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Prevalence, challenges and treatment seeking behavior for knee osteoarthritis among adults residing in DMC, UT Chandigarh: A community based descriptive study

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Abstract

Background: Osteoarthritis is the most common ailment affecting people globally causing pain and stiffness in knee joint increasing gradually leading to movement restrictions, adversely influencing social and emotional well-being; thus, lowering patients' quality of life.

Objective: The aim of the study was to assess the prevalence of knee OA, challenges faced and treatment seeking behavior among adults >30 with knee OA residing in DMC, UT Chandigarh.

Materials and Methods: Sample was collected using total enumeration technique where 220 subjects met ACR criteria. Subjects were interviewed, SF-36 Questionnaire (modified) was used to observe the challenges faced by the study subjects and biophysical measurements were taken. Data was analysed using descriptive and inferential statistics, Microsoft Excel and SPSS 22.0. Data findings were interpreted and presented in the form of tables, graphs and charts.

Results: Prevalence of KOA among study subjects was found to be 45%; it was more in females (46.9%) and in 60-69 years of age (60.5%). Half (49%) subjects were of upper middle class. As per BMI, 50.9% subjects were overweight (25-29.9) and 19% were obese. Most (74.5%) of the study subjects were taking treatment from government agencies. As per mean score; 57.7% of the study subjects reported fair general health, 40% reported little limitation of activities, 51.5% and 35.6% responded that they faced little physical health problems and moderate financial constraints, respectively.

Keywords: Knee OA, prevalence, challenges, treatment seeking behaviour

Introduction

In India, osteoarthritis is the most common joint disease, prevalence being 22% to 39%. Ageing is the most typical cause of knee OA. Majority of people suffering from osteoarthritis are in their forties and fifties but now younger people are also affected. The main symptom of knee OA is knee pain while attempting to flex and extend the knee. During community posting and data collection, the researchers noticed that knee discomfort was one of the most common issues in the community not only in older people but also in younger age group above 30 years. The best ways to limit disabilities are early diagnosis, regular treatment, and proper follow-up, so the current study was conducted to assess the prevalence, challenges, treatment seeking behavior of adults residing in DMC, UT Chandigarh.

Materials and Methods

A quantitative approach with descriptive design was used. The study was conducted among adults more than 30 years in a semi-urban locality of UT, Chandigarh.

488 subjects with knee pain (major criteria) were identified by conducting door to door survey, 220 subjects meeting ACR Criteria and inclusion criteria were enrolled as subjects by using Total Enumeration Technique after taking clearance from the Ethical Committee, Principal of the college, Medical Officer of the area. Survey performa, Semi-structured Interview schedule and Biophysical measurements were the tools used for data collection.

The reliability of the tool and instrument was checked by Inter-rater (Cohen's kappa) method on ten subjects. The tool was found to be reliable (0.8) with almost perfect strength of agreement for the tool. Reliability of the weighing scale was also ascertained by three checks and by two raters. Content validity, clarity and sequence of the tool was ascertained by consulting experts from the field of Medical - Surgical and Community Nursing. Language validity was also ascertained by translating the tool from English to Hindi and then to English again. Completeness and language of the tool was ascertained during pilot study on adults above 30 years of age with knee pain residing in different area of UT Chandigarh as subjects. The results of the pilot study revealed that the subjects were available and feasible

Results

Table 1: Distribution of the study subjects with knee OA as per ACR criteria n= 220

Variable	f(%)
Major criteria	
Knee pain	220 (100)
Minor criteria*	
Age >50 years	174 (79.0)
Crepitus	170 (77.2)
Bony tenderness	133 (60.4)
Stiffness <30 minutes	132 (60.0)
Bony enlargement	50 (22.7)
No palpable warmth of synovium	10 (4.5)

* More than one response given by the subjects.

