

# Knowledge, Attitudes and Practices Regarding the Osteoarthritis Amongst the Physiotherapist: A Questionnaire Based Study

Usha<sup>1</sup>, Baldev Negi<sup>2</sup>

<sup>1</sup>B.P.T. (Bachelor of Physiotherapy) Student, Department of Physiotherapy, School of Allied Health Sciences, M.V.N. (Modern Vidya Niketan) University, Palwal, Haryana, India-121105

<sup>2</sup> Assistant Professor, Department of Physiotherapy, Sharda School of Allied Health Sciences, Sharda University, Greater Noida, Uttar Pradesh, India -201306

Corresponding Author: Baldev Negi

DOI: <https://doi.org/10.52403/ijhsr.20240941>

## ABSTRACT

**Objective:** To assess the knowledge, attitudes and practices regarding the osteoarthritis amongst the physiotherapists.

**Methodology:** In this study, 65 physiotherapists from Palwal, Faridabad and Mathura district participated and they were providing KAP (Knowledge, Attitudes and Practices) questionnaire. Their responses were collected and were statistically analysed.

**Results and Conclusion:** The results of the present KAP study founded that there is diversity in the treatment methods followed by the physiotherapists besides being educated regarding the osteoarthritis. This study concluded that continuing education programs were needed to fill the evidence- practice gap existing amongst the physiotherapy practitioners' community in order to provide standardized well established protocol to the patients suffering from osteoarthritis.

**Clinical Implication:** This study would be helpful in evaluating the knowledge, attitudes and practices regarding the osteoarthritis among the physiotherapist. As, physiotherapy plays an important role in the management of an individual suffering with osteoarthritis.

**Keywords:** Osteoarthritis, Knowledge, Attitudes, Practices

## INTRODUCTION

Osteoarthritis (OA) is most prevalent form of arthritis world-wide. In osteoarthritis, there is wearing down of the protective tissue at the ends of cartilage at bones which gradually worsens over time. It prevents people from engaging in physically demanding task, which results in the subsequent decline in the quality of life <sup>[1]</sup>.

OA is the most widespread chronic joint disease across the world <sup>[2]</sup>. OA is a multifactorial disease. It's risk factors include age, sex, family history,

socioeconomic level and obesity <sup>[3]</sup>. Osteoarthritis (OA) is a degenerative disease that gradually impairs function, increases discomfort, and limits one's ability to participate in activities. It also has a rising social cost due to its increasing prevalence as life expectancy has increase of osteoarthritis. Thus, it is imperative to increase awareness of osteoarthritis (OA) one way to do this is by evaluating the current state of knowledge, attitude and practices regarding the disease <sup>[4]</sup>. As region, population awareness of knee OA

was more than sufficient, particularly, for preventive measures, alleviating measure [5]. Its symptoms, and the condition will probably worsen with time. Management options can be divided into four primary groups: not pharmaceutical, complementary, and pharmaceutical and substitute [6].

Common non – surgical treatment include the counseling and education, physical activity, managing weight, physiotherapy, occupational therapy, medication therapy [7,8]. Three primary categories include international recommendations for treating osteoarthritis (OA): non-pharmacological, and surgical treatments [9]. According to a study, there is a 32% increased risk of osteoarthritis (OA) 5kg/m<sup>2</sup> lead to increased body mass index (BMI) [10]. The increase early access to evidence- based interventions third priority policy has identified the steps that must be taken to raise awareness of OA. Increased awareness among caregivers and patients with OA. This is especially important since spreading awareness could halt the spread of the illness [11]. Therefore, a patient's treatment decisions and compliance may be influenced by an evaluation of their beliefs and attitudes regarding the side effects and efficacy of the various treatments used [12]. It appears that most Primary Health Centers (PHCs) engage in inappropriate procedures and lack of expertise about the management of OA [13]. In the end, these actions have an impacted on the individual's quality of life. Even with the insightful discoveries from previous studies, there is still a knowledge vacuum. while early osteoarthritis and knee discomfort are becoming more common, there is a dearth of thorough research concentrating on their management and awareness of osteoarthritis [14]. For knee pain and osteoarthritis to be effectively diagnosed and managed, awareness and understanding are essential. Studies on Saudi Arabia's revealed significant ignorance of the symptoms and risk factors of osteoarthritis and knee discomfort [15]. It is best to identify osteoarthritis as soon as possible. One way to diagnose it is to

inquire about the medical history, such as morning joint stiffness that goes away in 20 to 30 minutes, by physical examination by observing joint movements, and through laboratory testing. There seems to be variation among the physiotherapist perspective regarding the management of osteoarthritis. Assessment of knowledge, attitude and practices amongst the practicing physiotherapist regarding osteoarthritis disease is an essential issue for the persual of an effective health care delivery. The goal of the present study was to assess the knowledge, attitudes and practices regarding osteoarthritis amongst the physiotherapists.

