OPEN ACCESS

Research Paper

Assessment of Knowledge and Misconceptions of Osteoarthritis Patients Attending a Rheumatology Unit

Alyaa Nooruldeen Shawqi AlJafr[1], Sami Salman Shihab[2]

ABSTRACT:

BACKGROUND:

Osteoarthritis accounts for around 8% of the total burden of diseases worldwide. There is evidence that patient education has the beneficial impact of pain reduction and function improvement. The psychological advantages of patient education emphasized the effect of better knowledge on quality of life along with reduction in health care visit for patients with knee osteoarthritis.

OBJECTIVES:

To assess the level of knowledge and highlights the educational needs of Iraqi patients about osteoarthritis and to evaluate osteoarthritis patients' attitude and practice as a part of self-management approach.

PATIENTS AND METHODS:

A cross-sectional study conducted at Rheumatology Unit of Baghdad Teaching Hospital in Medical City, Baghdad, Iraq during a period of eight months from (December 2021 to August 2022). It included 100 patients who were known cases of osteoarthritis, aged ≥ 40 years. Questionnaire was divided into four sections in the form of multiple-choice questions to assess knowledge, attitude, and practice regarding osteoarthritis.

RESULTS:

Knowledge level was poor in 69% of patients. It was significantly higher among males and among the patients who reported that persons with the same problem (neighbors, friends, and relatives) were the source of information about osteoarthritis.

CONCLUSION:

Iraqi patients with osteoarthritis especially elderly is keen to live a pain free life but with the least effort to find the best advice from specialists and instead they gain information about the disease from their peers. There are many misconceptions and misbeliefs about the osteoarthritis and its management that need to be corrected by focused efforts to achieve better education.

KEYWORDS: Attitude; education; knowledge; osteoarthritis; practice.

[1]*M.B.CH. B) Al-Ramadi Teaching Hospital / MOH / Al-Anbar – Iraq*

[2]*FRCP, MRCP, DMR, CES, College of Medicine , University of Baghdad*

Iraqi Postgraduate Medical Journal, 2025; Vol. 24(2): 185-192

DOI: 10.52573/ipmj.2024.149323 *Received: May 22, 2024* *Accepted: June 2, 2024*

INTRODUCTION:

The most prevalent chronic articular disease is osteoarthritis, which is becoming more widespread as the population ages and becomes more obese [1,2]. Articular cartilage degradation and ongoing pain are the hallmarks of osteoarthritis, which can lead to disability, loss of function, a lower quality of life, and financial hardship [3,4]. Osteoarthritis is more common in women than in males, especially beyond the age of 50. It also rises with age. Around the age of 80, there is a levelling off or reduction in incidence at all joint sites [5]. Depending on the definition used, the population selected (primary versus tertiary care), and the distribution of osteoarthritis risk variables, such as age, sex, obesity, and geographic region, the prevalence and incidence of osteoarthritis vary significantly amongst studies [6]. According to estimates, osteoarthritis affects 8% of the world's population [7,8]. It causes moderate to severe disability in 43 million people, making it the 11th most debilitating disease worldwide [9]. The key components of osteoarthritis treatment incorporate the patient's adherence, optimum consumption of recommendations, and modifications of behavior; these elements can be achieved by establishing the goals of treatment, education about osteoarthritis self-management, and regular monitoring [10]. Education of the patients about their illness is a crucial element to attain an optimum osteoarthritis management. Patients themselves chose the education of specific disease and directed community-based programs for the management of osteoarthritis. There is evidence that patient education has the beneficial impact of pain reduction and function

improvement. The psychological advantages of patient education emphasized the effect of better knowledge on quality of life along with reduction in health care visit for patients with knee osteoarthritis [11]. According to osteoarthritis clinical practice standards, education is a crucial part of treatment. However, if medical professionals gave patients all of the important information suggested by clinical guidelines, there could be a risk of "information overload [12]. The majority of health care consultations often have a limited amount of time allocated for in-person instruction by medical specialists. Consumers and specialists on osteoarthritis selected 21 essential messages that those with the condition should hear. These ideas can serve as the foundation for evidence-based patient education materials, which will aid patients in understanding osteoarthritis and making decisions based on the available data [13]. The aim of this study is to assess the level of knowledge and highlights the educational needs of Iraqi patients about osteoarthritis and to evaluate osteoarthritis patients' attitude and practice as a part of self-management approach including their misconceptions in an attempt to identify the challenges to improve quality of life and prevent physical disability.

