Original Article :

Perception, Attitude, And Practice Of Patients With Osteoarthritis In Sudair Area-Saudi Arabia

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Abstract

Background:

Osteoarthritis is defined as a progressive joint disorder that has been linked to many factors such as genetic, biomechanical, and environmental that contributes to causing physical, psychological, and social consequences. In many countries, prevalence of OA can exceed the prevalence of other common medical diseases. This study aimed to explore the perception, attitude, and practice among patients with osteoarthritis in Sudair region-Saudi Arabia.

Methods:

A cross-sectional study involving patients with osteoarthritis in Sudair was conducted to assess perception, attitude, and practice. The sample size was taken as 165 and data were collected over a period of 6 months from June to December 2020. Adults over the age of 18 were invited in the study and the approval was obtained from research ethics committee of Majmaah University. The responses to the online questionnaires were collected in an Excel spreadsheet and exported to the Statistical Package for the Social Sciences (SPSS) file.

Results:

A total of 53 participants were considered. 58.4% had a university education or above, and only 32.1% had an income of <5000 SR. No more than 7.5% and 11.3% were unsatisfied and strongly unsatisfied with

الملخص

الخلفية:

يُعرَّف مرض الفصال العظمي وهو المعروف بمرض خشونة المفاصل بأنه اضطراب مفصلي تقدمي تم ربطه بالعديد من العوامل مثل الوراثية والميكانيكية الحيوية والبيئية التي تساهم في التسبب في عواقب جسدية ونفسية واجتماعية. في العديد من البلدان، يمكن أن يتجاوز انتشار مرض الفصال العظمي أكثر من الأمراض الطبية الشائعة. وقد هدفت هذه الدراسة إلى استكشاف ومعرفة الإدراك والموقف والممارسة لدى مرضى الفصال العظمي في منطقة سدير بالمملكة العربية السعودية

طريقة البحث:

تم إجراء دراسة مقطعية شملت مرضى الفصال العظمي في منطقة سدير لتقييم الإدراك والموقف والممارسة. شملت الدراسة على ١٦٥ مشارك وقد تم جمع البيانات على مدى ٦ أشهر من يونيو إلى ديسمبر ٢٠٢٠. تمت دعوة البالغين الذين تزيد أعمارهم عن ١٨ عامًا للمشاركة في الدراسة من خلال استطلاع عبر الاستبيان الإلكتروني وتم الحصول على الموافقة من لجنة أخلاقيات البحث العلمي جامعة المجمعة. تم جمع الردود من المشاركة على الاستبيان الالكتروني ووضعها في جدول بيانات اكسل ومن ثم تم تحليلها عن طريق برنامج الحزمة الإحصائية للعلوم الاجتماعية.

النتائج:

شمل البحث ١٦٥ مشاركا في منطقة سدير. ما يقارب ٨٠ ٪ منهم ينتمون إلى الفئة العمرية ١٨-٥٠ سنة. ٦٠,٦٪ من المشاركين كانوا من الإناث. غالبيتهم يقيمون داخل مدينة المجمعة ٨١,٢٪. بناءً على المعايير فان ٦٧,٣٪ من المرضى يعتبرون من ذوي الإدراك المتوسط . بالنسبة للمواقف، تم

their self-image. 30.2% were strongly unsatisfied about the discussion with a plastic surgeon prior to reconstruction. 81.1% would recommend the type of reconstruction to a friend, and 77.4% agreed that they would choose this type of reconstruction if they had to do it all over again. 79.2% to 88.7% reported no arm concerns at all. 45.3% of patients reported that it took them longer than expected to recover, and 52.8% of patients reported that the surgery was complex. Patients with above

Results:

The research included 165 participants in Sudair region. Almost 80% of them belonged to the age-group of 18-50 years. 60.6% of participants were females. 81.2%. of them were residing Inside Al Majmaah city. Based on the given criteria,67.3% of patients with moderate perception. For attitude, majority of them 66.1% were classified as negative attitude. 64.2% of patients had moderate practices.

Conclusion:

Overall, perception and practices appear to be moderately pervasive among the majority of patients but on the other hand negative attitude was obviously observed among the participants.