## **MATERIALS & METHODS**

In this questionnaire based study 65 physiotherapists practising in the clinics and hospitals of Palwal, Faridabad and Kosi Kalan were recruited. The inclusion criteria were physiotherapists possessing graduation, post- graduation and doctorate degree in physiotherapy and physiotherapy interns. The exclusion criteria were participants unwilling to participate and other health care professionals. The questionnaire was made up of following components: informed consent, demographic details (Name, Age, Gender, Level of Education, Affiliated institution and total industrial experience in years), Knowledge questions, attitudes questions and questions related to their practices. Prior to administering the questionnaire, all participants were provided complete description of the study's objective and significance via one- to -one interviews. The questionnaire comprising of 18 questions which was previously used by Ergezen et al., in 2023 [16] were distributed and their responses were recorded. The data was statistically analysed by the calculation of mean and percentage.

## **RESULT**

### **Participant's Characteristics**

Table 1 summarizes the participant's characteristics. In this study 65 physiotherapists participated, with 4 years

of average duration of experience who filled out the questionnaire. The majority of physiotherapists are between the age group of 31-40 years (n= 32)49.23%, followed by 21-30 years (n=28) 43.07%. The less number of participants belong to the age group of 41-50 (n=05) 7.69%. In this study male participants were more (n=39) 60% as compared to the female participants (n=26)40%. Only 01 participant with 1.53% was possessing the qualification of

doctorate degree in physiotherapy, followed by bachelor degree in physiotherapy which was possessed by 38.46% (n=25). Master of physiotherapy participants were 52.30% (n=34) and majority of the participants were physiotherapy interns with 53.84% (n=35). Majority of the participants were working in private hospital (n=37) 56.92% followed by physiotherapy clinic (n=28) 43.07%. None of the participants were associated with university and public hospital.

**Table 1: Participants characteristics included in this study**

Characteristics	n	%
Age (Years)	21-30	2843.07
	31-40	3249.23
	41-50	057.69
Sex	Male	3960
	Female	2640
Level of Education	Physiotherapy Intern	3553.84
	Bachelor of Physiotherapy	2538.46
	Master of Physiotherapy	3452.30
	Doctor of Philosophy (Physiotherapy)	011.53
Institution	University Hospital	0000
	Public Hospital	0000
	Private Hospital	3756.92
	Physiotherapy Clinic	2843.07

**Knowledge, Attitudes and Practices regarding osteoarthritis amongst the physiotherapists**

Table 2 summarizes the survey questions and the responses for Knowledge, Attitudes and Practices questionnaire regarding osteoarthritis amongst the physiotherapists. The result of the present study indicate that most common method of evaluation during the initial visit of physiotherapy by osteoarthritis patient was palpation (n=44) 67.69% followed by postural assessment (n=36)55.38%, range of motion (n=34) 52.30%, pain intensity device use (n=24)36.92%, muscle strength (n=21)32.30%, physical activity level (n=18)27.69%, level of functional activity (n=16)24.61%, gait assessment (n=15)23.07%, presence of physical deformity (n=13)205, imaging method results (n=10)15.38%, quality of life assessment (n=8)12.30%, and the least adopted method was OA specific (n=07)10.76%, physiotherapist rarely