PATIENTS AND METHODS:

Study design, setting, and time: This was a cross-sectional study conducted at Rheumatology Unit of Baghdad Teaching Hospital in Medical City, Baghdad, Iraq during a period of eight months from (December 2021 to August 2022).

Study Population and sample size: This study involved 100 patients who were known cases of osteoarthritis, aged ≥ 40 years, and enrolled during their visit to the rheumatology clinic in Medical City. Patients with history of inflammatory arthritis or cognitive dysfunction that prevents participation in the study were excluded from this study. Diagnosis of osteoarthritis was confirmed by clinical and/or radiological findings depending on American College of Rheumatology diagnostic criteria for osteoarthritis. The clinical American College of Rheumatology criteria for knee osteoarthritis are: pain in the knee and at least three of the following: age >50 years, stiffness <30 min, crepitus, bony tenderness, bony enlargement and no palpable warmth. At each follow-up visit, subjects of whom one or both knees and/or hips fulfilled American College of Rheumatology criteria were identified [1].

The study protocol was approved and official authorization was obtained from the Iraqi Board for Medical Specializations on 26/1/ 2021 with the approval number 363. This study follows the guidelines in the Declaration of Helsinki. After taking permission and confirming the confidential character of the study, a written consent was attained from 78 patients, and finger prints from the 22 illiterate patients.

Data collection: The questionnaire was compiled from different questionnaires obtained from five previous studies [14,18]. In this study, the questions were asked verbally by the interviewing author so they were illustrated in a simple Arabic language to the patients during the interview and all of the patients were keen to participate in the study and answered all the questions in 15 minutes without the help from their relatives. It was divided into four sections in the form of multiple-choice questions.

First section included the demographic features of patients: Age, gender, height, weight, body mass index was calculated (weight kg/height m^2), level of education (illiterate, primary or secondary school, and higher education), and duration of osteoarthritis.

Second section composed of nine questions which cover different knowledge aspects that include two parts:

First part contained simple definition of the disease, causes of osteoarthritis, medication options and non-steroidal anti-inflammatory drugs side effects, participants belief of other treatment modalities (weight reduction and physical therapy) as part of osteoarthritis management, and patient awareness of osteoarthritis as a health problem.

The total knowledge score of correct answers was 21 points as each correct answer takes 1 point, the incorrect and "I don't know" answer takes 0. The patient score (0-7) has been considered as poor knowledge, (8-14) as fair knowledge and good knowledge was the description of patient score (15-21).

Second part of this section contains the last two questions about the source of current information and the best way to enhance knowledge from the patients' point of view.

Third section described the attitude of participants which consists of three questions: first question about the methods they actually use to modulate joint loading and reduce the chance of osteoarthritis progression, second question about the most common reason for doctor visit and last question enquire about the significance of taking preventive strategies by the patients to delay the progression of osteoarthritis from the patients' point of view.

Fourth section: The practice was demonstrated by one multiple-choice question about

engagement in any form of exercise (for e.g., walking, running, swimming or joint specific muscle strengthening exercises) and if the patient was working out, he will give his opinion about the role of exercise in osteoarthritis management and if the patient is living a sedentary life style, he can choose from many options the reason of this lack of practice.

Statistical analysis: Version 26 of the Statistical Package for Social Sciences (SPSS) was used to analyze the data. The information was displayed as ranges, means, and standard deviations. percentages and frequencies are used to present categorical data. When the expected frequency was less than five, the Fisher Exact Test was utilized instead of the Chi Square Test to determine the relationship between the knowledge score and specific information. P-values equal to or less than 0.05 were regarded as significant at this level.

