osteoporosis are fractures which may be the first clinical manifestations and can be associated with morbidity that result in poor quality of life or even sometime high mortality. The good thing with the osteoporosis is when an early diagnosis is made before fractures happen, this done by assessing the mineral density of bone and with treatment, prevention of osteoporosis can be achieved.

Aim

This study was conducted to evaluate Iraqi women knowledge regarding osteoporosis causes and prevention in Al Dora District.

Introduction

One of the major financial concerns in the world is osteoporosis-related fractures, the burden on insurance systems is high in the countries that pay attention to such patients (Sözen, Özışık, & Baş, 2017). After menopause, bone loss increases and this associated with decrease in bone strength (Ahlborg , Johnel, Turn, Rannevik, & Karlsson, 2003).The fracture could be the first presentation sign and symptoms of this disease (Willson, Nelson, Newbold, Nelson, & LaFleur, 2015). For women aged 50 years, the estimated risk of developing an osteoporotic fracture was 40-50% (Johnell & Kanis, 2005) The problem with osteoporosis is that the most of patients are not aware about it till fracture happened (Sadat-Ali , et al., 2015).The good thing is that osteoporosis can be prevented through early diagnosis before fracture happened through measuring bone density and increasing the awareness among high risk group and doctors (Sözen, Özışık, & Baş, 2017).

Literature Review Section

Methodology

Across-sectional study on 203 women attended Primary Health Care Centers in Al Dora District was conducted for the period from the first of March to end of May 2021 using convenience sampling approach ,questionnaire was distributed to the participants.The questionnaire contain two parts, the first one was concerned with the demographics characteristics of included females and the other part include 20 questions (true or false) about general knowledge of osteoporosis, complications and prevention, one mark was given for each correct answer and 0 mark was given for wrong answer, score of 10 and more considered good knowledge otherwise it considered bad.

Statistical analysis

SPSS version (23) used for entering and analyzing data. Mean and SD was given for quantitative variables where frequencies and percentages were given for qualitative variables.

Results

A total of 203 questionnaires were included for the final analysis. The socio-demographic characteristics of the study participators where showed in table (1), the participants were all are females aged between 40 and 71 years (Mean ±SD 56.40 ±7.77). The majority of them were married (93.1%) and the rest were single (3%) and divorced (3.9%), figure (1). Regarding employment status, 155 of them (76.4%) were housewife and the rest were employed. More than half of the participant's (108 ,53.2%) have educated level of primary school, where 46 (22.7%) had intermediate school and 44(21.7%) of them with secondary school graduation, the rest were illiterate(5 ,2.5%) .

Table 1
Socio-demographic characteristics of the study participators (n=203)

	n=203		
Age (years)	Mean ±SD	56.40 ±7.7	
	Range	31	
	Category	Frequency	Percentages (%)
Marital status	Single	6	3
	Married	189	93.1
	Divorced	8	3.9
Employment	Housewife	155	76.4
	Employed	48	23.6
Education level	Illiterate	5	2.5
	Primary school	108	53.2
	Intermediate school	46	22.7
	Secondary school	44	21.7

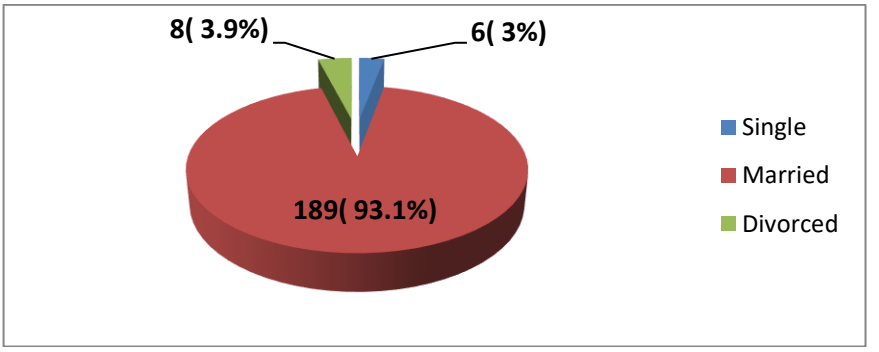

Figure 1. Marital status among study sample

Less than three quarter(72.9%) of the participants know that the osteoporosis increase the risk fractures of the bone , the majority of them (86.2%) thought it

give arise to symptoms before fractures happened and this is not true, bone may be broke without early observable sign and symptoms of bone loss (Team, 2021). Most of the participants (70.9%) answered the question "The highest risk of fracture are at white women as compared to others" correctly, where 35.0% of them answered the question "A fall can cause fractures easily in those complain from osteoporosis" wrongly and this not compatible with research done in Erbil in which 89.4% of them answer similar question correctly.((Mohammed & Dauod, 2021))

Poor knowledge seen also concerned the questions "The majority of females aged more than 70 years have osteoporosis" and "women have to expect fracture for at least one time when their age become more than 45 years before they die" , more than half of the participant133(65.5%) answer wrongly. Poor knowledge was seen with the questions "Physical activity of any type is beneficial for osteoporosis prevention", less than three quarter 145(71.4%) answered yes were the true answer is no and the question "It is easy to tell whether I am at risk of osteoporosis by my clinical risk factors" were more than three quarter of the participants, 159(78.3.%), think that its easy to know that they are at risk from the clinical sign and symptoms. "Osteoporosis is strongly predisposing by positive family history", "Half litter of milk a day (two glasses) can achieved the adequate calcium intake" were answered truly by 138(68.0%)and 130(64.0%) of the participants and this reflect good knowledge.

