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A CROSS SECTIONAL ANALYSIS OF TEACHING PROGRAMME FOR PATIENTS OF KNEE OSTEOARTHRITIS AND ITS IMPACT ON THEIR SELF-ASSESSMENT

Orthopaedics

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ABSTRACT

Background: Lack of knowledge about a chronic painful condition may lead to depression, anxiety and poor coping skills, which may affect the patients quality of life while health education is an effective intervention and can reduce pain and disability. Hence the present study was planned with the following aim to assess the knowledge regarding self-care among knee osteoarthritis patients and to develop and administer structured teaching program from knee osteoarthritis patients.

Methods: Study was conducted in patients of knee osteoarthritis attending the out patients Department of Orthopaedics, L N Medical college and research centre, Bhopal MP. The period of conduction of study was approximately one year. A total of 100 patients diagnosed with knee arthritis were included in the study.

Results: respondents with an immediate family member with knee OA averaged a 6.8 higher knowledge score than respondents whose family members did not have the condition ($p<0.001$). Respondents diagnosed clinically of knee OA averaged 3.7 higher knowledge score in comparison to respondents without knee OA ($p=0.011$).

Conclusions: A higher knowledge of knee OA was found for respondents with tertiary education over those with a primary or secondary education. The results from this cross-sectional study impact important public health decisions, given that respondents over 50 years, with a family history, self-awareness, and a knee OA diagnosis, showed better knowledge of symptomatic knee OA as shown in the multivariate analysis.

KEYWORDS

Knee arthritis, Knowledge, Self-assessment

INTRODUCTION

Osteoarthritis is the most common form of arthritis, affecting millions of people globally. Osteoarthritis occurs when the protective cartilage on the ends of your bones wears down over time. Its high prevalence especially in elder patients and high rate of disability make it a leading cause of disability.[1]

IT is a common health problem in India too with a high prevalence. Damage to the articular cartilage causes swelling and pain in joints and limits the movability of those affected with it. The other synonym of osteoarthritis is degenerative arthritis or degenerative joint disease. It is a well-known disease since ancient time.[1,2] When a person suffers from osteoarthritis, there is a breakdown of the joint's cartilage. When this breakdown and wears away the bones will start rubbing together and this can cause some severe pain as well as limitations in movement and in some cases, person cannot move at all. Numerous factors are responsible for the inception of osteoarthritis. It is widespread in middle to older aged people. Osteoarthritis may first appear without symptoms between 20 and 30 years of age. The symptoms, such as pain and inflammation, become visible in middle age. Till the age of 55 it occurs equally in both sexes.[3] But after 55, women are more prone to this disease. Many studies have demonstrated that age is not a foremost factor to the start of osteoarthritis. Many medical professionals have found that overweight may be the reason of having this disease. When a person is obese, there are more chances of experiencing some pain in the knees and in most cases; osteoarthritis develops in these areas.[4]

OA is the most prevalent of the rheumatic diseases, and is responsible for enormous disability and loss of productivity. Prevalence increases with age, and radiographic data show that OA at some skeletal site occurs in the majority of people over 65 years of age and in nearly everyone over 75 years of age.[5] Despite intense epidemiologic study, the exact prevalence of OA is unknown, owing to the uncertainties and variations of diagnostic definition and reporting mechanisms. Another confounder is that many patients with radio graphically apparent OA do not have symptoms that lead them to medical care. Based on prevalence data from the National Centres for Health Statistics, an estimated 15.8 million adults, or 12% of those between 25 and 74 years of age, have signs and symptoms of OA.[6]

The patients suffering from knee osteoarthritis should know the importance of self-care activities which are inexpensive at the same time are useful in overcoming the problems associated with it, especially pain. The self-care activities that patient should know and practice include "proper nutrition, joint protection measures, medication, hot and cold applications, and therapeutic exercises".[7] Osteoarthritis sufferers require medication, exercise and physical activity, information, education and self-management support to manage their disease and control pain. After their knee or hip joints reach the stage of surgical intervention, OA patients require pre-operative assessment of their home environment for suitability after the hospital discharge and postoperative rehabilitation. E -health and the internet-related solution can play an important role in all areas of OA management with the exception of surgical interventions. Previous studies have shown that providing information about the disease is a vital component of self-management. Lack of knowledge may lead to depression, anxiety and poor coping skills, which may affect the patient"s quality of life while health education is an effective intervention and can reduce pain and disability. Hence the present study was planned with the following aim to assess the knowledge regarding self-care among Knee osteoarthritis patients and to develop and administer structured teaching program from knee osteoarthritis patients.

METHODS

Data related to the study were collected from knee osteoarthritis patients attending the Out Patients Department of Orthopaedics. The period of conduction of study was approximately one year from May-2017 to June-2018. A total of 100 patients diagnosed with knee arthritis were included in the study.

Both males and females suffering from knee osteoarthritis, between the age group 30 to 60, the patients who were willing to give consent to participate in the study.