RESULTS:

In this study, patient's age ranged from 42 to 73 years with a mean of 54.71 years and standard deviation of ± 8.09 years; 78% were females; 37% were overweighed; 31% were finished primary school; 51% had osteoarthritis for period between 5 – 10 years; 45% had both knees osteoarthritis, 33% mentioned that neighbor, friends or family members with the same problem was the source of information, enhancement the knowledge about osteoarthritis was obtained by internet which offers Health Information or via celebrities' participation in awareness in 37%, and the knowledge level was poor in 69% of patients as shown in table (1).

Table 1: Distribution of study patients by certain characteristics.

Variable	No. (n= 100)	Percentage (%)
Age (Year)		
< 50	28	28.0
50 - 64	60	60.0
≥ 65	12	12.0
Gender		
Male	22	22.0
Female	78	78.0
BMI level		
Normal	5	5.0
Overweight	37	37.0
Obesity Class I	24	24.0
Obesity Class II	19	19.0
Obesity Class III	15	15.0
Educational level		
Illiterate	22	22.0
Primary school	31	31.0
Secondary school	30	30.0
Higher education	17	17.0
Duration of OA (Years)		
< 5	28	28.0
5 – 10	51	51.0
> 10	21	21.0
Types of OA		
Both Knees	45	45.0
Unilateral Knee	18	18.0
Both Hips	6	6.0
Unilateral Hip	5	5.0
Lumber spondylosis	8	8.0
Cervical spondylosis	6	6.0
More than one joint involved	12	12.0
Source of information about OA		
Internet (Social media applications)	25	25.0
TV show	15	15.0
Neighbor or friends or family members with Same Problem	33	33.0
Persons From Medical Field	10	10.0

Visited Doctor	17	17.0
Enhancement the knowledge about OA		
TV Shows with Physicians	34	34.0
billboards and booklets with public health messages	4	4.0
Internet Offering Health Information or celebrities' participation in awareness	37	37.0
Doctors During Usual Visit	25	25.0
Knowledge score		
Poor	69	69.0
Fair	29	29.0
Good	2	2.0

Results of the patients' knowledge about the definition of osteoarthritis showed that 25% answered correctly, and the other 75% answered incorrectly about the question of osteoarthritis definition. Regarding results about the causes and risk factors, the highest percentage of correct responses (86%) was to the question that says being overweight or obese increases one's chance of developing osteoarthritis, followed by (60%) to the question that says repetitive joint loading heavy sport, kneeling, farming and heavy lifting can increase one's chance of developing osteoarthritis. Whereas, the highest percentage of incorrect responses (88%) was recorded when the patients were asked if cold damp weather increases one's chance of developing osteoarthritis (Table 2).

Table 2: Distribution of the patients' responses about definition, causes and risk factors of OA

Questions	**Responses**	
	Correct no. (%)	**Incorrect no. (%)**
What do think the definition of OA	25 (25.0)	75 (75.0)
OA usually affects older people rather than young	57 (57.0)	43 (43.0)
Males have an increased chance of developing OA	53 (53.0)	47 (47.0)
Having strong thigh muscles reduce one's chance of developing OA	37 (37.0)	63 (63.0)
Overweight or obese people have more risk to develop OA than thin people	86 (86.0)	14 (14.0)
Cold damp weather can cause OA	12 (12.0)	88 (88.0)
Having a previous joint injury like ligament or cartilage tear increases one's chance of developing OA	26 (26.0)	74 (74.0)
Repetitive joint loading heavy sport, frequent kneeling, farming & heavy lifting can increase the risk & progression of OA	60 (60.0)	40 (40.0)

Results of the participants' response toward attitude questions revealed that the highest percentage of patients (49%) considered that reducing stress on the affected joint is the suitable method to reduce the chances of osteoarthritis progression, 82% considered the continuous and unbearable pain is the most common reason to visit the doctor, and 83% thought that taking measures which can prevent osteoarthritis are extremely important (Table 3).

