Awareness of working women regarding To osteoporosis

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Abstract: Osteoporosis is a progressive skeletal disease that affects hundreds of millions of people worldwide, predominantly postmenopausal women. The aim of this study: was to assess the awareness of working women toward osteoporosis. Research design: A descriptive research design was utilized in this study. Setting: This study was conducted in Benha University Administration. The sample: A simple random sample was used to choose 200 women. Two instruments were used. Instrument one: Social characteristics of the sample structured interview questionnaire, medical history, knowledge and practices of the studied sample. Instrument two: Osteoporosis risk factors checklist. Results: ages of 37% of the studied women from 30-40 years old, women who had no knowledge about osteoporosis were 41%, women who had satisfactory practices were 69.5%. Conclusion: many women had poor total knowledge about osteoporosis and poo total practice. Recommendations: Health educational program should be developed and implemented for all women to increase their awareness regarding prevention of osteoporosis.

Key words: Osteoporosis, Risk factors and Working women.

INTRODUCTION

Awareness is defined as the ability to directly know, perceive and to feel by having or showing realization, perception or knowledge. Aware implies knowledge gained through one's own perceptions or by means of outside information to formulate a state of elementary or undifferentiated consciousness that puts individual in alert cognitive state to be aware of the situation (Henriques, 2014).

Osteoporosis is 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 and associated fractures are an important cause of mortality and morbidity (Hannon & Murphy, 2017).

Osteoporosis is one of the diseases which affect an important sector of the population and therefore have serious impact on the community; it is a significant global public health issue, which affects 200 million women around the world and its frequency increase by age. It is expected to affect more people worldwide than ever by 2050. It is no longer confined to the growing older population but has

implications for all age groups (EL-Tawab et al., 2015).

Osteoporosis is most common in post-menopausal women due to loss of sex hormones. In many affected people, bone loss is gradual and occurs without symptoms or warning signs until the disease is advanced So, osteoporosis is referred to as the "silent epidemic" (Hackley & Kriebs, 2016).

Women are at higher risk of getting osteoporosis due to attainment of lower peak bone mass early in life and hormonal changes that occur at the menopause .Working women are more likely to have osteoporosis because they stay along time at working place, lack of exposure to sunlight and unhealthy food intake integrated disease (Anbarasi et al., 2015).

The occupational health nurse activities in primary, secondary and tertiary prevention stratiges are expected to assume an even more important role in the prevention and treatment of illness, injury and chronic in the future. The occupational health nurse play an important role regarding decrease the risk of osteoporosis among working women through educating them about warning signs of osteoporosis , healthy life style, following good nutrition, doing exercise and preventing falls during the work (Stanhope &Lancaster, 2018).

Significance of the study:

Osteoporosis has become one of the most prevalent and costly health problems; it affects more than 75 million people worldwide. Its prevalence among Egyptian population is 10% (Fahim et al., 2015). In Egypt as 6.5% of females aged 20 years and above suffer from osteopenia and 12.6% of women in the same age group suffer from osteoporosis. Egyptian women have generally lower bone mineral density compared to women in western countries based on different studies, it has been calculated that 53.9% of postmenopausal women have osteopenia and 28.4% have osteoporosis (Mohamed & Tayel, 2012).

Purpose of the study

The purpose of the study was to assess awareness of working women regarding osteoporosis through:-

Research questions

1) Are the working women have knowledge and practices enough regarding osteoporosis?

2) Is there a relation between socio demographic charact-eristics of working women and their knowledge and practice regarding osteoporosis?

3) What are the most prevalent osteoporosis risk factors among working women?

4) 4-Is there a relation between working women's knowledge and their practices regarding osteoporosis?

Methods

Research design:

A descriptive research design was utilized to conduct this study.

Setting:-

This study was conducted at Benha University Administration.

Sampling

A simple random sample was used to choose 10% of women who work in Benha University Administration. The total number of study sample was 200 women out of (2000).

Instruments

Two instruments were used to collect the data:

 Instrument one: A struct-ured interview questionnaire: It was developed by the investigator and supervisors; staff based on reviewing related literatures, and it was written in simple clear Arabic language. It comprised of four parts:

▪ **Part one:** It was concerned with social characteristics of studied sample. It included 7 items about: Age, place of residence, level of education marital status, monthly income, nature of work and daily working hours.

▪ **Part two:** It was concerned with the medical history of the studied sample it included 2 questions about; health problems and drugs taken related for osteoporosis, it was divided into 16 items.

