

A Study to Assess the Knowledge Regarding Risk Factors of Osteoarthritis among Patients Attending Outpatient Department in Ministry of National Guard Health Affairs (MNGHA), Alahsa, Kingdom of Saudi Arabia

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Abstract: Introduction: Musculoskeletal diseases are the major health issues which will cause functional disabilities in the adult and geriatric population. Osteoarthritis (OA) is a problem of breakdown of cartilage of joint and also the bones. Osteoarthritis is the most common worldwide arthritic condition. There were 85% of individuals over the age of 75 suffering with the disease and also 40% of the people experience difficulty with daily living. Aim: To assess the knowledge of risk factors regarding osteoarthritis among patients. Methods: A descriptive cross - sectional study was carried out among 185 patients attending OPD in ministry of National Guard health Affairs Al Ahsa, kingdom of Saudi Arabia. Samples were selected from August to September 2019. Systematic random sampling was done. The data was collected after obtaining consent from all subjects. Information related to demographic variables was collected using self - administered questionnaire with 30 items inclusive of 6 components such as risk factors, signs and symptoms, management, prevention and disabilities and also the diet to find out the knowledge of risk factors of osteoarthritis among patients. SPSS version 20 was used for analysis. Results: Data analyzed reveals that majority 57.3% of the patients with the age group of 50 - 60 years. In regard to gender 51.9% of patients were females. 97.3% of the patients were admitted in the medical ward; among them 78.9% of them was studied in secondary school. 84.9% of patients belongs to Saudi citizens. 44.3% of patients were doing some professional works. There were 67% of patients having the problems of diabetes and hypertension. Mostly 78.9% of patients revealed that they are having the family history of arthritis. With regard to smoking habits 51.3% of patients not having the smoking history. The study report shows that 59.5% of patients had good knowledge regarding risk factors of osteoarthritis, 16.2% of patients had average knowledge and 24.3% had poor knowledge. Conclusion: The study result shows that most of the patients have good knowledge about the risk factors of osteoarthritis that indicates the patients were awareness about the disease. Only the patients had the primary education needs to be educated regarding the risk factors of osteoarthritis.

Keywords: knowledge, risk factors, Osteoarthritis, patients

1. Introduction

Musculoskeletal diseases are the major health issues which will cause functional disabilities in the adult and geriatric population. Osteoarthritis (OA) is a problem of breakdown of cartilage of joint and also the bones. Osteoarthritis is the most common worldwide arthritic condition. There were 85% of individuals over the age of 75 suffering with the disease and also 40% of the people experience difficulty with daily living⁴.

Ana (2018) Osteoarthritis (OA) is a degenerative disease that worsens the fourth decade of life. Most of this disability occurs due to the involvement of the hips or the knees. There are 100 million people suffered with this disease worldwide. Hottman (2016) explained that every year the elderly population is increasing and it will reach in the year 2025 up to one by three in the total population. In the Middle East, there are more than one million population affected with OA in Saudi Arabia, Syria and Iraq. By the year 2040, an

estimated 78.4 million adults with the age group of 18 years will have arthritis.

Barbour (2015) estimated that 22.7% of adults had diagnosed arthritis, with significantly higher age - adjusted prevalence in women (23.5%) than in men (18.1%). Arthritis prevalence increased with age and also the obesity. The impact of osteoarthritis on individuals is significant. Also 34.6 million adults will report arthritis - attributable activity limitations. Woman with obesity prone to get osteoarthritis in future.

2. Aim

To assess the knowledge of risk factors regarding osteoarthritis among patients attending OPD in MNGHA, Alahsa.

Specific Aim

- To assess the knowledge of risk factors regarding osteoarthritis among patients attending OPD
- To find out the association between the demographic variables and knowledge regarding risk factors of osteoarthritis.