Table 2: Prevalence of knee OA among subjects as per ACR criteria n= 220

Subjects	Adults > 30 years of age		Prevalence
	Surveyed WITH KNEE pain f (%)	Meeting acr criteria f (%)	
Total	488	220	45%
Male	94 (19.2)	35 (15.9)	37.2%
Female	394 (80.7)	185 (84.0)	46.9%

Table 3: Age wise prevalence of knee OA according to ACR criteria. n=220

Age group* (Years)	Surveyed with knee pain n=488	Meeting ACR criteria n=220 f (%)	Prevalence
30 -39	49	15 (6.8)	30.6%
40 - 49	95	24 (10.9)	25.2%
50 - 59	125	54 (24.5)	43.2%
60 - 69	137	83 (37.7)	60.5%
70 - 79	66	39 (17.7)	59.0%
>80	16	05 (2.2)	31.2%

*Mean ± SD = 58.5±11.4
Range = 31-85

Table 4: Distribution of the study subjects as per BMI and central obesity. n= 220

Measurement	Overall n=220 f (%)	Male n=35 f (%)	Female n=135 f (%)
BMI* (kg/m²)			
<18.5 (Underweight)	02 (0.9)	02 (5.7)	--
18.5-24.9 (Normal)	65 (29.5)	07 (20.0)	58 (42.9)
25.0-29.9 (Overweight)	112 (50.9)	19 (54.2)	93 (68.8)
30.0-34.9 (Obese class I)	26 (11.8)	05 (14.2)	21 (15.5)
35.0-39.9 (Obese class II)	13 (5.9)	02 (5.2)	11 (8.1)
>40 (Obese class III)	02 (0.9)	--	02 (1.4)
Waist			
Circumference (cms)			
Male ≥102	114 (51.8)	23 (20.2)	--
Female ≥88		--	91 (79.8)
Waist-hip ratio	142 (64.5)		
Male >1.0		06 (4.2)	--
Female >0.85		--	136 (95.8)

*Mean ± SD = 26.7±4.17
Range = 17.30-42.46

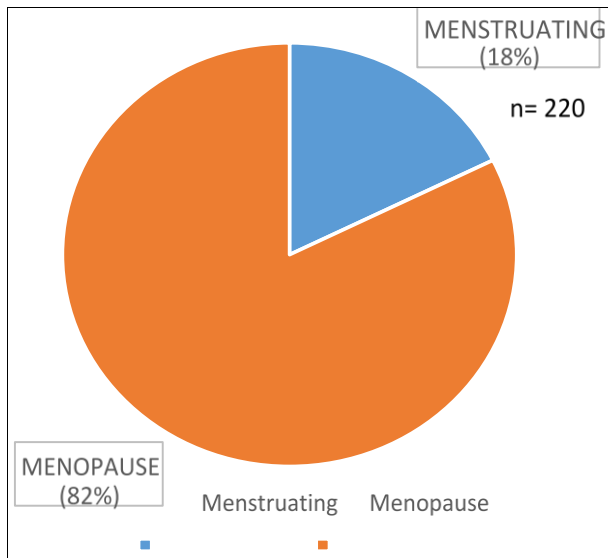


Fig 1: Knee OA among female subjects as per menstrual history.

Fig 1. Depicts the knee OA among female subjects as per menstrual history. About 82% female subjects had menopause whereas 18% female subjects were menstruating.

Table 5: Sources and types of treatment sought by the study subjects n=220

Sources and type*	f(%)
Treatment Agencies Allopathy	
Government	178 (74.5)
Private	72 (31.0)
Ayurveda	24 (11.3)
Physiotherapy	27 (11.3)
Yoga	51 (21.3)
Homeopathy	04 (1.7)
Quacks/Advertisements	09 (3.8)
Type of treatment	
OTC drugs (PCM, Diclofenac)	168 (70.3)
Topical applications (Moov, spray)	83 (34.7)
Intra-articular injection	13 (5.4)
Calcium and Vitamin D3 tablets	85 (35.6)
Surgical methods	06 (2.5)
Natural/home remedies	
Massage with warm mustard oil with turmeric/garlic	130 (54.4)
Massage with sesame oil	14 (5.9)
Consuming flaxseeds	25 (10.5)
Consuming Sesame seeds	24 (10.0)
Consuming Overnight soaked methi seeds/water	38 (15.9)
Consuming Walnuts	35 (14.6)
Homemade salve	16 (6.7)
Hot and cold application or any other application	73 (30.5)

Table 6: Challenges faced by study subjects as per SF – 36 Questionnaire (modified) n=220