Key words:

Perception, Attitude, Practice, Osteoarthritis, Saudi Arabia

تصنيف ٦٦,١٪ منهم كموقف سلبي وأن ٦٤,٢٪ من المرضى لديهم ممارسة متوسطة.

الخلاصة:

بشكل عام، يبدو أن الإدراك والممارسة منتشرة بشكل معتدل بين غالبية مرضى الفصال العظمي في منطقة سدير بالمملكة العربية السعودية. معظم المشاركين لديم مواقف سالبة عن المرض.

Introduction

Osteoarthritis (OA) is defined as a progressive joint disorder that has been linked to many factors such as genetic, biomechanical, and environmenta[1], that contribute to causing physical, psychological, and social consequences [1]. In many countries, prevalence of OA can exceed the prevalence of other common medical diseases such as diabetes mellitus, hypertension, and ischemic heart disease [2].

OA is characterized by degeneration and damage of articular cartilage [3] and whole joint, including the subchondral bone and synovium [4]. It consists of vary clinical manifestation from mild to severe pain and

stiffness of joints till chronically health problems and long-term disability [5]. OA can be primary or secondary, depending on its etiology.

Multiple risk factors have been linked to OA and can be categorized as non-modifiable (age, gender و and genetics) and modifiable (obesity, previous joint injury, and malalignment) [1]. The disease can occur in various joints and the most affected are the knees, hands, and hips joints [6]. The diagnosis of OA is mainly depending on clinical impression and radiographic findings [1].

Currently, OA management is mainly of two types: the first type is non-surgical intervention includes exercise, physiotherapy, weight loss, pharmacological therapy, and intra-articular injections. The second type is surgical intervention, which is considered when first type fails [7].

More importantly, improving the patients' knowledge is acquired and transmitted by physician with efficiency and practice and blended with measures of wisdom, ethics, and attitude 8. However, no study has been carried out to explore perception, attitude. and practice among patients with osteoarthritis in Sudair region-Saudi Arabia. Furthermore, a study reported that patients could achieve greater satisfaction when they received more information regarding their management [9]. Hence, this review aimed to explore in detail about the perception, attitude and practice among patients with osteoarthritis in Sudair region-Saudi Arabia to enhance their knowledge with improve the community medical services.

Materials and Methods

A cross-sectional study involving the patients with osteoarthritis in Sudair was conducted to assess perception, attitude, and practice. The following regions were included: Majmaah, Hautat Sudair, Tumair, Alghat, Al-Zulfi, and Jalajil. The sample size was taken as 165 and data were collected over a period of 6 months from June to December 2020.Adults over the age of 18 were invited to participate in the study through an online survey. The study proposal was approved by the research ethics committee of Majmaah University. The responses to the online questionnaires were collected in an Excel spreadsheet and exported to the Statistical Package for the Social Sciences (SPSS) file.

The questionnaire contained items about perception, attitude, and practice, based on previous studies and theories. It also included questions on socio-demographic features, such as sex, age, education level, monthly income, occupation. Some questions had answer options of always, mostly, sometimes, and no affect.

Questionnaire scoring

The criteria for the perception, attitude and

practice toward osteoarthritis were drawn from 9 questions (table 2) where 4-point Liker t scale categories were the answer options such as "No" coded as 1, "sometimes" coded as 2, "mostly" coded as 3 and "always" coded as 4. The total score has been calculated by adding all questions related to perception, attitude, and practices, each 3 questions, respectively which generally means that the higher the score, the greater perception, attitude, and practices toward osteoarthritis. By using 50% and 75% to determine the levels of perception, attitude, and practices. Participants were considered as poor/negative, levels by the score range of 3 – 6 points, 7 – 9 were considered as moderate/neutral and 10 – 12 were considered as good/positive levels.

