https://journal.utripoli.edu.ly/index.php/Alqalam/index eISSN 2707-7179

8th Libyan International Conference on Medical, Applied, and Social Sciences

المؤتمر الدولي الليبي الثامن للعلوم الطبية والتطبيقية والانسانية

تحت شعار: التطورات التكنولوجية والاتجاهات الحديثة في التعليم

Original article

Knowledge of Risk Factors Related to Osteoporosis among Women in Hospitals

Marwa Ibrahim Shabaan*, Hanaa Hussein Mukhlif

Department of Clinical of Nursing Science, College of Nursing, University of Mosul, Mosul, Iraq

ARTICLE INFO

Corresponding Email *Marwa.ibraheem@uomosul.edu.iq*

Received: *27-03-2024*
Accepted: *31-05-2024*
Published: *26-06-2024*

Keywords. *Knowledge, Risk Factors, Osteoporosis, Fractures*

ABSTRACT

The study aims to determine women's knowledge of some risk factors contributing to osteoporosis and determine the connection between the knowledge and the women's demographic data. A descriptive study design was used. One hundred thirty women participants were selected as convenience samples from Mosul city hospitals. Data was collected from 15th January to 20th March 2024. A questionnaire was constructed from two parts six as demographic information and ten questions about women's knowledge of risk factors of osteoporosis. The study results were found through descriptive statistics and inferential statistical. Most women (63.1%) know osteoporosis risk factors. With a significant relationship between women's knowledge and level of education (0.048), while no significant with other variables. The study concludes that the participating women's understanding of the risk factors for osteoporosis was acceptable, and there related to their educational level. The study recommended increasing women's risk factors for osteoporosis and prevention strategies.

Cite this article. *Shabaan M, Mukhlif H. Knowledge of Risk Factors Related to Osteoporosis among Women in Hospitals. Alq J Med App Sci. 2024;7(Supp2):134-138. https://doi.org/10.54361/ajmas.2472218*

INTRODUCTION

Osteoporosis is a widespread health concern that can have an impact on people's lifestyles. Which is a progressive skeletal condition, that reduces bone weakens bone strength, and increases fracture risk among 20% of men and 50% of women who have experienced a fracture linked to osteoporosis throughout their lifetime [1]. Women over 50 are more prone to have osteoporosis, which can worsen with age [2]. When modest, accidental falls and bone fractures occur, osteoporosis develops clinically. The quality of life is diminished, women become more disabled as a result of these fractures, and the disease's financial restrictions worsen [3]. In addition, osteoporosis is a silent, asymptomatic skeletal system condition, that leads to less dense and weaker bones causing osteoporosis [4].

Fractures are the most common osteoporosis consequence in women, accounting for a significant portion of morbidity and mortality. Osteoporosis is caused by a combination of variables and constants, or hereditary and environmental factors. Resulting in osteoporosis. Recent scientific discoveries reveal that elements connected with bad living habits are one of the major contributing factors to the rapid decrease of bone mineral density in women [5]. Osteoporosis has avoidable (modifiable) and non-modifiable of risk factors including: age, height, weight, body mass index (BMI), and menopause are examples of non-modifiable risk variables that cannot be avoided. Calcium consumption, sun exposure, smoking, alcohol use, physical activity, underlying medical illnesses such as rheumatoid arthritis, systemic lupus erythematosus, and other autoimmune disorders, steroid use, and hormone replacement treatment are among the

modifiable risk factors [6]. Women's osteoporosis management and prevention can aid in early diagnosis and treatment.

There is growing evidence that education on osteoporosis affects women who are at high risk of developing the condition in terms of preventive behavior. Despite these facts, several authors examined how well-informed women, even those with a medical background, were about osteoporosis and its risk in various nations [7]. The present study aimed to determine the knowledge of women about some risk factors of osteoporosis and find out the relationship between the level of knowledge with demographic information of women.

