

important physiological processes including fluid balance, nutrient transport, immune function, wound healing and muscle function which are essential for a smoother recovery process.

LITERATURE

1. Zdolsek, M., Hahn, R. G., Sjöberg, F., & Zdolsek, J. H. (2020). Plasma volume expansion and capillary leakage of 20% albumin in burned patients and volunteers. *Critical care (London, England)*, 24(1), 191. <https://doi.org/10.1186/s13054-020-02855-0>
2. Pérez-Guisado J, de Haro-Padilla JM, Rioja LF, Derosier LC, de la Torre JI. Serum albumin levels in burn people are associated to the total body surface burned and the length of hospital stay but not to the initiation of the oral/enteral nutrition. *Int J Burns Trauma*. 2013;3(3):159-163. Published 2013 Jul 8.
3. Soedjana H, Bowo SA, Putri NM, Davita TR. Serum albumin level difference in burn injury after tangential excision: A prospective cohort study. *Ann Med Surg (Lond)*. 2020;52:1-4. Published 2020 Feb 26. doi:10.1016/j.amsu.2020.02.007
4. Greenhalgh, David G. MD; Housinger, Terry A. MD; Kagan, Richard J. MD; Rieman, Mary RN; James, Laura MS; Novak, Sheri RN; Farmer, Lynn RN; Warden, Glenn D. MD. Maintenance of Serum Albumin Levels in Pediatric Burn Patients: A Prospective, Randomized Trial. *The Journal of Trauma: Injury, Infection, and Critical Care* 39(1):p 67-74, July 1995.

УДК 616.72-002-036.2(540)

Yashaswini Salvi, Ankit Gupta

Scientific supervisor: department assistant, P.Y. Ihnatsenka

*Educational Establishment
“Gomel State Medical University”
Gomel, Republic of Belarus*

SURVEY OF PREVALENCE AND BURDEN OF OSTEOARTHRITIS IN INDIA

Introduction

Osteoarthritis (OA) is a prevalent chronic degenerative joint disorder that eloquently impacts the quality of life of individuals worldwide [1]. It is the most common rheumatic disease and the predominant cause of disability covering an extensive range (worldwide) and comes in 4th most common cause of disability worldwide. In India, the burden OA is imperishable, affecting a notable portion of the population [2]. It is characterized by the progressive degeneration of articular (joint) cartilage and underlying bone. The burden of Osteoarthritis is expected to increase with the senile or aging population and have a great prevalence of risk factors such as obesity and passive lifestyle [3]. According to the other studies and the analytical results of this research paper we can say that OA also affects women more than men and its prevalence increases with age.

In the Indian ambience, the impact of OA is conspicuously significant due to the big population size and demographic transition [4].

Goals

To know about the factors contributing to the burden of osteoarthritis in India.

- Socioeconomic Implications of Osteoarthritis in India;
- Epidemiology of Osteoarthritis in India;
- To know the prevalence of Osteoarthritis on age and gender.

Material and methods of research

As a increasing prevalence of Osteoarthritis in India. A cross-sectional survey was conducted among the cases of patients in two different Orthopaedic hospitals of India. So, instead of collecting data using google form platform as a survey I used community based survey.

Total 33 patient's cases were taken from the hospitals of India. Around 18 cases were taken from Hospital 1 and 15 cases from Hospital 2, to get a more precise and an accurate data for this research. A detailed study is done from it to do a proper analysis for this research paper.

For the period from 2019 till now according to hospital's data, the cases of OA have increased over the time and it is more commonly associated with older age groups. The av. age of patients were 57 ± 12 years (45–69 years).

The result of the research and their discussion

1. Prevalence of Osteoarthritis on age and gender.

According to the survey conducted, the statistical data processing was carried out. From which analysis is done and the analytical information is obtained. According to which the risk of developing osteoarthritis on the basis of gender and age were seen.

Table 1 – Prevalence of OA on gender

OA status	Women	Men
Hospital 1	11	7
Hospital 2	9	6

In Table 1, most often, in 60.6% of the cases of osteoarthritis were diagnosed in women and 39.4% in men. Women are more likely to evolve OA, explicitly in weight-bearing joints such as the knees and hips, due to factors like childbirth, hormonal changes (e.g., menopause), and a higher foremost of obesity in females in some populations [1]. While females typically have a higher prevalence of OA, males in India are also influenced by this condition, especially as they starts to age.

Males may be more prone to OA in certain joints like the hands and spine, which can occur by occupational factors, sports-related injuries, and genetic predisposition [1].

Age is a significant factor in the development and progression of osteoarthritis (OA).