For the next questions, "Broccoli is a good source for the calcium", "prevention of osteoporosis can be achieved by calcium supplements alone", "prevention of osteoporosis can be achieved by calcium supplements alone", "alcohol has no effect on osteoporosis", "A high salt intake is a risk factor for osteoporosis", "There is a small amount of bone loss in the 10 years following the menopause", "Hormone therapy prevents further bone loss at any age after menopause" and "there are no effective treatments for osteoporosis available", more than half of participants answered wrongly ((143(70.4%) , 113(55.7%),113(55.7%), 131(64.5%),148(72.9%), 147(72.4%), 116(57.1%) and 128(63.1%) respectively.

Table 2
Knowledge about osteoporosis among participants

	Yes	NO	Correct answer
Osteoporosis increase the risk fractures of the bone	148(72.9%)	55(27.1%)	Yes
Before fractures happened , osteoporosis usually gives symptoms	175(86.2%)	28(13.8%)	No
Having a higher peak bone mass at the end of childhood gives great protection against osteoporosis in later life	148(72.9%)	55(27.1%)	No
Osteoporosis is common in males	113(55.7%)	90(44.3%)	No
Cigarette smoking is one of the causes of the osteoporosis	104(51.2%)	99(48.8%)	Yes
The highest risk of fracture are at white	144(70.9%)	59(29.1%)	Yes

women as compared to others			
A fall can cause fractures easily in those complain from osteoporosis	71(35.0%)	132(65.0%)	Yes
The majority of females aged more than 70 years have osteoporosis	93(45.8%)	110(54.2%)	Yes
Women have to expect fracture for at least one time when their age become more than 45 years before they die	70(34.5%)	133(65.5%)	Yes
Physical activity of any type is beneficial for osteoporosis prevention	145(71.4%)	58(28.6%)	No
It is easy to tell whether I am at risk of osteoporosis by my clinical risk factors	159(78.3.%)	44(21.7%)	No
Osteoporosis is strongly predisposing by positive family history	138(68.0%)	65(32%)	Yes
Half litter of milk a day (two glasses) can achieved the adequate calcium intake	130(64.0%)	73(36.0%)	Yes
Broccoli is a good source for the calcium	60(29.6%)	143(70.4%)	Yes
Prevention of osteoporosis can be achieved by calcium supplements alone	113(55.7%)	90(44.3%)	No
Alcohol has no effect on osteoporosis	131(64.5%)	72(35.5%)	No
A high salt intake is a risk factor for osteoporosis	55(27.1%)	148(72.9%)	Yes
There is a small amount of bone loss in the 10 years following the menopause	147(72.4%)	56(27.6%)	No
Hormone therapy prevents further bone loss at any age after menopause	87(42.9%)	116(57.1%)	Yes
There are no effective treatments for osteoporosis available	128(63.1%)	75(36.9%)	No

Discussion

Only 72 of participants (35.47%) had a good knowledge (scored 10 and more) while the rest of the participants had a bad knowledge (scored less than 10).Figure (2). This bad knowledge may be attributed to the low educational level (55.7%) of them were illiterate or had primary school level, the other thing was that most of participants were not being employed (76.4%), employed females had opportunity to communicate with others and getting information about many subjects in life.

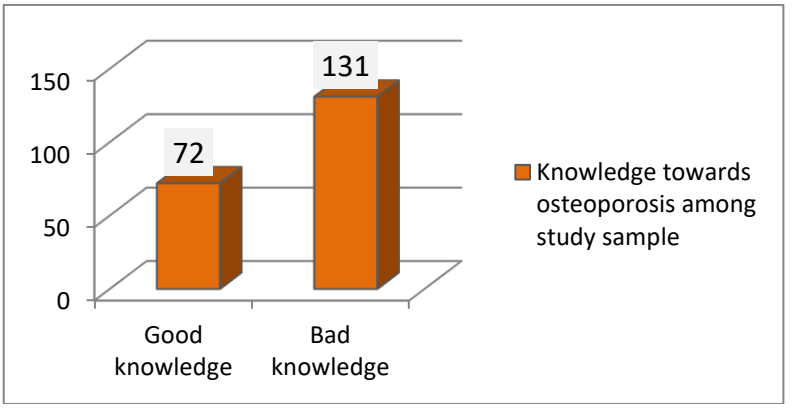

Figure 2. Knowledge towards osteoporosis among study sample.

Conclusions

Women that participated possessed an insufficient knowledge of the disease. This representa serious limited knowledge of precipitating factors and preventative practices for osteoporosis and highlightsthe need for health education amongst Iraqi females to reduce the burden of disease on the community.

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