

## EVALUATING OA PATIENTS' KNOWLEDGE AND DIETARY HABITS TO UNDERSTAND THEIR DISEASE MANAGEMENT PRACTICES

### BARKAT ALI

Department of Pharmacology, Faculty of Pharmacy, Ziauddin University.

### ZAHIDA MEMON

Department of Pharmacology, Faculty of Health Sciences, Ziauddin University.

### MIRZA TASAWER BAIG\*

Department of Pharmacy Practice, Faculty of Pharmacy, Ziauddin University.

### MUHAMMAD LATIF

Department of Orthopedic, Sindh Govt. Hospital Laiquatabad.

### MARYAM AHMED

Department of Pharmacognosy, Faculty of Pharmacy and Pharmaceutical Sciences, University of Karachi.

### SYED ZIA UL HASNAIN

Department of Pharmacognosy, Faculty of Pharmacy and Pharmaceutical Sciences, University of Karachi.

### Abstract

Osteoarthritis (OA) constitutes a significant public health challenge, imposing substantial burdens on individuals and healthcare systems globally. Characterized by progressive degeneration of articular cartilage, OA manifests as chronic joint pain, functional limitations, and diminished quality of life. The prevalence and impact of OA necessitate increased public awareness and comprehensive management strategies. **Objective:** Employ a qualitative research method involving interviews with osteoarthritis patients at Civil Hospital, Karachi, to gain insights into their dietary practices and related knowledge. **Method:** To investigate dietary practices among osteoarthritis patients, a 4-month cross-sectional study was conducted at Civil Hospital's Orthopedic and OPD. Data were collected from 100 patients using a pre-tested questionnaire administered through convenient sampling. Statistical analysis using SPSS 24.0 involved calculating frequencies and employing chi-square tests to explore potential associations between variables. **Result:** Higher levels of education were found to be positively associated with greater knowledge of dietary practices, which in turn was associated with slower disease progression in osteoarthritis patients. This study identified a significant linkage between educational attainment, patient understanding of dietary recommendations, and the rate of disease advancement in individuals with osteoarthritis. **Conclusion:** This study suggests a potential link between patients' educational level and their knowledge and behavior regarding dietary practices relevant to osteoarthritis. Notably, findings indicate that inadequate knowledge about the disease may contribute to poorer dietary choices and potentially exacerbate joint pain and disease progression. Further research is necessary to establish clearer causal relationships and inform targeted interventions.

**Keywords:** Knowledge, Osteoarthritis, Joint Pain, Attitude, Dietary Practices.

### INTRODUCTION

Osteoarthritis, the most common rheumatic disease, casts a long shadow over millions. As the US population ages, its grip tightens, with projections estimating 75 million Americans afflicted by diagnosed arthritis by 2035. This widespread condition, a leading

cause of disability, wreaks havoc on daily life, yet, to date, no curative or truly effective disease-modifying medications exist to combat its progression. This stark reality underscores the crucial need for further research and innovative approaches to managing OA (Kolasinski, S.L *et al.*, 2020). Although a distinction exists between treating OA as a disease, evidenced radiographically, and treating OA as an illness, manifested through pain, symptoms, and patient-reported experiences, the latter takes precedence in alleviating disability and improving quality of life (Xu, C *et al.*, 2020).

Interventional strategies, heavily emphasizing patient education and lifestyle modifications, serve this purpose by addressing the illness dimension and mitigating its impact on function and daily living (Lo, G.H *et al.*, 2022). Regular exercise isn't just good for your overall health, it's also a powerful tool for managing osteoarthritis (Messier, S.P *et al.*, 2004). By promoting weight loss, reducing joint stress, and keeping cartilage healthy, exercise can significantly improve outcomes for people with OA. Early intervention through physical therapy can further enhance function and quality of life. Similarly, a healthy diet plays a crucial role in managing OA (Drummer, D *et al.*, 2021). By reducing inflammation, slowing cartilage breakdown, and promoting weight loss, a well-balanced diet can help mitigate the progression of the disease. In fact, this connection between food and health dates back to Hippocrates, who recognized the importance of a healthy diet for both physical and emotional well-being. So, remember, both exercise and diet are key players in managing OA and improving your overall health (Fardet, A *et al.*, 2014). The Western diet, with its excess saturated fat and refined carbs, isn't just bad for your waistline; it can worsen osteoarthritis (OA) by fueling inflammation and hindering overall health. While this link is clear, understanding how other dietary patterns impact OA is still evolving. Supplements like glucosamine and chondroitin might offer some benefit, but only with strict preparation and regulation (Zeng, J *et al.*, 2022). Certain nutrients and spices, like vitamins D and K, ginger, and turmeric, also show promise in easing OA symptoms and improving quality of life. Ultimately, the quality of your diet, rather than specific food groups, seems to hold the key.