Table 2 – Prevalence of OA on age

OA status	45–50 yrs.	51–55 yrs.	56–60 yrs.	61–65 yrs.	66–70 yrs.	70+ yrs.
Hospital 1	2	1	4	6	3	2
Hospital 2	1	2	3	4	1	4

According to the information given in Table 2, while OA can affect individuals of all ages, it is mainly associated with older age groups people. The prevalence of OA increases with age, and the risk of developing OA rises substantially after the age of 45–50 years [1, 3, 4]. In the orthopaedic hospitals, patients with OA often present in the last nominal decade of life, with the predominance of cases seen in individuals above the age of 60 [1, 3]. This is because OA is a degenerative condition that aggravates over time as joint cartilage wears down, formation of osteophytes, leading to pain, stiffness, and functional disorders.

2. The factors contributing to the burden of osteoarthritis in India:

The epidemiology of osteoarthritis in India exhibits variations based on factors such as age, gender, geographical location, and lifestyle [3]. The knee joint is commonly affected by OA, followed by the hip and hand joint [3, 4]. India's senile natives is set to increase remarkably from around 9.7% in 2021 to around 19% in 2050. In that also preponderance of the elderly women (>60%) and men (>40%) are economically dependent making them vulnerable [2, 4].

In India, (Given in figure 1).

Rajasthan have the highest prevalence or we can say the burden of osteoarthritis is more as compared to other states) [2]. Goa and Kerala also comes in top of having highest number or burden of osteoarthritis.

While Bihar is the state or region having less prevalence of Osteoarthritis.

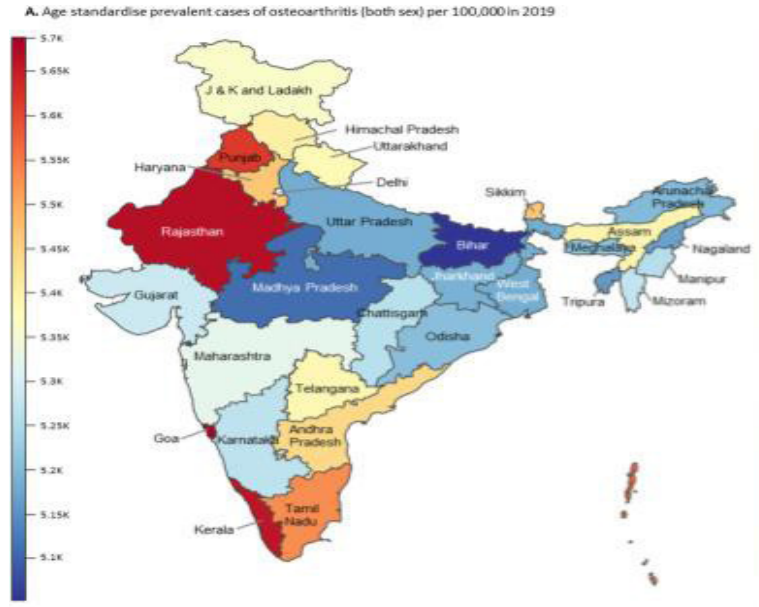


Figure 1 – Prevalence of OA according to states of India (areas)

India boasts a rich cultural heritage, replete with time-honoured practices, diverse professions, and enduring customs. However, many of these traditions involve repetitive movements or sustained postures that can increase the likelihood of developing osteoarthritis.

1. Occupations involving heavy physical labour, common practices like:

- sitting cross-legged;
- squatting and
- the widespread use of traditional squat toilets are notable risk factors.

2. In addition, in rural communities, walking barefoot is a customary practice that may heighten the risk of osteoarthritis [4].

3. The financial implications of osteoarthritis are substantial.

The expenses related to treatment and healthcare services are significant, leading to an socio-economic strain due to the lost productivity of those afflicted and their caregivers. Moreover, disparities in healthcare availability and varying levels of osteoarthritis awareness contribute to its uneven impact and challenge its management throughout India’s population [1, 2, 4].

Conclusion

Osteoarthritis indeed presents a multifaceted challenge that affects not only the health and well-being of individuals but also has wider socioeconomic repercussions. The research underscores that Osteoarthritis is prevalent in India, with traditional practices and the socio-economic factors contributing to its incidence. Healthcare disparities further complicate the management of OA. The varying levels of healthcare access and awareness across different regions and populations in India indicate that a one-size-fits-all approach is not adequate.

LITERATURE

1. Epidemiology of knee osteoarthritis in India and related factors-Chandra Prakash Pal, Pulkesh Singh.
2. Burden of osteoarthritis in India and its states, 1990-2019: findings from the Global Burden of disease study 2019- A Singh 1, S Das 2, A Chopra.
3. Prevalence of the Knee Osteoarthritis Risk Factors Among Young Adult Population – An Observational Study Rucha N. Acharya, Hemal M. Patel.
4. Prevalence of knee osteoarthritis, its determinants, and impact on the quality of life in elderly persons in rural Ballabgarh, Haryana- Jaiswal, Abhishek1,; Goswami, Kiran1; Haldar, Partha1; Salve, Harshal Ramesh1; Singh, U.