General health	Excellent(1)	Good(2)	Fair(3)	Poor(4)
In general, would you say your health is:	--	34 (14.2)	138 (57.7)	48 (20.1)
During the past 4 weeks:	Definitely True(1)	Mostly true(2)	Don't know(3)	Mostly false(4)
I am as healthy as anybody I know	6 (2.5)	65 (27.2)	115 (48.1)	34 (14.2)
My health is good	5 (2.1)	68 (28.5)	90 (37.7)	57 (23.8)
I seem to get sick a little easier than other people	Mostly False(1)	Don't know(2)	Mostly true(3)	Definitely true(4)
I expect my health to get worse	27 (11.3)	103 (43.1)	85 (35.6)	5 (2.1)
Mean Score	12.3 (5.5)	41.6 (18.9)	43.5 (19.7)	12.5 (5.6)
Limitations of Activities	No, not Limited at all (1)	Yes, limited a little	Yes, limited a Lot	Incapacitated
Vigorous activity	7 (2.9)	47 (19.7)	86 (36.0)	80 (33.5)
Moderate activities	36 (15.1)	96 (40.2)	63 (26.4)	25 (10.5)
Lifting or carrying groceries	77 (32.2)	98 (41.6)	32 (13.4)	13 (5.4)
Climbing several flight of stairs	12 (5.0)	67 (28)	72 (30.1)	69 (28.9)
Climbing one flight of stairs	54 (22.6)	95 (39.7)	52 (21.8)	19 (7.9)
Bending, kneeling or stooping	18 (7.5)	92 (38.5)	57 (23.8)	53 (22.2)
Waking more than 1 mile	41 (17.2)	98 (41.0)	60 (25.1)	21 (8.8)
Bathing or dressing yourself	158 (66.1)	49 (20.5)	11 (4.6)	2 (0.8)
Mean score	50.4 (27.1)	80.3 (40.1)	54.1 (27.0)	35.3 (12.6)
Physical health problems	Not at all	A little bit	Moderate	Quite a bit
During the past 4 weeks				
Amount of time cut down you spent on work or other activities	15 (6.3)	102 (42.7)	71 (29.7)	32 (13.4)
Extent of limitation in the kind of work or other activities	11 (4.6)	104 (43.5)	75 (31.4)	30 (22.6)
Amount of difficulty in performing the work or other activities	11 (4.6)	103 (43.0)	71 (29.7)	34 (14.6)
Mean score	12.3 (6.1)	103 (51.5)	72.3 (36.1)	32 (16)
Emotional health problems:	Not at all	A little bit	Moderate	Quite a bit
During the past 4 weeks				
Cut down the amount of time spent on work or other activities	13 (5.4)	125 (52.3)	61 (25.5)	21 (8.8)
Reduction in interest in doing regular daily activities	22 (9.2)	124 (51.2)	51 (21.3)	23 (9.6)
Mean score	17.5 (8.7)	124.5 (62.2)	56 (28.0)	22 (11.0)
Social activities and pain:	Not at all	Slight	Moderate	Severe
Emotional problems interfered with your normal social activities with family, friends, neighbours, groups?	52 (21.9)	127 (53.1)	37 (15.5)	4 (1.7)
How much bodily pain have you had during the past 4 weeks?	10 (4.2)	84 (35.1)	94 (39.3)	32 (13.4)
During the past 4 weeks, how much did pain interfere with your normal work?	13 (5.4)	100 (41.8)	87 (36.4)	20 (8.4)
Mean score	25 (12.5)	103.7 (51.8)	72.7 (36.3)	18.7 (9.3)

Energy and Emotions:	A little of the time	Some of the Time	A good bit of The time	Most of the Time
Have you been a very nervous person?	87 (36.4)	105 (43.9)	23 (9.6)	5 (2.1)
Have you felt so down in the dumps that nothing could cheer you up?	61 (25.5)	124 (51.9)	27 (38.3)	8 (3.3)
Did you feel tired?	8 (3.3)	80 (33.3)	89 (37.2)	43 (18)
	Most of the Time	A good bit Of the time	Some of the Time	A little of the Time
Have you felt calm and peaceful?	11 (4.6)	67 (28.0)	97 (40.6)	45 (18.8)
Did you have a lot of energy?	10 (4.2)	48 (21.1)	100 (41.8)	62 (25.9)
Mean score	34.4 (17.7)	84.8 (42.4)	67.2 (36.6)	32.6 (16.3)
Financial problems:	Not at all	A little bit	Moderate	Quite a bit
Do you feel any financial constraints?	46 (19.2)	53 (22.2)	85 (35.6)	36 (15.1)

Discussion

Osteoarthritis of the knee is the most common problem in India as well as the world. It causes discomfort, loss of function and financial hardship because of its high treatment costs. Exacerbation of the problem is caused by lack of willingness to seek help. However, if one modifies his/ knee OA is detected early, the rate of morbidity and disability can be minimised.