Table 3: Distribution of the patients' response regarding attitude toward osteoarthritis

Questions	Responses	
	No. (n=100)	Percentage (%)
Keeping my weight down to the ideal for my height and age	27	27.0
Simple daily exercises like walking, cycling, and aerobic exercise	0	0
Regular muscle strengthening exercises	3	3.0
Reducing stress on the affected joint	49	49.0
Taking pain killer continuously as they can heal OA	24	24.0
Most common reason to visit the doctor		
The pain become continuous & I can't withstand it	82	82.0
When I can't do my daily activities	18	18.0
I visit the doctor to take some advices	0	0
The personal importance of taking measures that can prevent OA progression		
Not important at all	3	3.0
Important in a moderate degree	14	14.0
Extremely important	83	83.0

Responses of the patients about regular exercises was as follows: 7 were exercising regularly (for e.g., walking on treadmill or swimming), 4 (57.1%) of them thought that the exercise strengthens muscles and ligaments and should be done. On the other hand, 93 patients weren't exercising, and the reason for the highest percentage of them (24.7%) was that exercises need special equipment and cannot be done at home and they have no time to go to gym. It was clear that 9.7% of those who didn't exercise thought that it is not necessary to do exercises (Table 4).

Table 4: Distribution of patients' response to questions regarding practice of osteoarthritis

Questions	Responses	
	No. (n= 100)	**Percentage (%)**
Patients with Regular Exercise	**n= 7**	
Exercise strengthens muscles and ligaments & should be done regularly	4	57.1
Exercise for a specific time (for ex. 1 month) can cure OA forever and no need to continue them	3	42.9
Patients without Regular Exercise	**n= 93**	
It is not necessary to do exercises	9	9.7
Exercises are harmful and weakens damaged joints	21	22.6
These exercises need special equipment and can't be done at home and I don't have time to go to gym	23	24.7
No one support me (family, friends)	6	6.4
I forget the exercises prescribed by the doctor or physiotherapist because I don't do them regularly	14	15.0
I do appreciate the significance of exercises but no one advises me to do any, or which can help in the management of OA.	20	21.5

The proportion of poor knowledge score was significantly higher among males (90.5%, P= 0.023) and among the patients who reported that persons with the same problem (neighbors, friends, and relatives) were the source of information about osteoarthritis (90.9%, P= 0.008). Other factors showed no significant association ($P \geq 0.05$) with knowledge score (Table 5).

Table 5: Association between knowledge score and certain characteristics

Clinical Characteristics	Knowledge Score		Total (%) n= 98	P- Value
	Poor (%) n= 69	Fair (%) n= 29		
Age Group (Years)				
< 50	20 (74.1)	7 (25.9)	27 (27.6)	0.869
50 – 65	41 (69.5)	18 (30.5)	59 (60.2)	
> 65	8 (66.7)	4 (33.3)	12 (12.2)	
Gender				
Male	19 (90.5)	2 (9.5)	21 (21.4)	0.023
Female	50 (64.9)	27 (35.1)	77 (78.6)	
BMI Level				
Normal	5 (100.0)	0 (0)	5 (5.1)	0.089
Overweight	28 (75.7)	9 (24.3)	37 (37.8)	
Obese Class I	18 (78.3)	5 (21.7)	23 (23.4)	
Obese Class II	11 (61.1)	7 (38.9)	18 (18.4)	
Obese Class III	7 (46.7)	8 (53.3)	15 (15.3)	
Educational Level				
Illiterate	16 (72.7)	6 (27.3)	22 (22.4)	0.794
Primary School	21 (67.7)	10 (32.3)	31 (31.7)	
Secondary School	20 (66.7)	10 (33.3)	30 (30.6)	
College or Higher Ed.	12 (80.0)	3 (20.0)	15 (15.3)	
Duration of OA (Years)				
< 5	18 (69.2)	8 (30.8)	26 (26.5)	0.806
5 – 10	35 (68.6)	16 (31.4)	51 (52.0)	
> 10	16 (76.2)	5 (23.8)	21 (21.4)	
Type of OA				
Knee	41 (67.2)	20 (32.8)	61 (62.2)	0.730
Hip	10 (90.9)	1 (9.1)	11 (11.2)	
Lumber spondylosis	5 (62.5)	3 (37.5)	8 (8.2)	
Cervical spondylosis	5 (83.3)	1 (16.7)	6 (6.1)	
Multiple Joints	8 (66.7)	4 (33.3)	12 (12.3)	
Source of information				
Internet (social media applications)	14 (56.0)	11 (44.0)	25 (25.5)	0.008
TV show	12 (80.0)	3 (20.0)	15 (15.3)	
Neighbor or friends or family with Same Problem	30 (90.0)	3 (9.1)	33 (33.7)	
Persons From Medical Field	5 (50.0)	5 (50.0)	10 (10.2)	
Visited Doctor	8 (53.0)	7 (46.7)	15 (15.3)	

