Original Research Article

Awareness of Preventive Measures in Osteoarthritis Among Urban Population in Pune City

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ABSTRACT

Background: Osteoarthritis (OA) is the most common articular disease of the developed country and cause of chronic disability, and may cause joint failure. Osteoarthritis of knee joint is common musculoskeletal problem nowdays in Indian population. OA is ranked among top 20 diseases in 40-45 years of age group.

Purpose: Osteoarthritis is responsible for major burden of disease and is one of the leading causes of global disability. People delay accessing health care for Knee Osteoarthritis due to lack of knowledge. Therefore, early diagnosis, signs and symptoms and awareness to delay/stall future disease process is essential for enhancing quality of life and function.

Objective: Objective of this study was to assess the knowledge about preventive measures of OA.

Setting: Different parts of Pune city.

Method: The study is undertaken to assess knowledge about preventives measures of OA with the help of self-made questionnaire in urban population of Pune, approved by ethical committee. The study was commenced with a sample size of 200 among urban residents of Pune. The questionnairewas circulated via google form through mails and other social media platforms and data analysis was done.

Participants: Age group 25-50 years were taken for the study. Population who was clinically pre diagnosed with osteoarthritis were excluded from the study.

Outcome measure: The primary outcome measure of this study was to assess the knowledge about preventive measures of OA where they have good knowledge about OA.

Results: Maximum population is aware about Osteoarthritis

Conclusion: There is lack of awareness regarding, signs and symptoms like crepitus, deformity, tenderness, joint enlargement, and risk factors, including age, trauma, family history and also the importance of posture correction and environmental awareness. Most of the population are not aware of surgical and conventional treatment for osteoarthritis.

Keywords: Osteoarthritis, prevention, bones and joints, awareness

INTRODUCTION

Osteoarthritis (OA) is the most common articular disease of the developed country and cause of chronic disability, and may cause joint failure[1]. OA is one of the most prevalent situations gives rise to disability especially in elderly population. OA is ranked among top 20 diseases in 40-45 years of age group[2]. It is responsible for major burden of disease and is one of the leading causes of global disability. Pain, reduced mobility, side effects from medications and other factors associated with osteoarthritis can lead to health

complications that are not caused by the disease itself and is one of the leading causes of global disability.

Primary prevention strategies are intended to prevent the onset of specific diseases via risk reduction, by altering behaviours or exposures that can lead to disease, or by enhancing resistance to the effects of exposure to a disease agent. Preventing knee injury and obesity during adolescence are examples of strategies that are relevant to knee OA[3]. Secondary prevention includes the detection and treatment of risk factors for progression in individuals who are already at risk. Examples relevant to knee OA include the detection and monitoring of weight gain and impairments in proprioceptive acuity, dynamic joint stability and muscle function, and subsequent intervention with weight management andtargeted exercise therapy in those who already have sustained a knee injury[3].

AIM: To assess the knowledge of preventive measure of OA among urban population.

OBJECTIVES: To assess knowledge about preventives measures of OA with the help of self-made questionnaire.

MATERIALS & METHODS
Study type – cross sectional study
Study design – questionnaire based
Sampling method – random
Sample size – 200
Sampling population- urban population, residents of Pune
Target population-above 25 years of age group
Inclusion criteria-
- 25-50 years
- both genders,
- individuals who can understand English

Exclusion criteria-
- Below 25 years
- Do not give consent
- Osteoarthritis

Method: The study is undertaken to assess knowledge about preventives measures of OA with the help of self-made questionnaire in urban population of Pune, approved by ethical committee. The study was commenced with a sample size of 200 among urban residents of Pune. The questionnaire was circulated via google form through mails and other social media platforms and data analysis was done.

Procedure:
1. Ethical clearance was taken from Intuitional ethical committee of Tilak Maharashtra Vidyapeeth College of Physiotherapy.
2. Questionnaire was prepared and circulated between few experts and physiotherapists.
3. Few modifications were done. A final questionnaire was made.
4. The aim and objective were explained to participants and participants giving written consent were included in study.
5. Participants willing to participate in the study were included.
6. A self-made questionnaire was circulated via google forms through emails, and social media platforms.
7. The participants were asked to select an appropriate option from the questionnaire.
8. The data was collected and analyzed and appropriate results were found out.

RESULT
The primary outcome measure of this study was to assess the knowledge about preventive measures of OA where they have good knowledge about OA.