Knee osteoarthritis is one of the most common problems found in elderly people but now it is observed that the persons over the age of 30 are also complaining of knee pain. During community posting, the researchers noticed that knee discomfort was one of the most common issues in the community not only in older people but also in younger age group above 30 years. The purpose of this study was to assess the prevalence of knee OA, difficulties, and treatment seeking behaviour among persons >30 years of age living in semi-urban area of UT Chandigarh in 2022. Area was chosen as the study field because it is a place to gain community experience and is one of rehabilitatory colony as a residential area and the residents belongs to different socio-demographic backgrounds.

Although knee pain is one of the symptoms of knee joint osteoarthritis, not all patients with knee pain have the disease. In door to door survey, 480 people with knee pain were identified and screened for knee osteoarthritis, according to the American College of Rheumatology. Total Enumeration Technique was used to enrol 220 persons meeting ACR Criteria (1986) and were willing to participate. Data was gathered using semi-structured interview schedule as it is the most suitable way to gather information in a semi-urban area to ensure quality of data; observation and biophysical measurements were the techniques used for data collection.

Osteoarthritis affects 10% to 15% of all persons over the age of 60 worldwide, with women having a higher frequency than men. In India, the prevalence of osteoarthritis ranges from 22% to 39%. In a study conducted by Massoo Kawano *et al.* reported 74.2 percent of women was suffering from Knee osteoarthritis. In the present study, women had a higher prevalence (84%) of knee OA than men.

As the prevalence of knee osteoarthritis rises with age, a study by Kiran Bala, Shallu Bavoria, and colleagues reported that people aged 60 and more have three times the risk of OA as those aged 50 to 59. Similar findings are also observed in half of the study subjects aged <60 years due to lack of attention and intake of junk food.

Obesity and menopause are risk factor for developing knee OA. It is more common among women because of the likelihood of developing osteoporosis in women who are not taking enough Calcium supplements.as the BMI measures

general body weight, but central obesity also plays a role in the disease's progression. In the current study half of the study participants (50.9%) had BMI of 25.0- 29.9 kg/m². Majority of females 95.8% were centrally obese as per waist- hip ratio and similar findings were reported in the study by Ashwin Kumar Das *et al.* According to the findings of a study done by Binu Areekal, Anitha Bhaskar and colleagues, menopausal women accounted for 50.4 percent of the population whereas in our study menopausal women made up the majority of the study's female participants (82%).

In 2016, study conducted by Binu Areekal, Anitha Bhaskar *et al.* reported that 66.2% of subjects had bilateral knee osteoarthritis but in the present study 81% of subjects had bilateral knee osteoarthritis.

To screen KOA, ACR criteria there is one major sign(knee pain) and six minor criteria (age over 50, crepitus, morning stiffness lasting more than 30 minutes, bony tenderness and enlargement and lack of palpable in the synovium. A study conducted by Kiran Bala 2019. In the current study, similar criteria was used to select the research subjects and determine the prevalence of KOA so that the patients may be referred for the early therapy of the disease state It is better to prevent or take treatment as early as possible, X-ray, MRI like different modalities are available to diagnose the disease but in the community setting, ACR Criteria is the best method for screening.

Among chronic conditions, people usually use some natural remedies. In a study conducted by Meenakshi Sharma, Mandeep S. Dhillon, Amarjeet Singh, and Sukhpal Kaur 2014, 79 percent of the subjects used natural/home remedies. 24 In the current study, with the majority (54.4%) of the study subjects massaging with warm mustard oil and 30.5 percent performing hot and cold applications. In present study, it was found that 74.5 percent of the study patients began their allopathic treatment with government agencies, but that treatment seeking behaviour was irregular among 77% of the study subjects.

Conclusion

Study concludes that the overall prevalence of knee OA was found to be 45% among adults more than 30 years of age with more prevalence in females as compared to males. It was more prevalent in the age group >60 years but in the present study more than 1/3rd were in the age groups <60 years of age. Except 1/3rd of the subjects, rest were either overweight or obese as per BMI and majority of the females were centrally obese as per waist-hip ratio.