(n=25)38.46%, followed by sometimes (n=17)26.15%, often (n=11)16.92%, never (n=08)12.30%, and always (n=04)6.15%, enquires about BMI. The results of the present study reveal that the most common treatment method used by the physiotherapists was aerobic exercise (n=32), 49.23% followed by stretching exercise (n=30)40%, electrotherapy (n=21) 32.30%, ice application and strengthening exercise (n=20)30.76% superficial thermal application (n=17)26.15%, shortwave diathermy and hydrotherapy (n=11)16.92%, myofascial relaxation (n=10)15.38%, peripheral joint mobilization (n=9)13.84%, weight control education (n=08)12.30, and the least adopted treatment method was taping and orthosis use (n=06)9.23%, The strengthening program intensity most commonly used criteria was 2 sets 10 repetitions (n=36)55.38%, followed by 3 sets of 10 repetitions (n=16)24.61%, 2 once a sets 8 repetitions (n=13)20%, 3 sets 12 repetitions (n=02)3.07%, 3 sets 15

repetitions (n=01)1.53% .The stretching exercises are rarely recommended (n=22)33.84%,exercises are rarely recommended (n=20)30.70%,aerobic exercises are also rarely recommended (n=29)44.6%, in the dosage of 20 minutes once a week (n=35)53.84%,the mainstay of treatment of individuals suffering from osteoarthritis remains on strengthening exercises (n=26)40%followed by electrotherapy application (n=21) 32.21%, ice application (n=20)30.76%,myfascial

release (n=10)15.38%,peripheral joint mobilization (n=09)13.84%,and least adopted therapy as core treatment was weight control education (n=08)12.30% .At the termination patient of physiotherapy treatment procedure seeks verbal information (n=38)58.46%,followed by written information (n=06)9.23%.The physical therapists declared that they made all three choices as per availability of the evaluation and treatment program (n=30)46.15%.

**Table 2: Survey questions and received responses from the participants**

Questions of the survey		n	%
<b>Which of the following certification courses you have attended?</b>	Manual therapy	65	86.15
	Lymphoedema	08	12.30
	Pilates	02	3.07
	Cupping therapy	14	21.53
	Not attended	02	3.07
<b>How often do you take information regarding body mass index (BMI) with a patient diagnosed with osteoarthritis (OA)?</b>	Never	08	12.30
	Rarely	25	3.07
	Sometimes	17	12.30
	Often	11	38.46
	Always	04	6.15
<b>How often you give education to the patient?</b>	Never	09	13.84
	Rarely	24	36.92
	Sometimes	09	13.84
	Often	06	9.23
	Always	27	41.53
<b>How often do you implement or suggest strengthening exercise?</b>	Never	21	32.30
	Rarely	10	15.38
	Sometimes	10	15.38
<b>How often you implement or suggest stretching exercise?</b>	Often	10	15.38
	Always	14	21.53
	Never	07	10.76
	Rarely	22	33.84
	Sometimes	20	30.76
<b>Which muscle you put in application for strengthening exercise ?</b>	Often	09	13.84
	Always	17	26.15
	Quadriceps	60	92.30
	Hamstring	48	73.84
	Core muscles	10	15.38
	Gluteal muscles	12	18.46
	Gastro -soleus	12	18.46
	Tibialis anterior	20	30.76
Iliopsoas	17	26.15	
<b>How often you implement or suggest or aquatic exercise?</b>	Upper extremity muscles	13	24.61
	Never	08	12.30
	Rarely	20	30.76
	Sometimes	12	18.46
	Often	9	13.84
<b>What assessment method you apply for the first visit of patient?</b>	Always	19	29.23
	Palpation	44	67.69
	Postural assessment	36	55.38