Statistical Analysis

Descriptive statistics are demonstrated using numbers, percentages, minimum, maximum, mean and standard deviation, whenever appropriate. Between comparisons, Mann Whitney U test and Kruskal Wallis test were applied. P-value of <0.05 was considered statistically significant. Normality tests were conducted using Shapiro Wilk, Kolmogorov, and Smirnov tests. Data follows abnormal distribution. Therefore, non-parametric tests were applied between comparisons of variables. Correlation procedures were also conducted to evaluate the linear agreement between perception, attitude and practices score. All statistical analyses were carried out using Statistical Packages for Software Sciences (SPSS) version 21 Armonk, New York, IBM Corporation.

Results

We enrolled 165 Saudi patients who were diagnosed with osteoarthritis to evaluate their perception, attitude, and practices toward the disease. As seen in table 1, nearly all patients (81.2%) were living inside Al Majmaah city with nearly (80%) were in the younger age group (18 – 50 years) and mostly were females (60.6%). With respect to their education, approximately (60%) were college degree with more than a half (55.2%) earned less than 5,000 SAR per month. With regards to occupational status, (43%) were unemployed and (42.4%) were employed. When asked the nature of their work, (30.3%) reported that their work depends on lifting heavy weights or requiring too much movement. Furthermore, more than two third (67.9%) indicated a duration of osteoarthritis of less than 5 years. The prevalence of smokers in this study was (9.7%).

Table 1: Socio demographic characteristics of the patients (n=165)

Study variables	N (%)
Residence location	
Inside Al Majmaah city	134 (81.2%)
Outside Al Majmaah city	31 (18.8%)
Age group	

Study variables	N (%)
18 – 50 years	130 (78.8%)
>50 years	35 (21.2%)
Gender	
Male	65 (39.4%)
Female	100 (60.6%)
Educational level	
High school or below	67 (40.6%)
College degree	98 (59.4%)
Monthly income level (SAR)	
<5,000	91 (55.2%)
5,000 – 10,000	29 (17.6%)
>10,000	45 (27.3%)
Occupational status	
Unemployed	71 (43.0%)
Student	24 (14.5%)
Employed	70 (42.4%)
Does the nature of your work depend on lifting heavy weights or requiring movement too much?	
Yes	50 (30.3%)
No	115 (69.7%)
Duration of osteoarthritis	
<5 years	112 (67.9%)
5 – 10 years	42 (25.5%)
>10 years	11 (06.7%)
Smoking	
Yes	16 (09.7%)
No	149 (90.3%)

Table 2 described the assessment of perception, attitude, and practices toward osteoarthritis. In the assessment of perception, in question 1, it was found that (36.4%) of the patients sometimes believe that osteoarthritis may affect the nature of normal life, (27.3%) rated always and (21.8%) mostly believe. In question 2, (40.6%) stated that osteoarthritis did not affect their mental health; others said they sometimes feeling depressed (25.5%) or mostly depressed (20%). In question 3, (40%) stated that they sometimes had sleep disturbance due to osteoarthritis, (20%) stated mostly and (14.5%) stated always. For attitude, in question 1, (31.5%) were sometimes committed with treatment or treatment plan recommended by the doctor, (27.9%) said they mostly committed and only (10.9%) stated that they had always committed to the treatment plan. In question 2, majority of the patients (66.1%) said that they did not receive information in advance of the possible side effects of medications, intra-articular injections, or joint replacement surgery. In question 3, (38.8%) were sometimes followed healthy diet to maintain weight, (17%) mostly followed while (40%) reported that they did not follow a healthy diet. For practices, in question 1, (35.2%) stated that they sometimes doing exercises to strengthen muscles surrounding joints, (13.9%) said that they mostly doing exercises while (46.7%) said they don't keep doing exercise. In question 2, two-third of the patients stated that they did not use alternative and complementary medicine for the treatment of osteoarthritis and (20.6%) said sometimes. In question 3, most of them (90.3%) stated that they did not use cauterization. The descriptive

Table 2: Assessment of perception, attitude, and practices toward osteoarthritis(n=165)