1/3rd of the subjects faced various challenges like limitations in performing activities, lack of interest in carrying out social activities due to pain and lack of energy. Poor compliance was present in most of the study subjects;

financial constraints or no relief/temporary relief were its causes. So they switched to pain killers as OTC drugs for relieving of pain; half of the study subjects were also taking natural/home remedies.

So, there is a need to conduct health education sessions in community for early diagnosis of knee OA and to educate them about importance of regular treatment and follow-up to prevent side-effects of OTC drugs and lifestyle modifications to prevent obesity and disabilities. Hence, improving the quality of life at large.

Conflict of Interest

Not available

Financial Support

Not available

References

- Bala K, Bavoria S, Sahni B, Bhagat P, Langeh S, Sobti S. Prevalence, risk factors, and health seeking behavior for knee osteoarthritis among adult population in rural Jammu - A Community based Cross Sectional Study. *J Family Med Prim Care*. 2020 Oct 30;9(10):5282-5287. <https://pubmed.ncbi.nlm.nih.gov/33409203/>
- Safiri S, Kolahi AA, Smith E, Hill C, Bettampadi D, Mansournia MA, *et al*. Global, regional and national burden of osteoarthritis 1990-2017: a systematic analysis of the Global Burden of Disease Study 2017. *Ann Rheum Dis*. 2020 Jun;79(6):819-828 <https://pubmed.ncbi.nlm.nih.gov/32398285/>
- Hunter J David, March Lyn, Chew Mabel. Osteoarthritis in 2020 and beyond: a Lancet Commission 2020;396(10264):1711-1712 [https://doi.org/10.1016/S01406736\(20\)32230-3](https://doi.org/10.1016/S01406736(20)32230-3)
- Cui Ajyong, Li Huizi, Wang Dawei, Zhong Junlong, Chen Yufeng, Lu Huading. Global, regional prevalence, incidence and risk factors of knee osteoarthritis in population - based studies. 2020, 29(100587) [https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(20\)30331X/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(20)30331X/fulltext)
- Pal CP, Singh P, Chaturvedi S, Pruthi KK, Vij A. Epidemiology of knee osteoarthritis in India and related factors. *Indian J Orthop*. 2016 Sep;50(5):518-522. DOI: 10.4103/00195413.189608. PMID: 27746495; PMCID: PMC5017174.
- Osteoarthritis by American College of Rheumatology <https://www.rheumatology.org/IAM-A/Patient-Caregiver/Diseases-Conditions/Osteoarthritis>
- Kumar A, Goel S, Gupta R, Gupta BM. Osteoarthritis research in India: A scientometric assessment of publications output during International Journal of Information Dissemination and Technology. 2007;16;7(3):157-161. https://www.researchgate.net/publication/323825719_Osteoarthritis_research_in_India
- Hunter HSU, Ryann. Siwiec.knee osteoarthritis: Continuing Education Activity; c2021. <https://www.ncbi.nlm.nih.gov/books/NBK507884/>
- Zelman David. Osteoarthritis of the Knee (Degenerative Arthritis of the Knee); c2021 <https://www.webmd.com/osteoarthritis/osteoarthritis-of-the-knee-degenerative-arthritis-of-the-knee>
- Hafez AR, Alenazi AM, Kachanathu SJ, Alroumi AM, Mohamed ES. Knee Osteoarthritis: A Review of Literature. *Phys Med Rehabil Int*. 2014;1(5):8 <https://www.researchgate.net/publication/328274926>
- Heidari Behzad. Knee osteoarthritis diagnosis, treatment and associated factors of progression: part II. *Caspian J Intern Med*. 2011;2(3):249-255. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3770501/>
- Altman R, *et al*. American College of Rheumatology criteria for the diagnosis of knee osteoarthritis. 1986;29:1039. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3770501/table/T1/?report=objectonly>
- Belleza Marianne. Osteoarthritis; c2021 <https://nurseslabs.com/osteoarthritis/>
- Emma Swärdh, Gitanjali Jethliya, Subhash Khatri, Kristina Kindblom, Christina H Opava. Approaches to osteoarthritis - A qualitative study among patients in a rural setting in Central Western India, Physiotherapy Theory and Practice; c2021. DOI: <https://doi.org/10.1080/09593985.2021.1872126>
- Salve H, Gupta V, Palanivel C, Yadav K, Singh B. Prevalence of knee osteoarthritis amongst perimenopausal women in an urban resettlement colony in South Delhi. *Indian J Public Health*. 2010;54:155-7.
- Zarate Maricela. Nursing Interventions to Relieve Orthopaedic Pain; c2014. http://frhs.org/assets/uploads/general/M_Zarate_Nursing_Interventions_Ortho_Pain.pdf
- Lara Al-Khlaifat, Rasha Okasheh, Jennifer Muhaidat, Ziad M Hawamdeh, Dania Qutishat, Emad Al-yahya, *et al*. Knowledge of Knee Osteoarthritis and Its Impact on Health in the Middle East: Are They Different to Countries in the Developed World? A Qualitative Study, *Rehabilitation Research and Practice*, <https://doi.org/10.1155/2020/9829825>
- Das AK, Routray Dipanweeta, Panigrahi Kumar Tapas. Prevalence and Risk Factors of Knee Osteoarthritis in a Rural Community of Odisha: A Snap Shot Study; c2018, (6)5 <https://dx.doi.org/10.18535/jmscr/v6i5.04>
- Carmona-Terés V, Moix-Queraltó J, Pujol-Ribera E, *et al*. Understanding knee osteoarthritis from the patients' perspective: a qualitative study. *BMC Musculoskelet Disord*. 2017;18:225. <https://doi.org/10.1186/s12891-017-1584-3>
- Bhaskar Anitha, *et al*. Osteoarthritis of knee and factors associated with it in middle aged women in a rural area of central Kerala, India. *International Journal of Community Medicine And Public Health*, [S.l.]. 2016;3(10):2926-2931. dec. ISSN 23946040.
- Jaiswal A, Goswami K, Haldar P, Salve HR, Singh U. Prevalence of knee osteoarthritis, its determinants, and impact on the quality of life in elderly persons in rural Ballabgarh, Haryana. *J Family Med Prim Care*. 2021;10:354-60
- Venkatachalam J, Nanesan M, Eswaran M, Johnan AK, Bharath V, Singh Z. Prevalence of atooarthritis of knee jost among aduk population is a real area of Kanchipuram Chistrict, Tamil Nadhe Indian Public Health. 2018;62:117-22.
- Radha MS, Gangadhar MR. Prevalence of Knee Osteoarthritis Patients in Mysore City, Karnataka. *International journal of Research Scientific Resarch*. 2015;6(4):3316-3320.