Those patients who were critically ill and unable to respond, those who were not willing to participate in the study, and indoor patients were excluded from the study.

Serial sample of patient was taken from orthopaedic OPD. Structured interview schedule was used by the investigator to collect data. The data analysis was done through descriptive and inferential statistics like Frequency, mean, mean percentage, paired "t" test and "chi-square" test with the help of Gaphprism Pad 7.0 statistical software.

RESULTS

A total of 100 patients participated in the survey. The mean (±SD) age of respondents was 41.2 years and the majority aged 50 years or older.

The majority of respondents were males (72.0%). Less one third (34.3%) of the entire sample had an immediate family member with the condition.

Table 1: Association between knowledge of knee osteoarthritis and socio-demographic variables among respondents.

Parameter	Mean	P Value
Gender		p<0.05
Male	18.3±5	
Female	12.5±9.1	
Age		p<0.001
20-35	16.4±2.1	
36-50	14.3±5.3	
>50	22.7±5.8	
Education level		p<0.001
Primary	12.4±5.5	
Secondary	19.7±9.4	
Graduate	21.5±5.9	
Awareness of osteoarthritis		P<0.001
Yes	24.5±5.7	
No	9.2±3.8	
Family members with osteoarthritis		P<0.001
Yes	24.4±10.3	
No	14.6±5.5	
Clinically diagnosed osteoarthritis		P<0.001
Yes	28.7±5.6	
No	14.2±8.0	

Most of the respondents expressed awareness of knee OA as a disease entity (63.8%) and patient with old disease. Though based on median cut-off points of knowledge score, 53.6% of the respondents had low levels of knowledge.

A higher degree of knowledge score was shown by male respondents in the study (18.3±5) as compared to females (12.5±9.1, p<0.05) counterparts. We see binomial distribution in knowledge score for age. There was a significant difference in the knowledge of young, middle aged and old age groups (p<0.001); a post hoc test revealed that respondents aged 50 years or more had higher knowledge score (22.7±5.8) compared to respondents aged 36–50 years old (14.3±5.3) and compared to 20–35 years (16.4±2.1; p<0.001, p=0.002, respectively). There was a significant association between education level and knee OA knowledge (p<0.001) and post hoc tests showed that respondents with tertiary education (21.5±5.9) showed higher knowledge score than those with secondary education (19.7±9.4, p<0.001). Respondents having immediate family members with knee OA had higher knowledge score (24.5±5.7) compared to respondents without a family history of knee OA (12.8±10.5; p<0.001). Respondents who were clinically diagnosed for knee OA showed higher knowledge score (28.7±5.6) compared to those without such medical condition (14.2±8.0; p<0.001). Factors associated with knowledge of symptomatic knee osteoarthritis among respondents by multiple linear regressions. Respondents aged 50 years or older had on the average 1.7 (95% CI 0.1–3.2) higher score in OA knowledge compared to respondents in the 20–34 age group (p=0.035). Respondents being aware of knee OA had on the average 12.5 higher knowledge score compared to respondents being unaware of the condition (p<0.001). Similarly, respondents with an immediate family member with knee OA averaged a 3.7 higher knowledge score than respondents whose family members did not have the condition (p<0.001). Respondents diagnosed clinically of knee OA averaged 2.06 higher knowledge score in comparison to respondents without knee OA (p=0.011).

DISCUSSION

This cross-sectional study was aimed at determining factors affecting knowledge of symptomatic knee OA among patients in Bhuj district. Of the 100 railway men surveyed, 53.6% reported low levels of knowledge. Our final regression model yielded four variables significantly influencing knee OA knowledge in this group: respondents over 50 years old, respondents previously aware of knee OA, immediate family members with knee OA, and respondents with knee OA diagnosed clinically by a doctor.

Data on risk factors, clinical manifestations, and available treatment options was well documented in numerous epidemiological studies and clinical trials. Our study challenged the current tenets and dogmas that only pathological, radiological, and clinical investigations may elicit awareness and knowledge of symptomatic knee OA. Hypotheses tested in previous studies were conjugated as knowledge scales in the present study to understand the lay population"s perception of this disease entity to promote primary prevention. This study was the first to explore knowledge of symptomatic knee OA in the general population, with particular focus among a specific occupational group.[8]

Educational attainment was linked to pain and disability in osteoarthritis; indeed a higher educational level was more predictive for disease progression. Behavioural risks that influenced health-seeking behaviour, access, and utilization of health services for early interventions were associated with higher educational level. A higher knowledge of knee OA was found for respondents with tertiary education over those with a primary or secondary education. Ganasegeran et al and Creamer et al found similar findings in the Greek population.[8,9]

The results from this cross-sectional study impact important public health decisions, given that respondents over 50 years, with a family history, self-awareness, and a knee OA diagnosis, showed better knowledge of symptomatic knee OA as shown in the multivariate analysis.

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