▪ **Part three:** It was concerned with the knowledge of the studied sample about osteoporosis which included 40 items; 5 about meaning, 4about symptoms, 8 about causes, 4 about high risk , 4 about the risk , 9 about preventive methods and 6 about source of information.

Scoring system:

Good	>26 (65%)
Average	20-26 (50-<65%)
Poor	<20 (<65%)

Instrument two: It was concerned with practices of studied sample as reported regarding osteoporosis it included 10 items(6 items about Nutritional habits e.g. taking food rich in calcium, taking food rich in fiber vegetables, and 4 items about daily healthy habits e.g. exercise continuously.

Scoring system:

Satisfactory	> 6(> 65%)
Unsatisfactory	(≤ 6(≤ 65%)

Instrument three: Osteoporosis risk factors check list **,** it was developed by

the researcher and included 7 items about age, irregularity of menstrual cycle, menopause, history of hysterectomy, ovaries removal, family history ,and body mass index of the studied sample. 3 Items about nutritional habits (taking milk). 6 Items about reproductive history e.g. number of pregnancies, number of births, number of abortions, type of baby feeding, duration of breastfeeding, using contraceptive methods) **.**

Scoring system:

Scoring system for each item

Yes	1
No	0

Content validity:

Instruments were checked by five experts community nursing to check clarity, relevance, comprehensiveness and applicability.

Ethical considerations

Approval of faculty ethical research committee was obtained oral consent has been obtained from each working women before conducting the interview. Also women receiver a brief orientation to the purpose of the study. They were also reassured that all information gathered would be treated confidentially and used only for the purpose of the study. Women were told that they had right to withdraw from the study at any time without giving any

reason.

Pilot study:

The pilot study was carried out on 10% (20) of working women. The pilot study was aimed to assess the clarity, applicability and time needed to fill each sheet, completing the sheet consumed about 30-45 minutes. Modifications were done, so the pilot study sample wasn't included in the total sample of the study.

Procedure:

1) Official letters were obtained and delivered from the Dean of Faculty of Nursing, Benha University directed to the Director of Benha University adminis-tration, then to security manager, and the security officers. The letter contained expansion of the title, objectives, instruments and the study technique.

2) The actual field work was carried out over a period of 6 months from the beginning of May 2016 to the end of October 2016. The investigator visited Benha University Administration from 9 am to 2 pm, two days per week (Sunday and Tuesday) to collect data from working women.

3) 3-Then instructions were provided about how to fill instruments two and three. it took about 20 minutes

to fill instrument two and three.

Statistical design:

All data collected were organized, tabulated and analyzed by using the Statistical Package for Social Science (SPSS version 20), which was used frequencies and percentages for qualitative descriptive data, and x^2 was used for relation tests, and mean and standard deviation was used for quantitative data, spearmean correlation test (r) was used for correlation analysis and degree of significance was identified.

Associations between items were considered as the following: (p value)

Highly statistically significant $P < 0.001$

Statistically Significant $P < 0.05$

Not significant $P > 0.05$

Results

Table 1: shows that; 37.0% of studied sample ranged from 30-40 years old Mean age was 38.04±9.25, and 68.5% they were living in rural areas. On the other hand; 54% of them had university education, 86.5% were married.

Figure 1: illustrates that 55% of studied sample had enough income, while 24.5% of them hadn t enough income.

Figure 2: illustrates that 23% of studied sample had gastritis , 16% had

diabets mellitus and 12% had rheumatoid arthiritis .

Figure 3: illustrates that 12% of the studied sample were using cortisone, while 4.5% of them were using anticoagulants.

Table 2: shows that 52% and 43% respectively of the studied sample had complete knowledge regarding meaning and preventive methods of osteoporosis, While, 73%, 91.5% respectively of them had incomplete knowledge regarding high risk of osteoporosis.

Figure 4: illustrates that; the studied sample sources of information regarding osteoporosis were medical team for 92.2%, 40.6% were family and friends, 15.2% were mass media, and 4.5% were special reading.

Figure 5: illustrates that; 41% of the studied sample had poor total knowledge scores about osteoporosis and only 21% of them had good total knowledge scores.

Table 3: As regards nutritional habits of the studied sample; 12%, 8.5%, 11.5%, 59.5%, 50.5%, &50 % respectively of them were taking food rich in calcium, fiber, and protein, reducing pickles or salts, reducing drink tea and coffee, avoiding drink soda water. Meanwhile, only 37.5%, 20%, 37%, &12 % of them were exercising

continuously, exposing themselves to the sun light, staying away from smoking and not sitting continuously more than 6 hours at work.