	Range of Motion	34	52.30
	Muscle strength	21	32.30
	Pain intensity assessment	30	46.15
	Presence of deformity	13	20
	Imaging method results	10	15.38
	Level of functional activity	16	24.61
	OA specific scales	07	10.76
	Quality of Life assessment	08	12.30
	Physical activity level	18	27.69
	Assistive device use	24	36.92
	Gait assessment	15	23.07
<b>On what basis you choose the evaluation and treatment program?</b>	High availability	30	46.15
	Experiential skills	26	40
	Being evidence based	21	32.30
<b>How many osteoarthritis patients you observed every week?</b>	0-5	18	27.69
	5-10	38	58.46
	10-15	11	16.92
	15-20	03	4.61
	20 and more	03	4.61
<b>What suggestion you give to your patients about their weight control?</b>	Never	13	20
	Rarely	27	41.53
	Sometimes	28	43.07
	Often	09	13.84
	Always	09	13.84
<b>Do you provide any information form in the written format?</b>	Never	12	18.46
	Rarely	30	46.15
	Sometimes	29	44.61
	Often	09	13.84
	Always	13	20
<b>What criteria you plan for the strengthening program intensity?</b>	2 sets 8 repetitions	13	20
	2 sets 10 repetitions	36	55.38
	3 sets 10 repetitions	16	24.61
	3 sets 12 repetitions	02	3.07
	3 sets 15 repetitions	01	1.53
<b>How often you implement or suggest aerobic exercise ?</b>	Never	15	23.07
	Rarely	29	44.61
	Sometimes	25	38.46
	Often	07	10.76
	Always	09	13.84
<b>Which type of therapy you will choose , if you can choose or apply only one core treatment ?</b>	Ice application	20	30.76
	Strengthening exercises	26	40
	Electrotherapy application	21	3.22
	Myofascial release	10	15.38
	Peripheral joint mobilization	09	13.84
	Weight control education	08	12.30
<b>What criteria you follow for the intensity of aerobic exercise?</b>	20 minutes once a week	35	53.84
	30 minutes once a week	14	21.53

	20 minutes twice a week	15	23.07
	30 minutes 3 days a week	03	4.61
<b>What further treatment procedure you used?</b>	Bed rest	26	40
	Aerobic exercise	32	49.23
	Superficial thermal application	17	26.15
	Stretching exercises	30	46.15
	Ice application	20	30.76
	Strengthening exercise	20	30.76
	Electrotherapy application	21	32.30
	Myofascial relaxation	10	15.38
	Peripheral joint mobilization	09	13.84
	Shortwave diathermy	11	16.92
	Weight control education	08	12.30
	Hydrotherapy	11	16.92
	Taping/orthosis use	06	9.23
<b>Do you provide any guidance for the self management in the end of the procedure to the patient?</b>	Oral information	38	58.46
	Written notification	06	9.23
	No	00	00

## DISCUSSION

The present questionnaire study was performed to assess the knowledge, attitude and practices regarding the osteoarthritis amongst the physiotherapists. The results suggests that the importance of continuing professional development and clinical experience in the osteoarthritis rehabilitation. There is customized management approach which is consistent with recommendations from osteoarthritis guidelines with respect to patient assessment and treatment planning apart from some differences like weight management. The importance, safety and effectiveness of early access to a physiotherapist in patients with musculoskeletal disorders have been proven. In this study, there is identification of the evidence- to- practice gap that can lead to non- evidence - based practice behaviors for the treatment of patients with knee OA. The physiotherapists apply different combinations.

A similar cross sectional study was conducted by Battista et al., in 2021 to assess Italian physiotherapists' knowledge of and adherence to osteoarthritis clinical

practice guidelines osteoarthritis CPGs (Clinical Practice Guidelines). In this online survey divided into two sections investigating knowledge of and adherence to CPGs was developed based on three high- quality, recent and relevant CPGs. In the first section, participants had to express their agreement with 24 CPG statements through a 1 (completely disagree) to 5 (completely agree) scale. They defined a  $\geq 70\%$  agreement with a statement as consensus. In the second section, participants were shown a clinical case, with different interventions to choose from. Participants were classified as 'Delivering' (all recommended interventions selected), 'Partially Delivering' (some recommended interventions missing) and 'Non-Delivering' (at least one non-recommended interventions selected) the recommended intervention, depending on chosen interventions. They founded that 822 physiotherapists (mean age (SD): 35.8 (13.3); female 47%) completed the survey between June and July 2020. In the first section, consensus was achieved for 13/24 statements. In the second section, 25% of the participants were classified as

‘Delivering’, 22% as ‘Partially Delivering’ and 53% as ‘Non- Delivering’. They concluded that an adequate level of knowledge of osteoarthritis CPGs regarding the importance of exercise and education. However, an adequate level of adherence has yet to be reached, since many physiotherapists did not advise weight reduction, but rest from physical activity, and often included secondary treatments (e.g. manual therapy) supported by low-level evidence. These results identify an evidence-to-practice gap, which may lead to non-evidence based practice behaviours for the management of patients with osteoarthritis<sup>[17]</sup>.