Setting of the study

The study was conducted in Medical & orthopedic OPD at ministry of National Guard hospital in Alahsa,

Inclusion criteria

- Patients attending medical & orthopedic OPD in MNGHA, Alahsa
- Patients willing to participate in the study.
- Patients who is able to read Arabic

Exclusion Criteria

- Patient with severe illness.

Research Design

A cross sectional Research design will be adopted to conduct a study among OPD patients in ministry of National guard health Affairs, at Alahsa, KSA.

Based on the previous study that investigated the knowledge of knee osteoarthritis” by Mohammed, (2018) 86.4% of population had good awareness of osteoarthritis. Applying the categorical sample size formula, the required sample size to detect a statistical result with d at 95 % level of confidence and 0.05 margin of error. The calculated sample size is 185. The patients attending OPD who fulfill the inclusion criteria will be selected for the data collection for a period of one month.

Sampling Technique

The study duration will be 4 months in which patients who are attending the OPD in MNGHA hospital, Alahsa will be selected using systematic random sampling technique. All the patients who are attending OPD in MNGHA who fulfill the inclusion criteria will be selected using systematic random sampling technique. (September 2019 - December 2019). Patients who are willing to participate in the research study will be given full explanation of the study and consent will be obtained. The self - administered questionnaire will be given to complete.

Description of the tool

In the present study the tool consist of two parts. Tool consists of two parts: 1) Part – 12) Part – 2

The demographic data part consists of structured questionnaire to collect the demographic data. And clinical variable which includes name of OPD, age, sex, marital status, educational status, occupation, comorbid illness, family history of osteoarthritis, smoking habits

Part 2: Structured questionnaire

This part consists of a questionnaire that has 30 questions with 6 components related to osteoarthritis such as risk factors, signs and symptoms, management, prevention and disabilities. diet. The questionnaire has three ratings on the Likert scale; Scoring 1 for strongly disagree, Scoring 2 for agree; scoring 3 for strongly agree. The scoring

interpretation is as follows; 1 - 30 Very low, 31 - 60 Average, 61 - 90 Good. The validity of the questionnaire was assessed using content validity from experts in that clinical field. The questionnaire survey was made according to their suggestions. The reliability of the questionnaire was assessed by test retest method.

Frequency and percentage of demographic variables

S.No	Demographic variables	Categories	No	Percentage
1.	Age in years	30-40	36	19.5
		41-50	26	14.1
		50-60	106	57.3
		60	17	9.2
2.	gender	Male	96	51.9
		Female	89	48.1
3.	Ward	Medical	180	97.3
		Other department	5	2.7
4.	Marital status	Single	77	41.6
		Married	73	39.5
		Divorced	35	18.9
5	Educational status	Primary	5	2.7
		Secondary	146	78.9
		graduates	34	18.4
6	Nationality	Saudi	157	84.9
		Non-Saudi	18	9.7
		3.00	10	5.4
7	Occupation	HW	18	9.7
		Professionals	82	44.3
		Labors	16	8.6
		Others	69	37.3
8	Co-morbid illness	Diabetes Mellitus	5	2.7
		Blood Pressure	21	11.4
		Bone disease	35	18.9
		Others	124	67.0
9	Family history of arthritis	Yes	146	78.9
		No	39	2.7
10	Smoking habits	Yes	90	48.6
		No	95	51.35

According to the age group of the patients, majority 57.3% of the patients with the age group of 50 - 60 years and 14% of patients were in the age group of 41 - 50 years, and 19.5%, were in the age group of 30 - 40. In regard to gender 51.9% of patients were males and the Female participants were 48.1. Regard to their admission 97.3% of the patients were admitted in the medical ward; With regard to the Marital status 77 participants were single, 41.6%, 39.5 were married, 35 (18.9) participants were divorced. Regard to the Educational Status, most of the participants were secondary school education with 78.9%. Only 2.7%, done their primary education and the 18.4%. Patients were graduated. According to their Nationality most of them were Saudis with 84.9%, and 9.7% of non - Saudi. Regard to their work status, most of the participant was working as professional's occupation, and 9.7 participants were staying at home, and 8.6% were labors.