This resonates with people living with OA, who see diet as crucial for managing their symptoms and prioritize education on what to eat and what to avoid (Messina, O.D *et al.*, 2019). So, remember, while the dietary puzzle in OA isn't fully solved, focusing on overall diet quality and exploring specific nutrients can be powerful tools in your OA management toolbox (Arden, N.K *et al.*, 2016). As the population ages, the burden of osteoarthritis (OA) is only going to grow. By 2050, it's estimated that a staggering 130 million people worldwide will grapple with this debilitating condition, with 40 million completely incapacitated. Pakistan is no exception, with studies showing knee OA affecting close to 30% of urban and 25% of rural populations. So, what sets the stage for OA? Several factors play a role. Family history adds a strong genetic predisposition. As we age, our cartilage naturally weakens, making us more susceptible. Gender also comes into play, with women more likely to experience OA (Nezamoleslami, S *et al.*, 2020). Carrying excess weight puts undue stress on joints, further elevating the risk. Repetitive joint strain, physical injuries, and pre-existing bone or joint malformations add fuel to the fire. Vitamin D deficiency, smoking, and even activities like climbing stairs regularly can contribute.

And let's not forget sarcopenia, the age-related decline in muscle mass, which leaves joints even more vulnerable (Ashfaq, M *et al.*, 2020). Clearly, OA is a complex issue with a multitude of contributing factors. Understanding these risk factors is crucial, not just for early detection and prevention, but also for developing effective management strategies to help individuals lead active, fulfilling lives despite OA.

While understanding of OA risk factors is growing, there's still room for exploration. Further studies are needed to solidify the link between dietary choices, smoking, and sarcopenia with OA development. Early diagnosis is key, and here's how it's done: History taking: Identifying telltale signs like morning stiffness that eases within 30 minutes is a crucial first step. Physical examination: Doctor will assess joint movements and range of motion to pinpoint affected areas. Laboratory tests: Tools like bone mineral density tests can provide valuable insights into joint health (Max, M *et al.*, 2021). Research is shedding light on the multifaceted impact of environment and exercise on osteoarthritis (OA). One study, following 1802 older adults for three years, revealed environmental factors significantly impacted mobility limitations. Surprisingly, the study suggests barriers like hills and inaccessible buildings, rather than dietary factors like berries, may play a bigger role in restricting movement (Heidht, C *et al.*, 2022). Meanwhile, a 2016 study explored the link between exercise and mental well-being in OA patients. Analyzing data from 262 individuals, researchers found that those with higher expectations for exercise outcomes experienced less depression and greater self-efficacy. This suggests that a positive mindset towards exercise can have a powerful impact on mental well-being in people with OA. These studies highlight the importance of considering both environmental and psychological factors alongside physical interventions when managing OA. By addressing environmental barriers and fostering a positive outlook towards exercise, we can potentially improve mobility and mental well-being in individuals living with this condition. The research suggests that education, anxiety, race, and social factors weren't directly associated with outcome expectations in osteoarthritis patients. However, the broader aim was to understand how knowledge, attitude, dietary habits, perceptions, and beliefs around OA impact patients. By identifying factors like lack of knowledge, low awareness, and unhealthy dietary habits, the researchers hope to raise awareness and develop interventions to reduce the burden of OA. Addressing these issues through education and support could potentially prevent an increase in OA patients and improve their overall well-being (Younis, I *et al.*, 2008).

## METHOD

To understand how osteoarthritis (OA) patients manage their condition, researchers conducted a four-month cross-sectional study at the orthopedic department of Civil Hospital. They surveyed 100 adult patients of both genders diagnosed with OA. Following ethical approval from Ziauddin University, data was collected via a pre-tested questionnaire using a non-probability sampling technique. Only patients with OA and joint pain who were cooperative participated. The gathered information was analyzed using SPSS version 24.0 to gauge their attitudes, knowledge, awareness, and practices related

to OA. This study aimed to shed light on how OA patients perceive and manage their condition, potentially informing future educational and support interventions.

Table #1

Table 1: Demographic data of patients in the current study

Demographics	Frequency
<b>Education Level</b>	
Illiterate	24
Matric	33
Inter	22
Graduation and Master	21
<b>Total</b>	<b>100</b>
<b>Occupation</b>	
Office worker	31
Housewives	40
Labor	18
Businessperson	11
<b>Total</b>	<b>100</b>
<b>Socio-Economic Status</b>	
Lower class	14
Lower middle	36
Middle class	25
Upper middle	19
Upper class	6
<b>Total</b>	<b>100</b>
<b>Residential area</b>	
Urban	70
Rural	30
<b>Total</b>	<b>100</b>

Table #2

Table 2: Association of osteoarthritis patient's education with the level of knowledge regarding the consumption of low caloric diet and caffeine intake