Table 1: showing awareness of OA

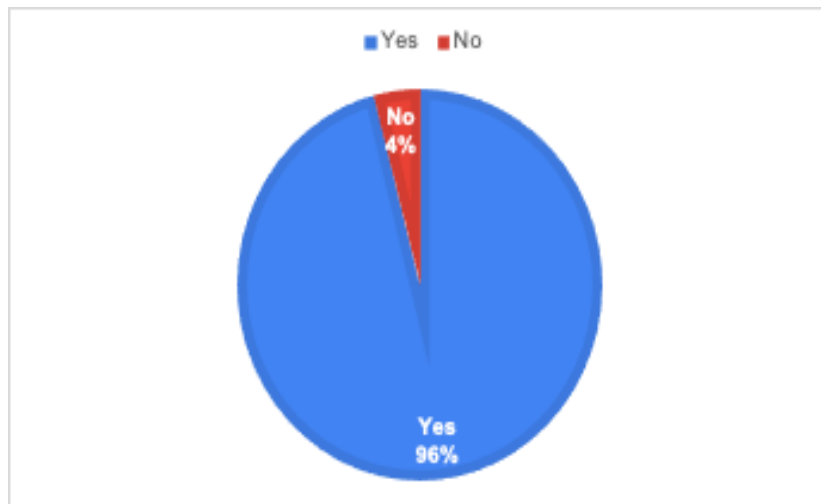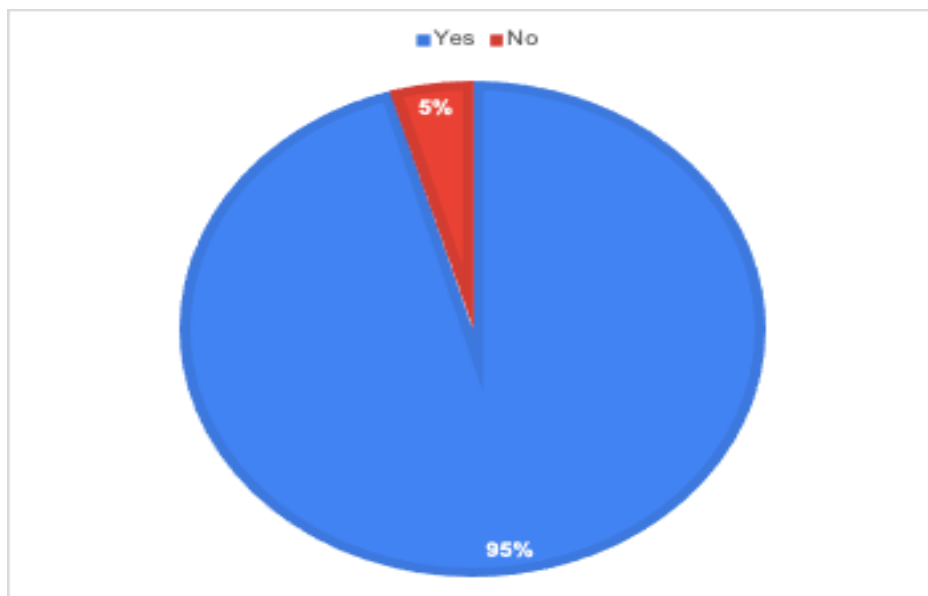| Basis	Frequency	Percent (%)
Yes	191	95.5%
No	9	4.5%
Total	200	100%

Figure 1: Pie chart depicting the awareness about osteoarthritis.

Interpretation: The above data reflects the awareness about osteoarthritis, in which 96 % subjects are aware and 4 % subjects are not aware.

Table 2: showing causes of OA

Awareness	Frequency	Percent
Yes	192	96%
No	8	4%
Total	200	100%

Figure 2: Pie chart depicting the awareness about the causes of osteoarthritis.

Interpretation: The above data reflects the awareness about the causes of osteoarthritis in which 95.5% are aware and 5% are not aware.