With regard to their co - morbid illness, most of them were having bone disease 18.9%, and 2.7% have diabetes, 11.4%

of patients having hypertension and 67% have other diseases. Most of the participants were having family history of arthritis 78.9% and 2.7 % were not having the disease of osteoarthritis. With regard to the habit of smoking, 48.6% were smokers and 51.35% were not.

Frequency and percentage of knowledge related to risk factors of osteoarthritis N=185

	Statements	Strongly disagree		Agree		Strongly Agree	
		No.	%	No.	%	No.	%
1	Osteoarthritis is a degenerative bone disease.	59	31.9	109	58.9	17	4.2
2	Osteoarthritis affects all the joints in the body.	87	47	80	43.2	18	9.7
3	Females are affected more than men by osteoarthritis	39	21.1	111	60	35	18.9
4	Post menopause women are more likely to have osteoarthritis	18	9.7	73	39.5	94	50.8
5	People aged above 50 years or older are prone to get Osteoarthritis	00	00	52	28.1	133	71.9
6	Obesity is one of the major risk factor for osteoarthritis	21	11.4	18	9.7	146	78.9
7	Previous knee injury can lead to osteoarthritis	57	30.8	110	59.5	18	9.7
8	Sports and leisure time physical activities lead to osteoarthritis	110	59.5	57	30.8	18	9.7
9	Repetitive strain injury may cause osteoarthritis	95	51.4	90	48.6	00	00
10	Working in a kneeling or squatting position can lead to OA.	57	30.8	54	29.2	74	40
11	Climate change does not affect the risk for osteoarthritis	92	49.7	54	29.2	39	21.1
12	Sitting improperly for long time may cause osteoarthritis	34	18.4	43	23.2	108	58.4
13	Standing improperly for long time may lead to OA	22	11.9	71	49.2	92	32.9
14	Knee pain & Difficulty kneeling	22	11.9	91	49.2	72	38.9
15	Numbness or tingling sensation of the knee	18	9.7	131	70.4	36	19.4
16	Feeling of increased warmth over the knee joints	-	00	70	37.6	115	61.8
17	Difficulty in squatting	74	40	36	19.5	75	40.5
18	Movements are totally impaired	00	00	110	59.1	57	30.6
19	Regular exercise and Supportive footwear	00	00	115	62.2	70	37.8
20	Reduction of body weight is necessary for prevention	00	00	40	21.6	145	78.4
21	Avoiding excessive and prolonged weight bearing to the knees during work	00	00	58	31.4	127	68.6
22	Pain killers and anti - inflammatory drugs help to relieve osteoarthritis pain temporarily	18	9.7	75	40.3	92	49.7
23	Intra - articular steroid injections help to relieve severe symptoms temporarily	58	31.4	57	30.8	70	37.8
24	Knee replacement surgery is indicated for severe osteoarthritis	18	9.7	76	41.1	91	49.2
25	Hot or cold packs to the knees help to resolve osteoarthritis symptoms temporarily	115	62.2	36	19.5	34	18.3
26	Difficulty in putting on stockings and rising out of bed	22	11.9	75	40.5	88	47.6
27	Difficulty in rising from sitting	36	19.5	58	31.4	91	49.2
28	Diet rich in calcium and vitamin D is good for strengthening of the bones.	40	21.6	18	9.7	127	68.6
29	Fish containing omega - 3 fatty acid helps in reducing OA	00	00	18	9.7	167	90.3
30	Antioxidants help in reducing the inflammation caused by OA.	41	22.2	00	00	00	00

There were 58.9% the participants agree that osteoarthritis is a degenerative bone disease while 31.9% disagree and also affects all the joints in the body 87% of the participants were strongly disagree 47% while 43.2% agree with statement. Females are affected more than men by osteoarthritis 60% participants were agree while 18.1% were strongly agree. Post menopause women are more likely to have osteoarthritis, there were 50.8% strongly agree while 39.5 agree and 9.7% were strongly disagreed.