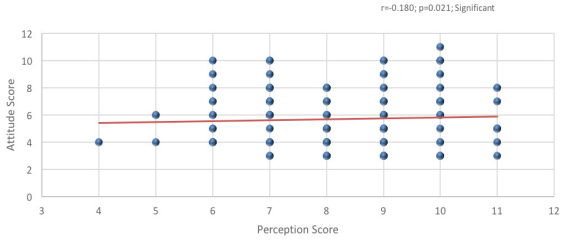
Perception statement	N (%)
Do you think that osteoarthritis may affect the nature of your normal life?	
Always	45 (27.3%)
Mostly	36 (21.8%)
Sometimes	60 (36.4%)
No, it did not affect	24 (14.5%)
Have you ever had a feeling of depression due to osteoarthritis?	
Always	22 (13.3%)
Mostly	34 (20.6%)
Sometimes	42 (25.5%)
No, I did not feel depressed	67 (40.6%)
Have you suffered from sleep disturbance due to osteoarthritis?	
Always	24 (14.5%)
Mostly	33 (20.0%)
Sometimes	66 (40.0%)
No, I didn't suffer sleep disturbance	42 (25.5%)
Attitude statement	
Are you committed using the treatment or the treatment plan?	
Always	18 (10.9%)
Mostly	46 (27.9%)
Sometimes	52 (31.5%)
No, I am not committed	49 (29.7%)
If you use medications, intra-articular injections, or have joint replacement surgery, have you been informed in advance of the possible side effects of the treatment method?	
Always	16 (09.7%)
Mostly	19 (11.5%)
Sometimes	21 (12.7%)
No, I did not	109 (66.1%)
Do you follow a healthy diet to maintain your weight?	
Always	07 (04.2%)
Mostly	28 (17.0%)
Sometimes	64 (38.8%)
I do not follow a diet	66 (40.0%)
Practices	
Do you keep on doing exercises to strengthen muscles surrounding the joints?	
Always	07 (04.2%)
Mostly	23 (13.9%)
Sometimes	58 (35.2%)
I do not keep doing exercise	77 (46.7%)
Do you have used one of the therapeutic methods of complementary and alternative medicine such as herbal remedies or acupuncture or cupping for treatment of osteoarthritis?	
Always	05 (03.0%)
Mostly	16 (09.7%)
Sometimes	34 (20.6%)
No, I did not use alternative and complementary medicine	110(66.7%)
Do you used the method of cauterization for the treatment of osteoarthritis?	
Always	02 (01.2%)
Mostly	05 (03.0%)
Sometimes	09 (05.5%)
I did not use cauterization	149 (90.3%)

statistics of the perception, attitude and practices toward osteoarthritis has been described at table 3. Based on the results, it was observed that the overall mean perception score was 8.32 (SD 1.46) out of 12 points. Based on the given criteria, the proportion of patients with poor, moderate, and good perception were (12.7%), (67.3%) and (20%), respectively. For attitude, the mean score was 5.70 (SD 1.99) with (66.1%) were classified as negative attitude, (28.5%) were in neutral and only (5.5%) were classified as positive attitude level. For practices, the mean score was 9.12 (SD 1.23) with poor, moderate, and good practices were detected among (3.6%), (64.2%) and (32.1%), respectively.

Table 3: Descriptive statistics for the perception, attitude, and practices (n=165)

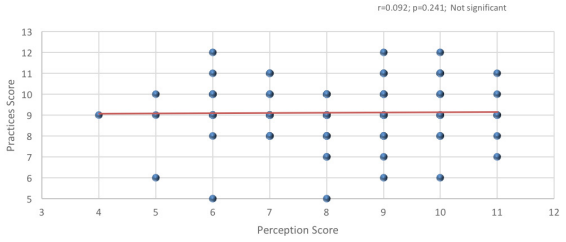
Variables	N (%)
Perception total score (mean ± SD)	8.32 ± 1.46
Level of perception	
Poor	21 (12.7%)
Moderate	111 (67.3%)
Good	33 (20.0%)
Attitude Total score (mean ± SD)	5.70 ± 1.99
Level of attitude	
Negative	109 (66.1%)
Neutral	47 (28.5%)
Positive	09 (05.5%)
Practices total score (mean ± SD)	9.12 ± 1.23
Level of practices	
Poor	06 (03.6%)
Moderate	106 (64.2%)
Good	53 (32.1%)

Figure 1: Correlation between the perception and attitude score



In figure 1, there was an inverse correlation between perception and attitude score (r=-0.180; p=0.021).