METHODS

Study design and setting

A descriptive study was designed to determine the women's knowledge of risk factors for osteoporosis in Mosul City. The study started in December 2023 to April 2024. A convenience sample was used for selecting 130 women who participated in the sample taken from hospitals in Mosul city.

The sample has been selected based on the eligibility of women who agree to participate in the present study, and answer all questions or complete all the research questionnaire. The tool was created in English and then translated into Arabic. An independent back translation was completed compared to the original questionnaire, and the discrepancies were fixed. The tool is divided into part one: six demographics (age, marital status, occupation, educational level, place of residence, and if you have heard of osteoporosis). Part two involved 20 questions about knowledge of risk factors for osteoporosis. The answers to the questions are (Yes 3, I do not know, or No = 1). The study selected public, and teaching hospitals affiliated with the Nineveh Health Department. The hospitals were Ibn-Sena, Al-Salam Teaching Hospital, and Al-Mosul General Hospital.

Data collection procedure

In data collection, it was significant to ensure validity of tool study was established through the selection of five experts to examine the questionnaire. The questionnaire was based on the experts' opinions and the Coefficient correlation for items was used, which showed that the reliability estimate for the questionnaire was (r = 0.84). To collect data from the participating women, see the approval form that includes the women's consent to participate in the study. The study questionnaire was distributed and each interview lasted about 15-25 minutes. Extract data the data was collected from 15th of January to the 20th of March 2024. Data obtained by a questionnaire was gathered, organized, and input into a computer file and analyzed by the Statistical Package for the Social Science (SPSS, Version 26), the data significant at (P. value $\leqslant$ 0.05). This approach was employed through descriptive statistics, which include percentages, and inferential statistical analysis of Chi-Square.

RESULTS

Demographic information of the participant

Table 1 shows the demographic information of the entire study sample. The table illustrates that the highest percentage of age groups is between (30-39 years). According to marital status, most of the women (66.2%) were married. Regarding occupation, the table shows that a high percentage (66.2%) of them were housewives. As for the level of education in the whole study, the intermediate school formed (31.5%), while the residents referred (79.2%) were urban. Finally, most women (63.1%) heard of osteoporosis.

Table1: Distribution the Demographic information of the participant (n=130)

Demographic Information		Frequency	Percent
Age group	20-29 Year	29	22.3
	30-39 Year	44	33.8
	40-94 Year	36	27.7
	50-59 Year	17	13.1
	60 Year and More	4	3.1
Marital Status	Single	44	33.8
	Married	86	66.2
Occupation	Employer	14	10.8
	Student	30	23.1
	Housewife	86	66.2

Educational Level	Primary School	12	9.2
	Intermediate School	41	31.5
	Secondary School	22	16.9
	Diploma	40	30.8
	Bachelors And More	15	11.5
Residence	Rural	103	79.2
	Urban	27	20.8
You have heard of osteoporosis	Yes	82	63.1
	No	48	36.9

Adult women's knowledge of risk factors related to osteoporosis.

In figure 1, the adults' women were (76.2%) have moderate knowledge. In the other hand (19.2%) was poor knowledge about risk factors of osteoporosis. While (4.6%) have good knowledge.