Education Level	A low caloric diet can lower OA chances	
	Yes	No
Illiterate	3	21
Elementary-Matric	7	27
Inter	4	18
Graduation	16	5
Education Level	Caffeine intake increases OA chances	
	Yes	No
Illiterate	1	23
Elementary-Matric	3	30
Inter	3	20
Graduation	15	6

**Table #3**

**Table 3: Association of osteoarthritis patient's education with the level of knowledge with carbonated drinks intake and weight reduction.**

Education Level	Carbonated drinks increase OA chances.		P Value
	Yes	No	
Illiterate	4	20	0.000
Elementary-Matric	3	30	
Inter	8	15	
Graduation	15	6	
Education Level	Losing weight can reduce the severity of OA		
	Yes	No	0.000
Illiterate	4	20	
Elementary-Matric	6	27	
Inter	10	12	
Graduation	14	7	

**Table # 4**

**Table 4: Association of osteoarthritis patients' education with the presence of myths and misconceptions related to bone health**

Education Level	Presences of myths and misconceptions		P-Value
	Yes	No	
Illiterate	20	5	0.000
Elementary-Matric	28	8	
Inter	10	7	
Graduation	8	14	

## RESULT

The average age of participants was 60 years, with a slight female majority (67% female, 33% male). Education levels varied, with 33% illiterate, 33% having completed elementary or matriculation, and 31% being office workers. Interestingly, 70% resided in urban areas, while 30% lived in rural areas. The study revealed gaps in awareness regarding diet and lifestyle factors influencing OA. Only 20% of patients were aware that a low-calorie diet can help prevent OA, and 15% knew that excessive caffeine intake can trigger joint pain. Education level was significantly associated with this knowledge (p-value < 0.00). Similarly, only 29% were aware that carbonated drinks can increase OA risk, and 33% knew that weight loss can reduce OA severity. Again, education level showed a significant association with both these aspects (p-value = 0.000). Table 4 highlights the link between education level and misconceptions related to bone health in OA patients (p-value < 0.05). Unfortunately, the specific myths and misconceptions are not mentioned in the provided text. Including these details would offer valuable insights into the areas where educational interventions are most needed.

## DISCUSSION

This study sheds light on several crucial factors influencing osteoarthritis (OA) in patients. Age: OA prevalence was significantly higher in patients over 50, with nearly 58% diagnosed with the condition. This suggests age is a major risk factor for OA. Weight: BMI played a significant role in OA pain. Over 61% of patients were overweight or obese, with 35% overweight and 26% obese. This underlines the importance of weight management in OA management (Losina E *et al.*, 2013). Social Class: Lower socioeconomic status (45% lower class and lower-middle class) was linked to increased OA pain. This could be due to factors like heavy manual work and limited access to healthcare and information. Urban vs. Rural: 75% of patients were from urban areas, highlighting the potential impact of environmental and lifestyle factors in OA development (Cleveland RJ *et al.*, 2013). Education: Lower education levels were associated with increased OA pain, suggesting a lack of knowledge about managing the condition and avoiding activities that worsen joint pain. This study highlights the importance of considering not just age and weight, but also socioeconomic factors, education levels, and knowledge about OA in managing the disease effectively. By addressing these factors through targeted interventions and education programs, we can potentially reduce OA pain and improve quality of life for patients (Perruccio AV *et al.*, 2016).

## CONCLUSION

This study shows a clear picture of the complex web of factors contributing to osteoarthritis (OA). While age and weight remain prominent, several other influences emerge as significant players. A major concern is the widespread lack of understanding about OA among patients. This gap in information fuels inappropriate practices and worsens symptoms. Poor dietary choices, particularly obesity and low-fiber intake, are closely linked to OA severity. Interestingly, the study suggests a potential link between high-protein anti-inflammatory diets and reduced rheumatoid arthritis (RA) activity, a condition closely related to OA. However, further research is needed to solidify this connection. Lower income and socioeconomic status are unfortunately linked to increased OA prevalence and pain. This association likely stems from factors like limited access to healthcare and information, as well as potentially demanding manual work. While OA affects both genders, the study suggests a slight predominance in women. Additionally, age remains a significant risk factor, with increased prevalence after 50. The study highlights the impact of negative attitudes and misconceptions surrounding OA. These can lead to inappropriate self-management practices, further exacerbating symptoms. This research emphasizes the need for a holistic approach to OA management. By addressing not only physical factors like weight and age but also socioeconomic disadvantages, knowledge gaps, and false beliefs, we can empower individuals to take charge of their OA and potentially improve their quality of life. The study opens doors for future research to delve deeper into the specific relationship between diet and OA, explore targeted interventions for vulnerable populations, and address misconceptions and knowledge gaps through effective education and awareness programs (Elahi, N *et al.*, 2022).



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