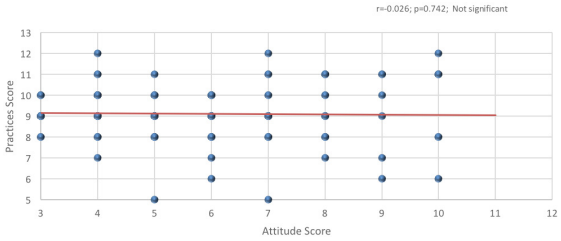
Figure 2: Correlation between the perception and practices score



In figure 2, the correlation between perception and practices score was not statistically significant (r=0.092; p=0.241).

When comparing the perception, attitude, and practices in relation to the socio demographic characteristics of the patients, it was found that those in the older age group (>50 years) showed significantly better attitude than their counterparts (T=-1.871; p=0.027) but in practices, younger age group (18 – 50 years) showed significantly better practices (T=2.356; p=0.014). Furthermore, patients with higher monthly income level (>10,000 SAR) exhibited with better attitude than the other groups (F=5.156; p=0.004) while those unemployed patients observed to have significantly lower practices compared to either students or employed (F=4.602; p=0.040). In addition, patients with less than 5 years' duration of the disease showed significantly higher practices than their counterparts (F=8.278; p=0.004). Other socio demographic characteristics including residence location, gender, educational level, the nature of work and smoking status did not show significant difference when compared to perception, attitude, and practices score (All p>0.05) (Table 4).

Figure 3: Correlation between the attitude and practices score



In figure 3, there was negative correlation between attitude and practices score, however statistical test revealed that it did not reach statistically significant (r=-0.026; p=0.742).

Table 4: Comparison between the mean perception, attitude, and practices score in relation to the socio demographic characteristics of the patients (n=165)

Factor	Perception Score (12) Mean ± SD	Attitude Score (12) Mean ± SD	Practices Score (12) Mean ± SD
Residence [a]			
Inside Al Majmaah City	8.31 ± 1.38	5.67 ± 1.98	9.11 ± 1.29
Outside Al Majmaah	8.32 ± 1.78	5.84 ± 2.07	9.13 ± 0.92
T-test	-0.031	-0.421	-0.069
P-value	0.935	0.777	0.758
Age group [a]			
18 – 50 years	8.28 ± 1.45	5.55 ± 2.02	9.23 ± 1.16
>50 years	8.43 ± 1.50	6.26 ± 1.80	8.69 ± 1.41
T-test	-0.519	-1.871	2.356
P-value	0.654	0.027 **	0.014 **
Gender [a]			
Male	8.55 ± 1.51	5.82 ± 1.96	9.28 ± 1.17
Female	8.16 ± 1.41	5.63 ± 2.01	9.01 ± 1.27
T-test	1.708	0.584	1.364
P-value	0.056	0.445	0.279
Educational level [a]			
High school or below	8.31 ± 1.59	5.63 ± 1.94	9.03 ± 1.36
College degree	8.62 ± 1.37	5.76 ± 2.03	9.18 ± 1.14
T-test	-0.012	-0.406	-0.735
P-value	0.981	0.768	0.571
Monthly income level (SAR)[b]			
<5,000	8.19 ± 1.55	5.90 ± 2.11	9.02 ± 1.29
5,000 – 10,000	8.52 ± 1.24	4.66 ± 1.56	9.34 ± 1.20
>10,000	8.44 ± 1.39	5.98 ± 1.79	9.16 ± 1.13
F-test	0.809	5.156	0.787
P-value	0.386	0.004 **	243
Occupational status [b]			
Unemployed	8.14 ± 1.61	6.04 ± 1.98	8.79 ± 1.44
Student	8.33 ± 1.40	5.79 ± 2.08	9.42 ± 1.18
Employed	8.49 ± 1.30	5.33 ± 1.92	9.34 ± 0.92
F-test	0.991	2.336	4.602
P-value	0.286	0.095	0.040 **
Does the nature of your work depend on lifting heavy weights or requiring movement too much? [a]			
Yes	8.04 ± 1.52	5.78 ± 2.14	9.04 ± 1.14
No	8.43 ± 1.42	5.67 ± 1.93	9.15 ± 1.27
T-test	-1.608	0.327	-0.516
P-value	0.128	0.845	0.357
Duration of osteoarthritis [b]			
<5 years	8.21 ± 1.42	5.69 ± 2.01	9.32 ± 1.16