Figure 6: reveals that 69.5% of the studied sample had satisfactory total practices score regarding osteoporosis and 30.5% had unsatisfactory total practices scores.

Table 4: As regards general risk factors; 49.5% of the studied sample were above 45 years old, while 45.5% of the studied sample had irregularity of menstrual cycle.30% of the studied sample were in the period of menopause. According to nutritional habits 60% of studied sample were getting sufficient amounts of vegetables (4 times /week), while 55.5% of them were taking sufficient amount of fruits (4 times /week), and 27.5% of them were getting sufficient amounts of milk products (4 times /week).

Table 5: shows that 43.5% of the studied sample had 3-4 numbers of pregnancies. 46% had 1-2 births and 66.5% hadn't abortion. types of feeding; 64.5% were breast feeding and 57% continued breast feeding for 18 months and 65.5% of them were using contraceptive methods.

Figure 7: illustrates that 51.5% of them were using of IUD, 24.1% were using

tablets, and 16.8% were using of injection.

Figure 8: illustrates that; 61.5% of the studied sample were obese, 29.5% were overweight, 7% had normal weight and 2% of them were under weight.

Table 6: reveals that there were a highly statistical significant differences between total knowledge of the studied sample having different monthly incomes (P<0.001), Meanwhile, there were no statistical significant differences between total knowledge score of the studied sample having different age, place of residence, level of education, marital status and nature of work(P> 0.05).

Table 7: reveals that there were highly statistical significant differences between total practices score of the studied sample having different places of residence (P<0.001), marital status and monthly income (P<0.05). On the other hand; there were no statistical significant difference total practice score of women having differences between (ages, level of education, and nature of work (P > 0.05).

Table 8: reveals that there was a highly statistically significant correlation between total knowledge and practices scores of the studied sample regarding osteoporosis (P< 0.001)

Social characteristics	No.	%
Age/year		
20-	30	15.0
30-	74	37.0
40-	68	34.0
50 years or more	28	14.0
X² ±SD	38.04±9.25	
Place of residence		
Rural	137	68.5
Urban	63	31.5
Level of education		
Not read and write	5	2.5
Read and write	3	1.5
Primary education	4	2.0
Secondary education	75	37.5
University education	108	54.0
Postgraduate studies	5	2.5
Marital status		
Single	10	5.0
Married	167	83.5
Divorced	4	2.0
Widowed	19	9.5
Nature of work		
Written works	139	69.5
Computer works	38	19.0
Hard work (such as cleaning - lifting things	11	5.5
Daily working hours		
6-< 9 hours	167	83.5
9- <12 hours	28	14.0
12-hours or more	5	2.5
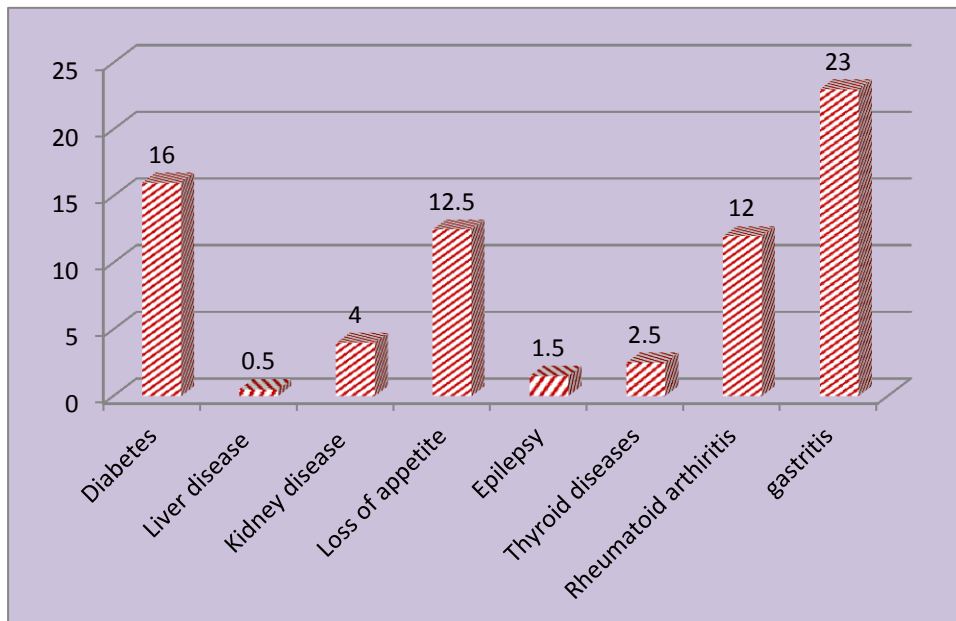
Figure (1): Percentage distribution of the studied sample regarding their health problems
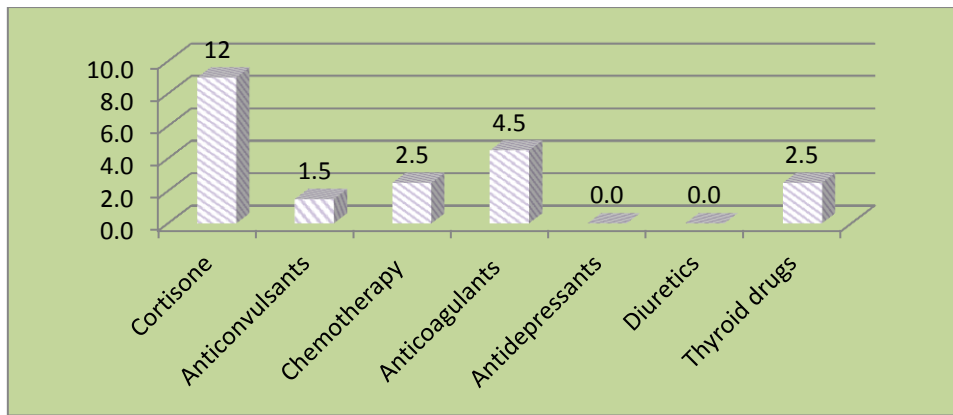
Figure (2): Percentage distribution of the studied sample regarding their taken drugs related to osteoporosis