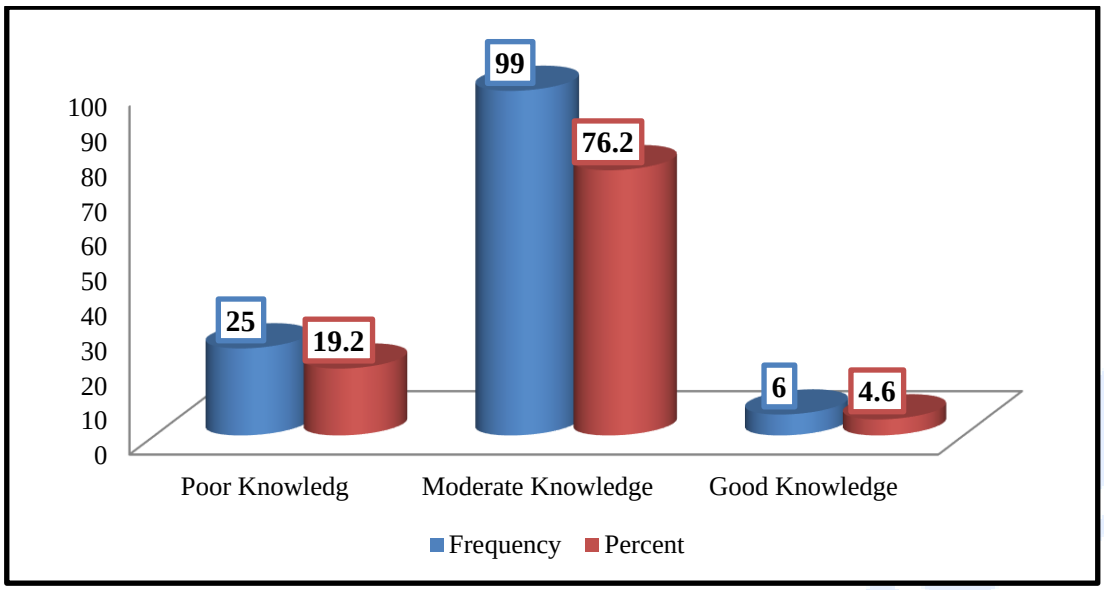

Figure 1. Displays the level of adult women's knowledge of risk factors related to osteoporosis.

Association between Adult women knowledge and demographic information

This table shows a significant relationship between women knowledge and level of education (0.048) at P value less than or equal 0.05. While other demographic variables not a significant with knowledge of risk factors for osteoporosis.

Table 2. Association between Adult women knowledge and demographic information among women with osteoporosis

Variables		Level			Value	df	Sig.
		Poor Knowledge	Moderate Knowledge	Good Knowledge			
Age	(20 to29) Year	5	21	3	6.717	8	0.567 N.S
	(30 to39) Year	10	31	3			
	(40 to49) Year	7	29	0			
	(50 to59) Year	2	15	0			
	60 Year and More	1	3	0			
Marital Status	Single	7	34	3	1.092	2	0.579 N.S
	Married	18	65	3			
Occupation	Employer	3	10	1	6.994	4	0.136 N.S
	Student	1	28	1			
	Housewife	21	61	4			

Educational Level	Primary School	5	7	0	15.611	8	0.048 S.
	Intermediate School	5	34	2			
	Secondary School	7	12	3			
	Diploma	6	34	0			
	Bachelors & more	2	12	1			
Residence	Rural	19	79	5	0.239	2	0.887 N.S.
	Urban	6	20	1			
You have heard of osteoporosis	No	10	35	3	0.647	2	0.724 N.S
	Yes	15	64	3			

DISCUSSION

Finding any gaps in women's knowledge about osteoporosis is crucial because they could impede early prevention efforts [7]. There is mounting evidence that women who are at higher risk of osteoporosis are more likely to take preventive measures once they are aware of the illness [8].

In the present study, the data collected from women has been analyzed and interpreted according to the study objectives. Whereas, osteoporosis is a major public health concern, increasing female osteoporosis knowledge and awareness is an important step in preventing and treating osteoporosis.

The current study finds that most women in middle age are married. This result is consistent with the study conducted by Peng et al., shows the participants age were between 26 and 35 years old) and (54%) were married. Regarding occupation, half of the participants' sample are housewives [9]; this result disagrees with the study conducted at Egypt by Mohamed et al. illustrates that the most of participants are employees [10]. Some of the women have the intermediate school formed certificate and residence in urban.

It is crucial to investigate the risk factors and determinants of osteoporosis as well as the contribution of knowledge and health beliefs to the disease. By having this data available, the Ministry of Health may focus its efforts on high-risk populations and enhance the quality of its health awareness campaigns [11]. Moreover, to alter health-related behaviors linked to osteoporosis risk factors that are modifiable [12].