DISCUSSION:

In the current study, results of knowledge about definition of osteoarthritis showed that 25% answered correctly about this question, while 75% didn't recognize the simple description of the disease. This result is in contrast to Juby AG et al study 2005 in which 75% defined osteoarthritis properly [19]. This might be explained by the fact that these patients didn't try to ask or understand the definition of osteoarthritis and depend only on the perceived popular thoughts in our society about osteoarthritis as the disease name is well known to most of elderly people.

Regarding causes and risk factors, 86% says that being overweight or obese increases one's chance of developing osteoarthritis. High prevalence of correct answers observed here is related to the advices they received from their doctors about the need for weight reduction and avoidance of excessive loading during work or exercises; while 88% of incorrect responses was recorded when the patients were asked if cold damp weather could be a risk factor for developing osteoarthritis. High percentage of incorrect answer about this question can be explained by the fact that cold weather decreases pain threshold so their symptoms are usually more prominent in winter time which resulted into the misconception that cold weather is a causative agent. Different results found in Saeed F et al study in 2019 [18] and Mukharrib MS et al study in 2018 [20].

In this study, the overall knowledge score of the patients about osteoarthritis showed that 69% had poor knowledge. Different findings observed in Mukharrib MS et al study in 2018 in which 82.6% of the population had good level of knowledge in total regarding osteoarthritis [20]. Of the 513 railway men surveyed in Ganasegeran K et al study in 2014, a close result observed when 53.6% had low knowledge level [16].

This study showed that poor knowledge score was significantly higher among males. This can be concluded from the higher percentage of female in this study who in general tend to visit the doctor more frequently with their curious personality to enquire more information about their disease as compared to males who are busy with their jobs and family financial responsibilities most of the time.

Different findings observed in Mukharrib MS et al study in 2018 as gender was obviously not related with the level of knowledge [20]. Another different finding observed in Ganasegeran et al study in 2014 in which reported that male respondents displayed higher significant knowledge score compared to females [16].

This study reported that poor knowledge score was significantly higher among those who reported that persons with the same problem (neighbors, friends, and relatives) were the source of information about osteoarthritis. This can be explained by the shortage of doctors and mismatch between the increasing number of the patients and declining number of Iraqi doctors which yielded an inadequate dissemination of information so, as a result most of the patients seek advices from other more available resources as a source of information. This finding was in consistence to studies done by Kao et al in 2012 [21] and Parsons et al in 2009 [22].

CONCLUSION:

Iraqi patients with osteoarthritis especially elderly are keen to live a pain free life but with the least effort to find the best advice from specialists and instead they gain information about the disease from their peers. There are many misconceptions and misbeliefs about the osteoarthritis and its management that need to be corrected by focused efforts to achieve better education.

Conflict of interest: No

Funding: This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Acknowledgment: Great thanks to medical staff in the rheumatology clinic in Medical City for their big efforts and help. Thanks to all enrolled patients for their patience and cooperation.

REFERENCES:

1. Jang S, Lee K, Ju JH. Recent updates of diagnosis, pathophysiology, and treatment on osteoarthritis of the knee. International journal of molecular sciences. 2021;22(5):2619.
2. Gorial FI, Maseer ES. Relationship of Platelet Lymphocyte Ratio and Neutrophil Monocyte Ratio with Disease Severity of Knee Osteoarthritis. Iraqi Postgraduate Medical Journal. 2020;19(4):345-49.
3. Hu Y, Chen X, Wang S, Jing Y, Su J. Subchondral bone microenvironment in osteoarthritis and pain. Bone research. 2021;9(1):20.
4. Hasan N, Alwasiti E, Ahmed M. Association of DVWA rs11718863 gene polymorphism with knee osteoarthritis in Iraqi patients. Iraqi JMS. 2022; 20 (2): 207-16. doi: 10.22578. IJMS.20(7).
5. Hamood R, Tirosh M, Fallach N, Chodick G, Eisenberg E, Lubovsky O. Prevalence and Incidence of Osteoarthritis: A Population-Based Retrospective Cohort Study. Journal of clinical medicine. 2021;10(18).
6. Palazzo C, Nguyen C, Lefevre-Colau M-M, Rannou F, Poiraudeau S. Risk factors and burden of osteoarthritis. Annals of physical and rehabilitation medicine. 2016;59(3):134-38.
7. Driban JB, Harkey MS, Barbe MF, Ward RJ, MacKay JW, Davis JE, et al. Risk factors and the natural history of accelerated knee osteoarthritis: a narrative review. BMC musculoskeletal disorders. 2020;21:1-11.
8. Shamekh A, Alizadeh M, Nejadghaderi SA, Sullman MJM, Kaufman JS, Collins GS, et al. The Burden of Osteoarthritis in the Middle East and North Africa Region From 1990 to 2019. Frontiers in medicine. 2022;9:881391.
9. Bortoluzzi A, Furini F, Scirè CA. Osteoarthritis and its management-Epidemiology, nutritional aspects and environmental factors. Autoimmunity reviews. 2018;17(11):1097-4.
10. Nelson AE, Allen KD, Golightly YM, Goode AP, Jordan JM, editors. A systematic review of recommendations and guidelines for the management of osteoarthritis: the chronic osteoarthritis management initiative of the US bone and joint initiative. Seminars in arthritis and rheumatism; 2014: Elsevier.
11. Ali SA, Walsh KE, Kloseck M. Patient perspectives on improving osteoarthritis management in urban and rural

communities. Journal of pain research. 2018:417-25.

12. Hinman RS, Lawford BJ, Nelligan RK, Bennell KL. Virtual Tools to Enable Management of Knee Osteoarthritis. Current treatment options in rheumatology. 2023:1-21.

13. French SD, Bennell KL, Nicolson PJ, Hodges PW, Dobson FL, Hinman RS. What do people with knee or hip osteoarthritis need to know? An international consensus list of essential statements for osteoarthritis. Arthritis care & research. 2015;67(6):809-16.

14. Prasanna SS, Korner-Bitensky N, Ahmed S. Why do people delay accessing health care for knee osteoarthritis? Exploring beliefs of health professionals and lay people. Physiotherapy canada. 2013;65(1):56-63.

15. Hill J, Bird H. Patient knowledge and misconceptions of osteoarthritis assessed by a validated self-completed knowledge questionnaire (PKQ-OA). Rheumatology. 2007;46(5):796-800.

16. Ganasegeran K, Menke JM, Challakere Ramaswamy VM, Abdul Manaf R, Alabsi AM, Al-Dubai SAR. Level and determinants of knowledge of symptomatic knee osteoarthritis among railway workers in Malaysia. Biomed research international. 2014;2014.

17. Bennell KL, Van Ginckel A, Kean CO, Nelligan RK, French SD, Stokes M, et al. Patient knowledge and beliefs about knee osteoarthritis after anterior cruciate ligament injury and reconstruction. Arthritis care & research. 2016;68(8):1180-85.

18. Saeed F, Humayun A, Fatima SM, Junaid V, Imtiaz H, Zehra M, et al. The pressing need to raise awareness about osteoarthritis care among elderly females in Pakistan: a cross-sectional study. Cureus. 2019;11(8).

19. Juby AG, Skeith K, Davis P. Patients' awareness, utilization, and satisfaction with treatment modalities for the management of their osteoarthritis. Clinical rheumatology. 2005;24:535-38.

20. Mukharrib MS, Al-Sharif MN, Alshehri TK, Shaker A. Knowledge of knee osteoarthritis among general population in Aseer region. Journal of Family Medicine and Primary Care. 2018;7(6):1385.

21. Kao M-H, Tsai Y-F. Living experiences of middle-aged adults with early knee osteoarthritis in prediagnostic phase. Disability and rehabilitation. 2012;34(21):1827-34.

22. Parsons GE, Godfrey H, Jester RF. Living with severe osteoarthritis while awaiting hip and knee joint replacement surgery. Musculoskeletal Care. 2009;7(2):121-35.