Table (2): Frequency distribution of the studied sample regarding their knowledge about osteoporosis:

Knowledge	Correct&Complete		Correct&Incomplete		Dontknow	
	NO.	%	NO.	%	NO.	%
Meaning	104	52.0	76	38.0	20	10.0
Symptoms	70	35.0	96	48.0	34	17.0
Causes	59	29.5	72	36.0	69	34.5
High risk group	46	23.0	146	73.0	8	4.0
The risk age (60)years	6	3.0	183	91.5	11	5.5
Preventive methods	86	43.0	69	34.5	45	22.5
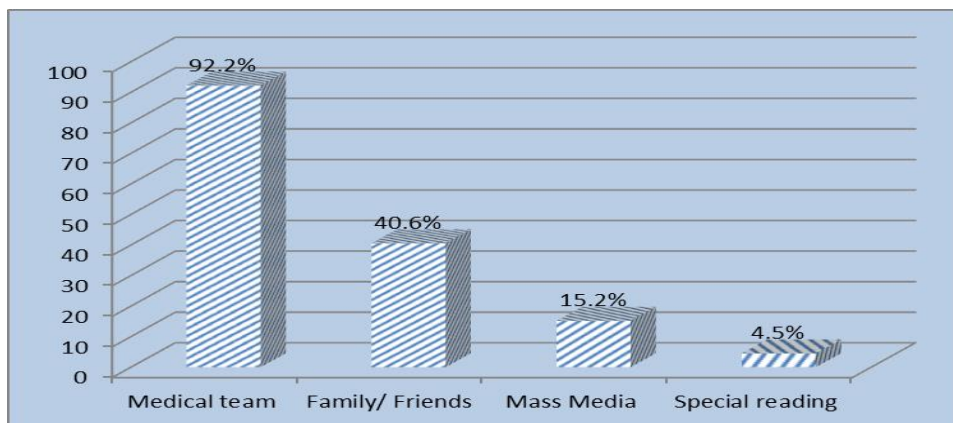
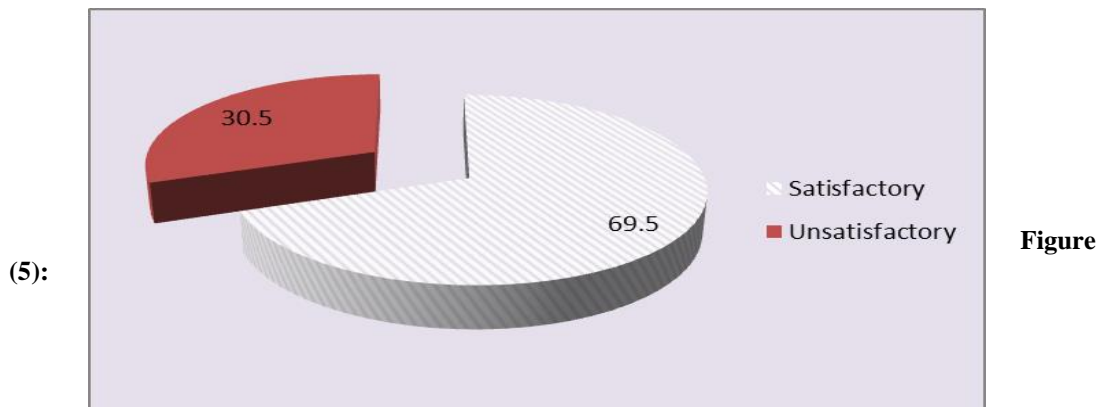**Figure (3):** Percentage distribution of the studied sample regarding their source of information:
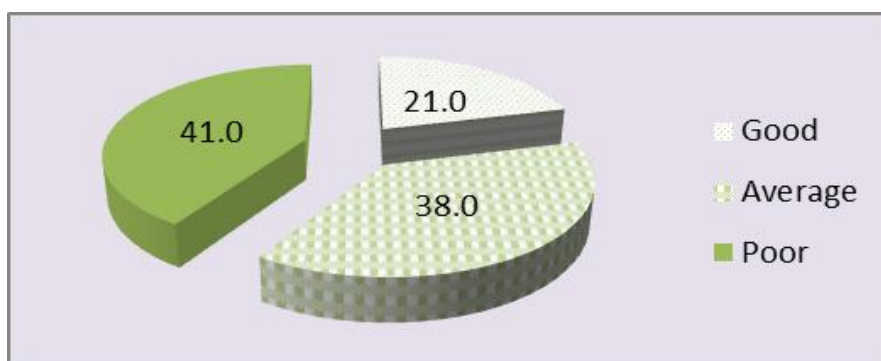
Figure (4): Percentage distribution of the studied samples' total knowledge scores regarding osteoporosis:

Table (3): Frequency distribution of the studied sample total reported practice scores regarding osteoporosis:

Practices	Done		Not done	
	No.	%	No.	%
Nutritional habits				
Taking food rich in calcium	24	12.0	176	88.0
Taking food rich in fiber vegetables	17	8.5	183	91.5
Taking food rich in protein	23	11.5	177	88.5
Reducing pickles or salts	119	59.5	81	40.5
Reducing drink tea and coffee	101	50.5	99	49.5
Avoiding drink soda water	100	50.0	100	50.0
Daily healthy habits				
Exercise continuously	75	37.5	125	62.5
Exposure to the sun light	40	20.0	160	80.0
Stay away from smoking	74	37.0	126	63.0
Not sitting continuous more than 6 hours at work	24	12.0	176	88.0

Figure (5): Percentage distribution of the studied sample total practices score regarding osteoporosis:

Table (4): Percentage distribution of the studied sample regarding their osteoporosis risk factors:

General risk factors	No.	%
Age above 45 years(yes)	99	49.5
Irregularity menstrual cycle	91	45.5
Menopause (yes)	60	30.0
History of hysterectomy(yes)	3	1.5
Ovaries removal (yes)	8	4.0
Family history	19	9.5
Nutritional habits factors	No.	%
Taken sufficient amount of milk products 4 times/week	55	27.5
Taken sufficient amount of fruits 4 times /week	111	55.5
Taken sufficient amount of vegetables 4 times /week	120	60.0

Table (5): Frequency distribution of the studied sample regarding their reproductive history:

Reproductive history	NO.	%
Number of pregnancies: (for married women167)		
None	17	8.5
1.2 times	72	36.0
3.4 times	87	43.5
More than 4 times	24	12.0
Number of births		
None	22	11.0
1.2	92	46.0
3-4	83	41.5
More than 4 times	3	1.5
Number of abortions		
None	133	66.5
1-2	52	26.0
3-4	11	5.5
More than 4	4	2.0
Type of baby feeding		
Natural/breastfeeding	129	64.5
Artificial	15	7.5
Both	56	28.0
Duration of breastfeeding		
6 months	13	6.5
9 months	31	15.5
18 months	114	57.0
2 years	42	21.0
Using contraceptive methods(yes)	131	65.5
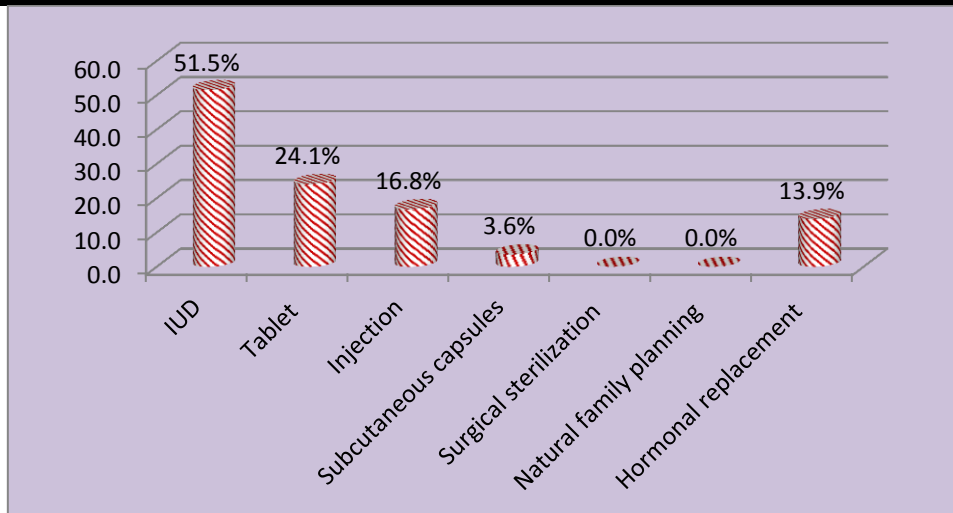
Figure (6): Percentage distribution of the studied sample regarding their contraceptive methods:
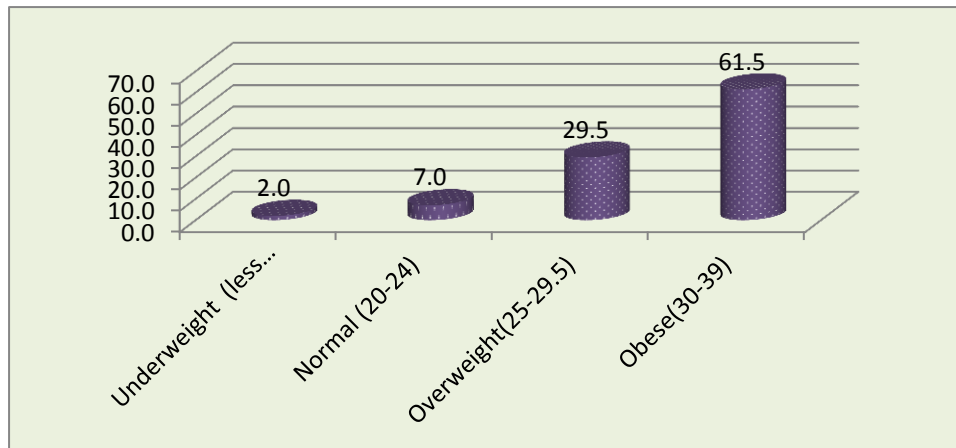
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Figure (7): Percentage distribution of the studied sample regarding their body mass index

Table (6): Relation between socio-demographic characteristics of the studied sample and their total knowledge score regarding osteoporosis:

social characteristics	Total knowledge score						X^2	P-value
	Good		Average		Poor			
	No	%	No	%	No	%		
Age								
20-	5	11.9	15	19.7	10	12.2		
30-	14	33.3	30	39.5	30	36.6		
40-	15	35.7	23	30.3	30	36.6	4.07	0.66
50 years or more	8	19.0	8	10.5	12	14.6		
Place of residence								
Rural	24	57.1	56	73.7	57	69.5	3.49	0.17
Urban	18	42.9	20	26.3	25	30.5		
Level of education								
Illiterate	0	0.0	2	2.6	3	3.7		
Read and write	0	0.0	1	1.3	2	2.4		
Primary education	0	0.0	2	2.6	2	2.4		
Secondary education	24	57.1	44	57.9	40	48.8	5.1	0.88
University education	17	40.5	25	32.9	33	40.2		
Postgraduate studies	1	2.4	2	2.6	2	2.4		
Marital status								
Single	2	4.8	2	2.6	6	7.3		
Married	37	88.1	63	82.9	67	81.7	3.71	0.715
Divorced	0	0.0	2	2.6	2	2.4		
Widowed	3	7.1	9	11.8	1	1.2		
Monthly income								
Enough and saving	18	42.9	12	15.8	11	13.4		
Enough	14	33.3	44	57.9	52	63.4	17.99	0.001**
Not enough	10	23.8	20	26.3	19	23.2		
Nature of work								
Written works	29	69.0	52	68.4	58	70.7		
Computer works	11	26.2	12	15.8	15	18.3	8.32	0.21
Hard work (such as cleaning - lifting things	0	0.0	8	10.5	3	3.7		

Table (7): Relation between socio-demographic characteristics of the studied sample and their total practices score regarding osteoporosis.