In osteoporosis, risk factors include things like age, using tobacco products, having a family history of certain malignancies, being exposed to radiation or certain chemicals, and so on [13]. In our study, the high percentage of adult women have acceptable knowledge of risk factors, as figure [1]. In addition, women have some knowledge of the risk factors of osteoporosis. In the same line as the current study by Ayyash et al., (2023), it mentioned the participants were median age, and the majority were married. The present study displays that the highest percentage (76.2%) had moderate knowledge, and the lower percentage (4.6%) had good knowledge of osteoporosis, with poor knowledge (19.2%). In another study, the overall mean knowledge, score was 7.84 (SD 1.57) with good, moderate, and poor knowledge detected among participants (63.1%, 33.3%, and 3.6%), respectively [14]. Another study shows that the amount of knowledge does not vary much with demographic data. However, there was a significant link with respondents' educational level [15].

CONCLUSION

Overall, this study concluded that the participating women's understanding of the risk factors for osteoporosis was moderate. While some women had insufficient information about risk factors consistent with osteoporosis, finding a significant relationship between women's knowledge and level of education. While other demographic characteristics are not significant in their knowledge. The study recommended increasing women's awareness of osteoporosis risk factors and preventive behaviors. Used the health belief model scale as a diagnostic tool to identify groups requiring more interventions. Implement community-based osteoporosis health programs to reach an audience of women.

Acknowledgments

The authors are thankful to the Ethical Research committee on Mosul Directorate of Health for approved the study.

Conflicts of Interest *Nil*

REFERENCES

1. Alshareef SH, Alwehaibi A, Alzahrani A, Fagihi A, Alkenani A, Alfentoukh M, et al. Knowledge and Awareness about Risk Factors of Osteoporosis among Young College Women at a University in Riyadh, KSA. J Bone Res. 2018;06(02).
2. Rossini M, Adami S, Bertoldo F, Diacinti D, Gatti D, Giannini S, Giusti A, Malavolta N, Minisola S, Osella G, Pedrazzoni M, Sinigaglia L, Viapiana O, Isaia GC. Guidelines for the diagnosis, prevention and management of osteoporosis. Reumatismo. 2016 Jun 23;68(1):1-39. doi: 10.4081/reumatismo.2016.870.
3. Ayyash M, Jaber K, Daghash R, Abu-Farha R, Alefishat E. Perception and awareness of osteoporosis and its related risk factors among women: A cross-sectional study. Electron J Gen Med. 2023;20(3).
4. Sözen T, Özışık L, Başaran NÇ. An overview and management of osteoporosis. Eur J Rheumatol. 2017 Mar;4(1):46-56. doi: 10.5152/eurjrheum.2016.048.
5. Bijelic R, Milicevic S, Balaban J. Risk Factors for Osteoporosis in Postmenopausal Women. Med Arch. 2017 Feb;71(1):25-28. doi: 10.5455/medarh.2017.71.25-28.
6. Thulkar J, Singh S, Sharma S, Thulkar T. Preventable risk factors for osteoporosis in postmenopausal women: Systematic review and meta-analysis. J Midlife Health. 2016 Jul-Sep;7(3):108-113. doi: 10.4103/0976-7800.191013.
7. Alrashidy RI. Evaluation of knowledge about osteoporosis risk factors among adults above 40 years of age in Hafar Al-Batin Region, Saudi Arabia. J Family Med Prim Care. 2021 Aug;10(8):3089-3093. doi: 10.4103/jfmpc.jfmpc_386_21.
8. Senthilraja M, Cherian KE, Jebasingh FK, Kapoor N, Paul TV, Asha HS. Osteoporosis knowledge and beliefs among postmenopausal women: A cross-sectional study from a teaching hospital in southern India. J Family Med Prim Care. 2019 Apr;8(4):1374-1378. doi: 10.4103/jfmpc.jfmpc_95_19.
9. Mohamed N, Elsayed N, Mohamed M. Preventive Health Behavior and Osteoporosis Prediction among Perimenopausal Women. Scientific African.2024;114(June), e00146. https://doi.org/10.1016/j.sciaf.2019.e00146
10. Peng L, Reynolds N, He A, Liu M, Yang J, She P, Zhang Y. Osteoporosis knowledge and related factors among orthopedic nurses in Hunan province of China. Int J Orthop Trauma Nurs. 2020 Feb;36:100714. doi: 10.1016/j.ijotn.2019.100714.
11. Elgzar WT, Nahari MH, Sayed SH, Ibrahim HA. Determinant of Osteoporosis Preventive Behaviors among Perimenopausal Women: A Cross-Sectional Study to Explore the Role of Knowledge and Health Beliefs. Nutrients. 2023 Jul 6;15(13):3052. doi: 10.3390/nu15133052.
12. Abd E, Emam E-R, Mervat A, Kader A. Improvement of women's knowledge, attitude and practice regarding osteoporosis after an interventional educational program. Zagazig Nurs J. 2013;9(1):1–14
13. Giroux É. Risk Factor and Causality in Epidemiology. In History, Philosophy and Theory of the Life Sciences. 2015;7. https://doi.org/10.1007/978-94-017-8887-8_9
14. Alharbi MS, Almutairi AS, Alwabel AS, Ali HA, Alrumayh J, Alnasayan RA, Alghofaili SM, Alshomar A. Evaluation of knowledge about osteoporosis risk factors among adults above 40 years of age in Qassim region, Saudi Arabia. Eur Rev Med Pharmacol Sci. 2023 Jan;27(1):20-25. doi: 10.26355/eurrev_202301_30849.
15. Hussein RS, Wahdan MM. Knowledge about Symptoms and Risk Factors of Osteoporosis among Adult Women in Cairo, Egypt. Egypt J Community Med. 2021;39(2):59–68.