Table 3: showing awareness of alternative treatment for OA

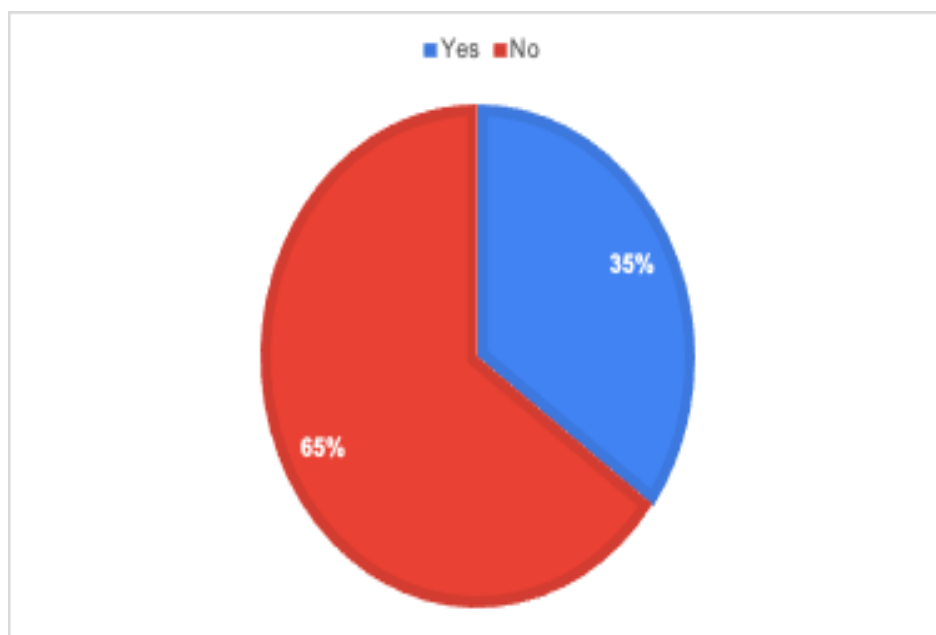| Basis	Frequency	Percent (%)
Yes	70	35%
No	130	65%
Total	200	100

Figure 3: Pie chart representing subject's awareness about the alternative treatment for OA

"Interpretation: The above data reflects the awareness about the alternate treatment for OA in which 35% are aware & 65% are not aware"

DISCUSSION

The study was design to assess the awareness of preventive measures of Osteoarthritis among urban population of Pune between age group of 25-50 years using self-made questionnaire. A total of 200 urban residents of Pune participated in the study. Out of which 48% females and 52% males participated.

The sampled population that is 96% population is aware about the term osteoarthritis. The most common cause subjects think is excessive knee activity and the least cause is age. Excessive running, jumping, kneeling, stair climbing, bike riding, jumping requires knees to bend repeatedly put too much strain on the joints can lead to knee pain or arthritis flare up. As you age, joint movement becomes stiffer and less flexible because of lubricating fluid inside your joint decreases and the cartilage becomes thinner. As per article by Shital Wakale, Xiaoxin Wu, Yogita Sonar, 2023 study on [How are aging and osteoarthritis related?] concluded The prevalence of OA is increasing with age. Aging affects the musculoskeletal system at a molecular and functional level. The regenerative potential of bone and cartilage is affected by cell renewal and matrix alterations.[4] The most common sign and symptoms subject is aware about is pain and least is deformity and joint enlargement.

According to table 3, 35% are aware about alternative treatment for OA while maximum population is not aware. As per article by Rouzi Shengelia 2012, [Complementary Therapies for Osteoarthritis: Are They Effective?] Available evidence indicates that Tai chi, acupuncture, yoga, and massage therapy are safe for use by individuals with OA. Positive short-term (6 months or less) effects in the form of reduced pain and improved self-reported physical functioning were found for all 4 treatments.[5]

The only aspect of knowledge that was defective is regarding the environmental factors and alternative treatment for OA. The aim is to promote bone health, prevent osteoarthritis, and improve the economic implications of osteoarthritis, educational and awareness programs should be established targeting the whole population.

CONCLUSION

There is lack of awareness regarding, signs and symptoms like crepitus, deformity,

tenderness, joint enlargement, and risk factors, including age, trauma, family history and also the importance of posture correction and environmental awareness.

Most of the population are not aware of surgical and conventional treatment for osteoarthritis.

Limitation:
- While considering this study, diagnosed Osteoarthritis population was not taken.
- Local language can also be considered.
- As the questionnaire has to be filled individually by the residents of Pune; intentionally or unintentionally they might not have been frank about the use, duration and content used on smartphones.

Future scope:
- While considering future research regarding this subject, BMI, and other co-morbidities can beconsidered.
- A larger number of Sample size can be considered for appropriate results of the research.
- A comparison can be done to check the prevalence of knee pain between different ages and differentgenders.
- Awareness about preventive measures of Osteoarthritis can be observed in rural and urban population.
- Study can be compared with tally assessment and physical assessment.

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

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