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KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS KNEE OSTEOARTHRITIS AMONG ATHLETES IN RIYADH

Fahad Khalid Alotaibi[1], Sulaiman Alshammari[2,3], Abdulrahman Abdulaziz Aldhubib[1], Faisal Omar Bazuhair[1], Abdulrahman Awad Alqahtani[1], Abdulmalek Ibrahim Alnujid[1], Ahmad Abdulallah Almaliki[1]

[1] College of Medicine, King Saud University, Riyadh, Saudi Arabia
[2] Department of Family Medicine, King Khalid University Hospital
[3] College of Medicine, King Saud University, Riyadh, Saudi Arabia

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Abstract :

Background

Knee Osteoarthritis is a common chronic problem; it is currently the fourth leading cause of disability worldwide, loss of work and joint surgery. Increased risk of osteoarthritis has been found among active athletes in various kinds of sports. The occurrence of knee osteoarthritis between athletes is greater than in the non-athletic individuals. Methods: A cross-sectional study was conducted through a self-administered questionnaire on athlete for both Male and Female in Gyms in Riyadh, Saudi Arabia in all age's group. Data obtained was analysed using SPSS Software. Results: Out of 314 participants, 78 (24.8%) never knew about knee osteoarthritis, the study found that 254 (80.9%) never been educated about KOA, even though 119 (37.9%) have a family history of KOA, about 18% of our participants knows the sign and the symptoms of KOA while 24% know the complications on the other hand about 5% only know about the prevention methods. Most of the respondents had had incorrectly inferred about all the possible treatments and preventive KOH measures p<0.001

Conclusion:

In conclusion, this study identified for the first time that more than eighty percent of athletes never been educated about knee OA. Twenty-four percent of them did not have any knowledge about knee OA. Only Five percent of people who knows about the prevention methods Demographic background characteristics may influence their gained knowledge (family history of knee OA). So, A Focused education on knee OA may enhance people's gained knowledge on Knee OA.

Corresponding author:
Fahad Khalid Alotaibi,
E-mail: fKMO2013@gmail.com
Telephone number: +966 50 858 2208
Address: College of Medicine, King Saud University, Riyadh, Saudi Arabia

QR code

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INTRODUCTION:

Knee Osteoarthritis is a common chronic problem; it is currently the fourth leading cause of disability worldwide, loss of work and joint surgery.

Osteoarthritis is the most frequent form of arthritis in the knee. It is a degenerative type of arthritis that arises mostly in older individuals but could rise in younger people **(1) (2)**. The osteoarthritis occurs due to the cartilage in the knee joint gradually wears away, becoming worn and irregular, and the protective space between the bones decreases **(3)(4)(5)**. Osteoarthritis develops slowly and the pain it causes worsens over time.

Increased risk of osteoarthritis has been found among active athletes in various kinds of sports **(6)**. Sports that subject joint to repetitive high levels of impact and torsional loading increase the risk of articular cartilage degeneration and the resulting clinical syndrome of osteoarthritis **(3)(7).** The occurrence of knee osteoarthritis between athletes is greater than in the non-athletic individuals **(5)**.
The symptoms of osteoarthritis are joint pain, limitation of range of motion and joint stiffness. The diagnosis of osteoarthritis can be made by the symptoms and the radiological discovery and they are narrowing joint space, osteophyte formation and subchondral sclerosis **(4)(2).**

Other factors such as Extreme musculoskeletal loading during sports, high body mass index, prior knee injury, female gender, and muscle weakness is also a well-known risk **(5).** The elite athlete with a knee injury has a high prevalence of developing knee osteoarthritis **(8**). Cartilage injuries are often witnessed in young and middle-aged athletes. Lessening certain risk factors can decrease the occurrence of knee osteoarthritis. The inhibition of knee injury, especially anterior cruciate ligament and meniscus injury in sports, is significant in the development of knee osteoarthritis **(5)**.
In this study, we emphasized on the competitors in the gym to evaluate their awareness on knee osteoarthritis and also shed light on the mechanical probability in developing osteoarthritis if these athletes train in an unproductive and unsuitable way that may trigger more strain on the joints.

MATERIALS AND METHODS:

Study design and population:
It is a cross sectional analytic study applied among athlete for both Male and Female in Gyms in Riyadh, Saudi Arabia in all ages group. The study was started in May to August 2018.The study is conducted in Gyms after agreement from the companies, the selection of the gyms was by random include all regions of Riyadh North, south, East, west and middle of Riyadh. The investigators Create the Questionnaire which had been revised and accepted by Expert investigator. The investigators used Convenience Technique for participant sampling and the questionnaire was self-administrator and collected by data collector. Total of 320 complete filling the questionnaire.

Ethics Statements:
The Institutional Review Board at King Saud University (College of Medicine) approved the study protocol. Informed consent was obtained before the start of the study and participation in the study was voluntary. No rewards upon participate in the research

Study instrument:
A Hardcopy questionnaire similar to study applied in Malaysia, we had agreement from the primary author for use and modify it. There were demographic variables in the questionnaire which was include Gender, Age, Study level, Nationality, resident, weight and height, question for duration being participant in gym, question for frequency, question about If having lecture about osteoarthritis (OA) and lastly if there is family History of Osteoarthritis. Then there are 6 parts in the questionnaire, First Five parts are direct question and answered by Yes or No or I do not know. which are First about Risk factors for OA has 15 items, then Symptoms and Signs of OA has 9 items, then the complication of OA has 12 items, then treatment of OA 4 items, and lastly prophylaxis strategy to avoid OA 5 items. Each item is Confirmed and validated with its References extracted from previous studies for Risk factors, Symptoms and signs, complications, treatment and prophylaxis to OA.
The questions written as (1) which one of the following increase risks of OA (2) which one of the following is symptom or sign for OA (3) which one of the following is a complication for OA (4) which of the following is consider treatment for OA (5) which of the following strategy is prophylactic to OA?