5 – 10 years	8.64 ± 1.62	5.62 ± 1.96	8.88 ± 1.13
>10 years	8.18 ± 0.98	6.18 ± 1.94	7.91 ± 1.58
F-test	1.436	0.357	8.278
P-value	0.111	0.683	0.004 **

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Smoking [a]			
Yes	8.00 ± 1.79	5.13 ± 1.93	9.25 ± 0.93
No	8.35 ± 1.42	5.77 ± 1.99	9.10 ± 1.26
T-test	-0.911	-1.225	0.460
P-value	0.612	0.236	0.551

a P-value has been calculated using Mann Whitney U test.
b P-value has been calculated using Kruskal Wallis test.
** Significant at p<0.05 level

Discussion

Worldwide, OA is the one of the most common musculoskeletal disorder associated with disability and reduced quality of life resulting in psychological distress and decreased social functioning [10, 11]. According to Wolf et al, patients aged 60 and above were (18.0%) woman and (9.6%) men suffer from symptomatic OA, with (25%) of them unable to perform a routine activity daily living [7].

In our study, persons aged between 18 and 50 years and those with college degree were the main respondents and this could be attributed to the method of data collection using an electronic survey. Obviously, (67.3%) of the participants had a moderate perception about osteoarthritis and third of them mentioned sometimes OA reduced quality of life.

Several studies have evaluated the relationship between OA and depression; this concluded that depression adversely impact the quality of life of patients with OA 12. (40.6%) participants in our study had never felt depressed. OA known to increases the risk of sleep disturbance, and that both pain and sleep problems may lead to functional disability and depression 13. This was found only (40 %) of participants had sometimes sleep disturbance due to osteoarthritis.

Attitude is considered as one of the most important components to improve medical knowledge; it has a positive impact on the value of ethical conduct in raising the application of the component in real life to a peak 8. However, our results showed that the majority of participants' attitude about OA were (66.1%) negative.

A study reported that medical professionals who fail to provide clear information on pharmacological properties of the medications may causes patients not to adhere to drug therapy [14]. In the present study (66.1%) of participants have not been in-

formed in advance of the possible side effects of the treatment method of OA. Good practice is an art that is linked to the progress of knowledge and technology and is executed in an ethical manner [8].

Campbell et al. reported that long-term physiotherapy exercise adherence was affected by a positive attitude to exercise, perceived exercise effectiveness, perceived causes of OA, and perceived symptoms severity [15]. Our results reported that level of practices in majority of participant's were (64.2%) moderate.

Results show correlation between the perception, attitude. and practices score. There was an apparent relationship between the perception, attitude, and practices with socio demographic features; participant with older age group (>50 years) and higher monthly income level (>10,000 SAR) exhibited with better attitude than the other groups, and these findings were consistent with reported data by Gecht [16].

Moreover, younger age group (18 – 50 years) of participant showed significantly better practices than their counterparts. This could be because the older age group may need to take extra precautions and seek medical advice before striving to achieve the recommended levels of physical activity for older people [17].

To the best of our knowledge, this is the first review assessing the perception, attitude, and practices among patients with osteoarthritis in Sudair region-Saudi Arabia. Therefore, it can shed light regarding better perception, attitude and practices understanding and ensuring more fruitful and desirable outcomes among OA patients.

Conclusion

Overall, perception and practices appear to be moderately pervasive among most patients with osteoarthritis in Sudair region-Saudi Arabia. On the other hand, negative attitude was obviously observed among the participants. Further studies are also required to confirm our findings.

Conflict of interest

The authors declare no conflicts of interest.

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