Social characteristics	Total practices score				X^2	P-value
	Unsatisfactory		Satisfactory			
	No	%	No	%		
Age/year						
20-	12	19.7	18	12.9		
30-	21	34.4	53	38.1	3.90	0.27
40-	23	37.7	45	32.4		
50 years or more	5	8.2	23	16.5		
Place of residence						
Rural	52	85.2	85	61.2	11.4	0.001**
Urban	9	14.8	54	38.8		
Level of education						
Illiterate	0	0.0	5	3.6		
Read and write	0	0.0	3	2.2		
Primary education	2	3.3	2	1.4	5.88	0.31
Secondary education	30	49.2	78	56.1		
University education	27	44.3	48	34.5		
Postgraduate studies	2	3.3	3	2.2		
Marital status						
Single	1	1.6	9	6.5		
Married	47	77.1	120	86.3	8.4	0.038*
Divorced	2	3.3	2	1.4		
Widowed	11	18.0	8	5.8		
Monthly income						
Enough and saving	6	9.8	35	25.2	7.33	0.026*
Enough	41	67.2	69	49.6		
Not enough	14	23.0	35	25.2		
Nature of work						
Written works	46	75.4	93	66.9	2.35	0.50
Computer works	11	18.0	27	19.4		
Hard work (such as cleaning - lifting things	2	3.3	9	6.5		

Table (8): Pearson correlation between total knowledge score and total practices score of the studied sample regarding osteoporosis.

Total practices Scores	Total knowledge Scores	
	r	P-value
	0.21	0.001**

DISCUSSION

Osteoporosis is a systemic skeletal disorder that affects bone density and quality, leading to bone fragility and increased risk of fractures. It is a major health problem which affects millions of people around the world and its

frequency increases by age. Osteoporosis is a worldwide problem because it increases with (Abdullah, 2017).

Concerning knowledge score about osteoporosis disease (Table 2). The current study showed that; slightly more than the half of the studied sample had correct and complete knowledge score regarding meaning of osteoporosis disease, and had average knowledge regarding high risk of osteoporosis, and the risk age of osteoporosis. These finding disagree with Hossien et al., (2014) who performed a study on osteoporosis knowledge among female adolescents in Egypt, and reported that; average knowledge score regarding meaning of osteoporosis was 36% and poor knowledge regarding high risk of osteoporosis were 52%, and the risk age of osteoporosis .

As regards symptoms, causes, preventive methods of osteoporosis, the current study revealed that about one third of the study had no knowledge regarding causes, and slightly more than one fifth of them had no knowledge about symptoms, less than half of the study complete knowledge about preventive methods. These finding disagree with who performed a study on Knowledge about osteoporosis among healthy women attending a tertiary care hospital, Saudi Arabia, and reported that; the

minority of the studied sample had correct and incomplete knowledge according to symptoms, causes and preventive methods related to osteoporosis .

Concerning the studied sample source of information about osteoporosis disease. this study showed that most of the studied sample received information from medical team while less than half of them received information from family or friends, one fifth from mass media and less than one tenth from special reading. These findings disagreed with Safizadeh et al., (2015) who performed a study about awareness of osteoporosis among female employee in Kerman, Iran, and stated that; the most frequent source of information about osteoporosis were radio and TV (44.6%) followed by newspapers and magazines (41.6%) and relatives and friends for (41.4%). Health care workers had the least role in this regard (9.5%).

Concerning total knowledge score of the studied sample regarding osteoporosis. this study showed that less than half of them had poor knowledge scores. This result disagreed with Osman, (2013) who performed a study on assessment of osteoporosis KAP among women in Assir region, Saudi Arabia and stated that 43% of the studied sample had good knowledge regarding osteoporosis. This

difference could be ahirbnted to differences in the level of education between the two studied samples.

Regarding the practices of the studied sample results of the present study illustrated that slightly more than one tenth of the studied sample were taking food rich in calcium.This result disagreed with Mahboub et al., (2014) who performed a study on evaluation of the prevalence and correlated factors for decreased bone mass density among pre and postmenopausal educated working women in Saudi Arabia they stated that 60% of the studied sample took food rich in calcium.

Results of the present study showed that only (8.5%) of the studied sample were eating food rich in vegetables and around one tenth of the studied sample were taking food rich in protein. These results disagree with Agrawal & Verma, (2013) who performed a study on cross sectional study of osteoporosis among women in India and stated that 35% of the studied sample took food rich in vegetables and protein. Although some women had proper knowledge about healthy diet they need nutritional educational programs help them to translate their knowledge into behaviors.