Lastly. The sixth part is multiple choice about the source of OA information.

Statistical analysis:
The Data analysis was conducted using SPSS 21. Yes, answers coded as 1, No and I do not know coded as 0. Maximum score is 45 which represent more or better knowledge about AO, minimum answers is 0 which represent less knowledge

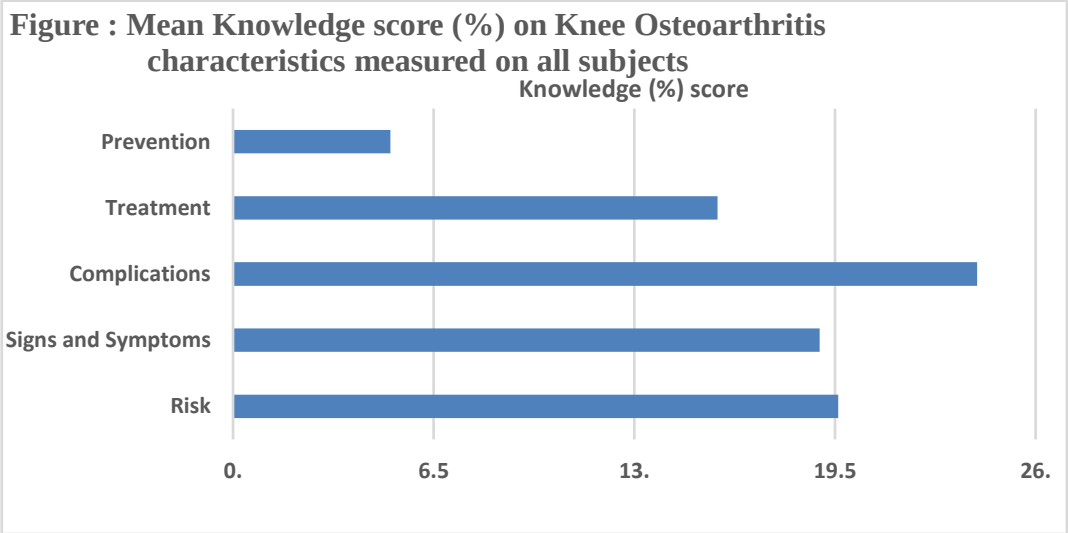
RESULTS:

In general, our study measures the knowledge, preventive methods and the complications toward KOA which after conducting the study it became

very clear to us that that population at risk (athletes) know little about. Out of 314 participants, 78 (24.8%) never knew about knee osteoarthritis, the study found that 254 (80.9%) never been educated about KOA, even though 119 (37.9%) have a family history of KOA, about 18% of our participants knows the sign and the symptoms of KOA while 24% know the complications on the other hand about 5% only know about the prevention methods. Most of the respondents had had incorrectly inferred about all the possible treatments and preventive KOH measures $p<0.001$.

Table 1: Descriptive statistics for sport club attendants' knowledge (%) on Knee Osteoarthritis (KOA).

	Mean	SD
Knowledge on KOA S&S (0-100 points)	19.0	19.5
Knowledge on KOA risk (0-100 points)	19.6	13.2
Knowledge on KOA Complications (0-100 points)	24.1	16.4
Knowledge on KOA treatment (0-100 points)	15.8	21.4
Knowledge on KOA prevention (0-100 points)	5.2	11.3
Overall Knowledge on KOA score (0-100 points)	18.7	11.2



DISCUSSION:

knee osteoarthritis (OA) is common chronic problem, it affects both males and females. it is currently the fourth leading cause of disability worldwide. As it makes the person unable to move easily and this is affecting social and economic status as people become more inactive and less productive due to pain and other symptoms, leading them to visit the doctors to treat this issue either medically or surgically which also costing a lot of money.

The disease aetiology is multifactorial that includes generalized constitutional (female gender, obesity. and hormonal (postmenopausal state) factors and local adverse mechanical insults to the knee joint. knowing the risk factor is valuable to avoid it and prevent the OA as much as possible.

In this study, we focused on the athletes in the gym to assess their knowledge about knee OA there is no study done in this population as they are at higher mechanical risk to develop OA if they train in unproductive and inappropriate way **(9)**.

So, in our research we tried to cover the city we included all regions of Riyadh North, south, East, west and middle of Riyadh.

In our study we found that about 24.8% never knew about knee osteoarthritis

And (80.9%) never been educated about KOA which is considered a huge percent for a population who

supposed to know as they are looking for maintaining their physical health 18% of our participants knows the sign and the symptoms of KOA and this defect who lead to late diagnosis and delayed the management until complication happened that even 24% of them were able to recognize these complications And in compare to other study Overall Knowledge in our population were 18.7 only were in the study done on Railway Workers in Malaysia the overall were 46.4 which was the double and over that as our population is supposed to be more educated in training and more passion about being healthy, we think this is a major defect in our population knowledge (10).

To prevent OA and its complication you need to be educated about it in manner of knowing the sign, symptoms and the causes which all were showing a defect in the knowledge about it. for that we got a 5% only of people who knows about the prevention methods

CONCLUSION:

In conclusion, this study identified for the first time that more than eighty percent of athletes never been educated about knee OA. Twenty-four percent of them did not have any knowledge about knee OA. Only Five percent of people who knows about the prevention methods Demographic background characteristics may influence their gained knowledge (family history of knee OA). So, A Focused education on knee OA may enhance people's gained knowledge on Knee OA

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