Another study was conducted by Bashaer Al-Ahmadi et al., in 2019 to estimate the level of knowledge and attitude of osteoarthritis management among primary health care PHC physicians inside Makkah city, 2018, and identify factors affecting them. In this cross-sectional study, includes a sample of PHC physicians working at PHC centres of the ministry of health in Makkah city. A Self-administered questionnaire was utilized for data collection. The study included 136 physicians. They founded that overall, the knowledge score ranged between 2 and 10 (out of 10). There was no statistically significant difference in the knowledge between physicians according to age, gender, nationality, qualification, and experience. The majority of the physicians agreed that osteoarthritis is a common health problem in Saudi Arabia, more attention should be offered to osteoarthritis patients, recommended establishing Saudi guidelines, and perceived that PHC physicians can achieve a major role in control of osteoarthritis. They concluded that overall knowledge of PHC physicians in Makkah city regarding Osteoarthritis is acceptable. Their attitude towards the importance of the disease was promising. Conduct Saudi guidelines and further studies to assess the practice of PHC physicians regarding osteoarthritis, is recommended<sup>[18]</sup>.

Al-rusafa et al., in 2017 conducted an study to assess the knowledge, attitude and practice of Iraqi PHCC physicians in Baghdad, AL-Rusafa, regarding the management of osteoarthritis patient, and it's association with sociodemographic data. In this descriptive cross sectional study with some analytic elements has been conducted from the 1st of January to 1st of June 2017, in primary health care centers of six sectors selected randomly from Al Rusafa health directorate; in Baghdad. The data was collected by self-administered questionnaire regarding demographic characteristics, knowledge, attitude, and practices of physicians regarding management of osteoarthritis. Data analysis was done by (frequency, percentage), Chi square test (Fisher exact test). P value less than 0.05 was considered significant. They founded that the total study sample was 204 enrolled physicians, their age ranged from (25-58) years, The correct answers regarding etiology, diagnosis, imaging findings etc. ranged from 64.2-83.3% which reflect good knowledge of physicians regarding OA disease as well as that highly qualified physician showed good knowledge, about half of enrolled physicians showed good attitude and their practices regarding osteoarthritis and its management are good in general. They concluded that the knowledge, attitude and practice regarding osteoarthritis management among primary health care physicians are good in general<sup>[19]</sup>.

### **Limitations of the Study**

This study is based on small sample size. More efficient questionnaires can be used.

### **Future Scope of the Study**

Future studies should comprise larger sample size. Studies can be done with more efficient questionnaire.

### **CONCLUSION**

This study reveals the awareness of physiotherapists regarding the main treatment for patients with early

osteoarthritis of the knee joint. The results indicate that there is ill -compliance regarding the evidence based practice for the treatment of patients with knee osteoarthritis. Therapy, if sustained education is provided to the physiotherapists the gap can be bridged between evidence based practice and clinical practice.