معرفة عوامل الخطر المتعلقة بهشاشة العظام بين النساء في المستشفيات

مروى إبراهيم شعبان[1]* هناء حسين مخلف [2]

[1]قسم العلوم التمريضي السريري، جامعة الموصل، كلية التمريض، العراق
[2] قسم العلوم التمريضي السريري، جامعة الموصل، كلية التمريض، العراق

الخلاصة

هدفت الدراسة إلى تحديد معرفة النساء ببعض عوامل الخطر المسهمة في الإصابة بهشاشة العظام وتحديد العلاقة بين المعرفة والبيانات الديموغرافية للمرأة.تم استخدام تصميم الدراسة الوصفية. تم اختيار مائة وثلاثين امرأة مشاركة كعينات ملائمة من مستشفيات مدينة الموصل. تم جمع البيانات في الفترة من 15 يناير إلى 20 مارس2024 تم إنشاء استبيان من جزأين: ست معلومات ديموغرافية وعشرة أسئلة حول معرفة النساء بعوامل خطر الإصابة بهشاشة العظام. وتم التوصل إلى نتائج الدراسة من خلال الإحصاء الوصفي والإحصائي الاستدلالي. معظم النساء (63.1%) يعرفن عوامل خطر الإصابة بهشاشة العظام مع وجود علاقة ذات دلالة إحصائية بين معارف المرأة ومستوى تعليمها (0.048)، في حين لا توجد علاقة ذات دلالة إحصائية مع المتغيرات الأخرى.خلصت الدراسة إلى أن فهم النساء المشاركات لعوامل خطر الإصابة بهشاشة العظام كان مقبولا، ويرتبط بمستواهن التعليمي وأوصت الدراسة بزيادة عوامل خطر إصابة النساء بهشاشة العظام واستراتيجيات الوقاية.

الكلمات الدالة. المعرفة، عوامل الخطر، هشاشة العظام والكسور.