Results of the study showed that more than half of the studied women reduced pickels,salts,teaor coffee in diet.

Meanwhile, more than one third of the sample were practicing regular exercise. These results agreed with Al-shammari, (2014) who performed a study on women knowledge, attitude and practices about osteoporosis prevention Saudi Arabia, and stated that 58% of the studied samples were reducing salts or pickles, and 42% were making exercise continuously. This might be due to the habit of drinking a lot of tea cups daily among all Egyptians and that caffeine was thought to provide to keep alert, productive, stay up late and concentrate well.

Furthermore, the results of the current study showed that half of the studied sample avoided drinking soda water. This result disagreed with Poslusna et al., (2008) who performed a study on risk factors of osteoporosis-knowledge and practices among adolescent females, and reported that; 29% of the studied sample were drinking soda water. These might be due to faulty habits of drinking soda water among Egyptian people.

As regards to exposure to the sunlight; the results of the current study showed that less than one quarter of the studied sample were exposed to sunlight. Also, slightly more than one third of them stayed away from smoking. These findings agreed with Jakobsen et al., (2013) who made a study on clinical risk

factors for osteoporosis they reported that; 17.8% of the studied sample were exposed to the sunlight and 42% of them stayed away from smoking. This result might be related to staying for time in the work.

This finding was in agreement with Gebel et al., (2017) who conducted a study on patterns and predictors of sitting time over ten years in a large population-based Canadian sample.

Concerning total practices score, the present study showed that more than two thirds of the study had satisfactory practices regarding osteoporosis. This finding disagreed with Ibrahim et al., (2014) who conducted a study on effectiveness of the implemented training program in changing menopausal women's knowledge and opinion toward osteoporosis and stated that only15% of the studied sample had satisfactory practices regarding osteoporosis. This might be due to poor knowledge and cultural factors that may reduce women joining in sports.

Concerning osteoporosis general risk factors, the current study showed that about one half of the study group were above 45yearsand had irregular menstrual cycle. Also these findings dissimilar with Mohamed, (2009) who conducted a study on assessment and modification of nutritional risk behavior

for osteoporosis among childbearing / working women, and stated that; 16% of the studied sample were 45years, 20% had irregular menstrual cycle and 5% were in menopause.

As regard nutritional habits less than two thirds of them were taking sufficient amounts of vegetables. while more than half were used to get sufficient amount of fruits and slightly more than one quarter were taking sufficient amount of milk products. These findings were agree with who conducted a study on increased intake of selected vegetables, herbs and fruit, and stated that; 49% of the studied sample had taken fruits,55% of studied sample were taking vegetables, and 30% were taken milk products.

The current study revealed that; there was a highly statistically significant relationship between the total knowledge score of studied sample and their monthly income. Meanwhile there was no statistically significant relationship between total knowledge and women age, place of residence, level of education, marital status and nature of work. These findings WERE in the same line with Elsabagh et al., (2015) who conducted a study on osteoporosis knowledge and health beliefs among employees of Tanta University. Also it agreed with Riaz et al., (2008) who performed a study on Knowledge about

osteoporosis among healthy women attending a tertiary care hospital in Saudi Arabia.

The current study revealed that there was a highly statistical significant relationship between total practices scores of the studied sample and their place of residence, marital status, and monthly income. On the other hand there were no statistical significant relationship between age, level of education, nature of work and their total practices score(P> 0.05). This might be low income women had a much lower intake of dairy products. this was attributed to inadequate intake of good quality of diet by low income women.

The second research question is about relationship between level of knowledge and practices. Bedsides this study revealed that there was a high statistical significant correlation between total knowledge and total practices score of the studied sample regarding osteoporosis. This finding is dissimilar with who performed a study on Effect of STP on knowledge, attitude and practice of menopausal women regarding the prevention of cardiac disease and osteoporosis in selected health center of Kannur they stated that there was no statistical significant correlation between knowledge and practice. Above all,

higher level of knowledge is expected to contribute to higher level of practices.

Conclusion:

Women who have complete knowledge about meaning , symptoms, causes, high risk groups , risk age and preventive methods are only 52%, 35%, 29.5%, 23%, 3% and 43%.also, more than two thirds of women (having different social characteristics had either average or poor level of knowledge. More than half of them had either average or poor level of practices Also, there was highly statistical positive correlation between level of nurses knowledge and practices regarding care of osteoporosis.

Recommendation:

1) Health educational program should be developed and implemented for women to improve and update their knowledge and practices about osteoporosis.

2) Further studied need to be focusing on improving awareness of women about osteoporosis.

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