24. Sharma M, Dhillon MS, *et al.* Treatment-seeking Behavior of Knee Osteoarthritis Patients in Northern India. *J Postgrad Med Edu Res.* 2019;53(3):109-112.
25. Kawano MM, Araújo ILA, Castro MC, Matos MA. Assessment of quality of life in patients with knee osteoarthritis. *Acta Ortop Bras.* [Online]. 2015;23(6):307-10. Available from URL: <http://www.scielo.br/aob>
26. Ajit NE, Nandish B, Fernandes RJ, Roga G, Kasthuri A, Shanbhag DN, *et al.* *IJRCI.* 2014;1(S1):SO3.
27. Alami S, Boutron I, Desjeux D, Hirschhorn M, Meric G, *et al.* Patients' and Practitioners' Views of Knee Osteoarthritis and Its Management: A Qualitative Interview Study. *PLOS ONE.* 2011;6(5):e19634. <https://doi.org/10.1371/journal.pone.0019634>
28. Brennan-Olsen SL, Cook S, Leech MT, *et al.* Prevalence of arthritis according to age, sex and socioeconomic status in six low and middle income countries: analysis of data from the World Health Organization study on global AGEing and adult health (SAGE) Wave 1. *BMC Musculoskelet Disord.* 2017;18:271 <https://doi.org/10.1186/s12891-0171624-z>
29. Singh Arvind Kumar, Kalaivani Mani, Krishnan Anand, Aggarwal Kumar Parveen, Gupta Kumar Parveen. Prevalence of Osteoarthritis of Knee among Elderly Persons in Urban Slums Using American College of Rheumatology (ACR) Criteria. *Journal of Clinical and Diagnostic Research.* 2014 Sep;8(9):JC09-JC11 10.7860/JCDR/2014/7763.4868
30. Sharma MK, Swami HM, Bhatia V, Verma A, Bhatia S, Kaur G. An epidemiological study of correlates of osteo-arthritis in geriatric population of UT Chandigarh. *Indian J Community.* 2007;32(1):77-78. <https://www.ijcm.org.in/text.asp?2007/32/1/77/53414>

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