People aged above 50 years or older are prone to get osteoarthritis no one says strongly disagree and the majority of the subjects were 71.9 %strongly agree with the statement. Previous knee injury can leads to osteoarthritis, there were 59.5% of people agreed and 30.8% strongly disagree very few 9.7 % were strongly agreed. Obesity is one of the major risk factor for osteoarthritis 78.9% strongly agreed. Previous knee injury can lead to osteoarthritis 59.5% were agreed and 30.8% were strongly disagree. Sports and leisure time physical activities lead to osteoarthritis statement, there were 59.5% strongly disagreed while 30.8% participants were agreed and 9.7% were strongly agreed.

Repetitive strain injury may cause osteoarthritis, none of them were strongly agreed, and the majority were 51.4% strongly disagree and 48.6% were agreed. Working in a

kneeling or squatting position can lead to OA, there were 40% participant strongly agree with the statement, while 30.8% strongly disagree and 29.2% were agree. Climate change does not affect the risk for osteoarthritis 49.7% were strongly disagree, and 29.2% were agreed while 21.1% strongly agree. Sitting improperly for long time may cause osteoarthritis 58.4% strongly agree. Standing improperly for long time may lead to OA 49.2% agreed this statement, while 32.9% strongly agree with the statement. Knee pain & Difficulty kneeling 49.2% were agree to have keen pain, while 28. % strongly agree, 11.9 were not having feeling of increased warmth over the knee joints 61.8% participants were strongly agreed while 37.6% agree and non - disagree. Difficulty in squatting 40% strongly disagrees while 40.5 strongly agree and 19.5 agree.

Movements are totally impaired 59.1% agree and 30.6 strongly agree. Regular exercise and Supportive footwear 62.2 agree while 37.8 strongly agree. Reduction of body weight is necessary for prevention 78.4% strongly agree and 21.6 agree. Avoiding excessive and prolonged weight bearing to the knees during work 68.6% strongly agree while 31.4% agree. Pain killers and anti - inflammatory drugs help to relieve osteoarthritis pain temporarily 49.7% strongly agree while 40.3 agree. Intra - articular steroid injections

help to relieve severe symptoms temporarily 37.8 strongly agree while 30.8 agree and 31.4 strongly disagree.

Knee replacement surgery is indicated for severe osteoarthritis 49.2% strongly agree and 41.1 agree while 9.7% strongly disagree. Hot or cold packs to the knees help to resolve osteoarthritis symptoms temporarily 62.2% strongly disagree, while 19.5 agree and 18.3 strongly agree. Difficulty in putting on stockings and rising out of bed 47.6% strongly agree and 40.5% agree while 11.9 strongly disagree. Difficulty in rising from sitting 49.2% strongly agrees while 31.4 agree. Diet rich in calcium and vitamin D is good for strengthening of the bones. 68.6 strongly agree while 21.6% strongly disagree. Fish containing omega - 3 fatty acid helps in reducing OA 90.3% are strongly agree with statement, while 9.7 were agreed.

Distribution of level of knowledge related to risk factors of osteoarthritis

S. No	Knowledge categories	No of patients	Percentage (%)
1	Very Low	45	24.3
2	Average	30	16.2
3	Good	110	59.45

The above table indicates that there were 45 patients 24.3% had very low knowledge, and 30 patients 16.2% had average level of knowledge and 110 patients had 59.45% had good knowledge.

3. Conclusions and Recommendation

The current research revealed that the level of knowledge regarding risk factors of osteoarthritis in Alahsa region. Osteoarthritis is a multi - factorial condition for which aging is the major risk factor. However, there are important differences between an aged joint and one with OA. Health care professional's responsibility to take care of the aged population and educate the people to prevent serious complications. The researchers recommended that more attention should be paid to the young people for more improvement in awareness level regarding osteoarthritis complications.

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