#### **Declaration by Authors**

**Ethical Approval:** Approved

**Acknowledgement:** None

**Source of Funding:** None

**Conflict of Interest:** The authors declare no conflict of interest.

#### **REFERENCES**

1. Fransen M, Bridgett L, March L, Hoy D , Penserga E, brooks P. The epidemiology of osteoarthritis in Asia. *Int J Rheum Dis.* 2011; 14:113-21.
2. Pereira, D., Peletier, B., Araujo, J., Branco, J., santos, R.A., Ramos , E . (2011). The effect of osteoarthritis definition on prevalence and incidence estimates: a systemic review. *osteoarthr. cartil.*19(11), 1270-1285.  
<https://doi.org/10.1016/j.joca.2011.08.009>.
3. Hunter, D. J., Schofield, D., Callander, E. (2014). The individual and socioeconomic impact of osteoarthritis. *Nat. Rev. Rheumatol.* 10(7),437-441.
4. Zhanfg, Y., Jordan, J.M. (2008). Epidemiology of osteoarthritis. *Rheum. Dis. Clin. N.Am.* 34(3), 515-529.<https://doi.org/10.1016/j.rdc.2008.05.007>
5. Bijlsma, J.w ., Berenbaum, f .. Lafeber,F.P.(2011).Osteoarthritis: an update with relevance for clinical practice. *Lancet.* 377(9783),2115-2126.
6. Murphy,L.B.,Cisternas, M.G.,Pasta,D.J., Helmick,C.G., Yelin, E.H.(2018). Medical Expendituresana Earnings Losses Among US Adults with Arthritis in 2013. *Arthritis Care Res.*70(6),869-876.<https://doi.org/10.1002/acr.23>.
7. Lim AY, Doherty M, what of guidelines for osteoarthritis? *Int J Rheum Dis* .2011;14:136-44.
8. Anandacoomarasamy A, March L. Current evidence for osteoarthritis treatments. *therapeutic Advances in Musculoskeletal disease.* 2010;2(1):17-28.
9. Frasen, M., Mcconnell , S. (2009). Land based exercise for osteoarthritis of the knee: a metaanalysis pf randomized controlled trials. *J. Rheumatol.*36(6),1109-1117.
10. Uthman, O.A. van der windot, D.A. Jordan, J.L., Dziedzic, K.S., Healey, E.L. Peat, G.M., Foster, N.E. (2014). Exercise for lower limb osteoarthritis: systemic review incorporating trial sequential analysis and network meta- analysis. *Br J Sports Med.*48(21), 1579.<https://doi.org/10.1136/bjsports-2014-5555rep>.
11. Neogi T, Zhang Y. Epidemiology of osteoarthritis: Rheumatic Diseases Clinics of north America. 2013;39(1):1-19.
12. A national public health agenda for osteoarthritis. Center for disease control (CDC)and Arthritis Foundation.2010.
13. Uebelacker LA,Bailey G,Herman D,Anderson B,stein M.patients’ beliefs about medications ate associated with stated preference , or no medications- assisted therapy following inpatients opiod detoxification. *Journal of substance Abuse treatments* .2016;66:48-53.
14. Mckenzie S , Torkington A osteoarthritis managent options in general practice .*Aust Fam physician* .2010;39:622-5.
15. Al-Ghamdi S, Alfauri TM,Alharbi MA , et al: current self-medications practices in the kingdom of Saudi Arabia: an observational Study .*pan Afr Med J.*2020, 37:51.
16. Alahmed SK, Mohyeldin AM, Alshammari A,et al:: knowledge and awareness regarding osteoarthritis and Its risk factors in Hail Region, Saudi Arabia. *Current* .2023, 15:e36557.10.7759/cureus. 36557.
17. Mobasheri A, Rayman MP, Gualillo O,Sellam J,van der kraan P ,fearon U.The role of metabolism in the pathogenesis of osteoarthritis. *Nat Rev Rheumatol.* 2017;13:302- 311.
18. Ergezen, G.; Aras Bayram, G.; Boca, I.C. (2023). Determining the compliance with the guidelines of physio-therapists’ knowledge levels and attitudes regarding the treatment approach of early osteoarthritic patients in Turkey. *Romanian Journal of Physical Therapy.* 29(50),52-62. <https://www.doi.org/10.61215/RJPT.2023.29.50.52>.



19. Battista S, Salvioli S, Millotti S, Testa M, Dell'Isola A. Italian physiotherapists' knowledge of and adherence to osteoarthritis clinical practice guidelines: a cross-sectional study. *BMC Musculoskelet Disord.* 2021 Apr 23;22(1):380. doi: 10.1186/s12891-021-04250-4. PMID: 33892692; PMCID: PMC8067645.
20. Bashaer Al-Ahmadi , Eman Al-mohandis. Knowledge and Attitude of Osteoarthritis Management Among Primary Health Care Physicians at Primary Health Care Centers of Ministry of Health Inside Makkah Al-Mukarramah City, 2018. *International Journal of Medical Science and Dental Research.* 2019 ; Volume 02, Issue 05 : PP 36-53.
21. Tawfeeq AK. Knowledge, attitude and practice regarding osteoarthritis management among physicians of primary health care centers; Al-rusafa/ Baghdad/2017. *Al-Kindy Col. Med. J* ;15(1):15-2.  
<https://jkmc.uobaghdad.edu.iq/index.php/MEDICAL/article/view/70>

How to cite this article: Usha, Baldev Negi. Knowledge, attitudes and practices regarding the osteoarthritis amongst the physiotherapist: a questionnaire based study. *Int J Health Sci Res.* 2024; 14(9):311-319.  
DOI: <https://doi.org/10.52403/ijhsr.20240941>

\*\*\*\*\*