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OSTEOARTHRITIS FOR LONGER-TERM CONDITION

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Introduction

The Long-term conditions (LTCs) are among the most significant issues in global healthcare systems. Studies have also highlighted how these conditions can have negative outcomes on the everyday lives of individuals living with this (Holland *et al.*, 2024). In the United Kingdom, the number of individuals living with these conditions is expected to increase in the coming years, especially due to the gaining population and lifestyle factors. Research by Dismore *et al.* (2023) has showcased that there are nearly 12 million people aged 65 and over projected to become 26% of the total population by 2066, supporting previous analysis. Among these LTCs, Osteoarthritis (OA) is often related to ageing and is a prevalent condition in the UK and global context. This leads to often chronic conditions with structural and functional changes in joints that can lead to persistent pain, reduced quality of life, and disability (Tavares *et al.*, 2020).

Percentage of UK Population with Long-Term Conditions

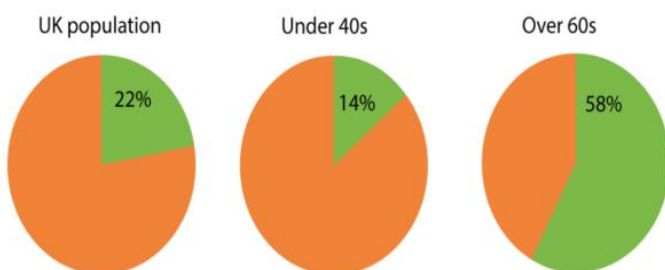


Figure 1: People living with LTCs in the UK by age group

(Source: Gosforthjesmondhealth, 2022)

This study aims to analyze how Osteoarthritis is a long-term health condition and analyse its prevalence, risk factors and impact on diverse factors. The evidence-based treatments are also identified in the study to provide better recommendations for the enhancement of person-focused care and self-management approaches. Considering it to be a long-term condition, focus needs to be given on its prevention and control, which can come with reducing overuse of joints and promoting healthy lifestyles.

Analysis of Osteoarthritis

Osteoarthritis is a chronic degenerative joint-focused disorder in which there is breaking down of cartilage, changes in bone structures and inflammation of surrounding tissues (Puntillo *et al.*, 2024). This issue affects the complete joint, especially the ligaments and bone, which leads to situations like high pain, reduced motion, swelling, and stiffness (Clevelandclinic, 2023). This disorder mostly focuses on the joints of the knees, hips, hands, and spine.

Osteoarthritis is among the most common types of musculoskeletal conditions (MSK) across the globe. Based on data by the World health Organization, in 2019, the number of people living with this disorder grew to 528 million people across the globe, which is a major increase of 113% from 1990 (WHO, 2023). Furthermore, nearly 70% of people with Osteoarthritis are older than 55 years, showing a relation

between the condition and ageing populations. Population-based analyses are showing that OA is becoming more prevalent among older people who, especially impacting their knees and hips. The UK population is also highly impacted via these conditions as it can be identified that more than 10 million people are living with Osteoarthritis (Carrothersorthopaedics, 2023). It is estimated that nearly 5.4 million people have knee OA and 3.2 million people have hip OA in the region (openaccessgovernment, 2023). As individuals age, repeated levels of joint use, minor injuries, and long-term movement stress can contribute in joint damage. The potential of developing OA is kneer in later life, and older adults face multiple joint OAs. This data shows the rise of OA among UK individuals.

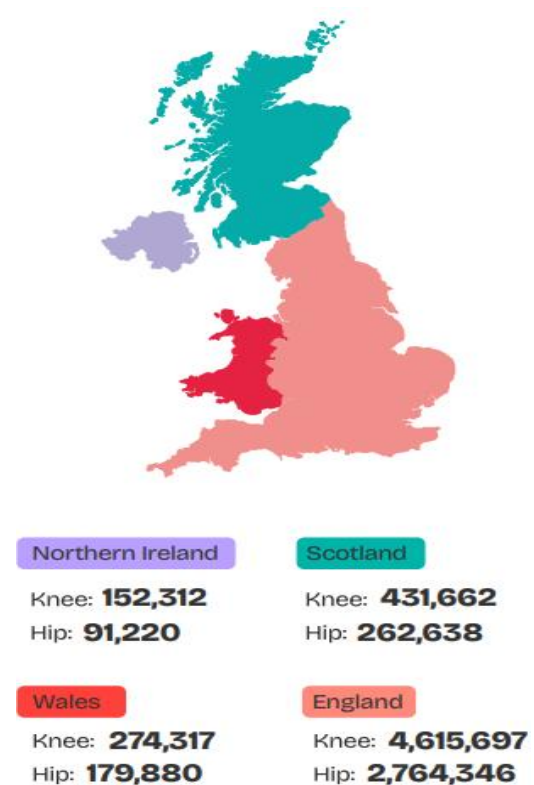


Figure 2: Number of people with hip and knee OA in the UK

(Source: arthritis-ukorg, 2025)

The OA development is influenced through the combination of biological, mechanical, and environmental aspects. Age, is the most crucial factor as a risk, as joint tissue often loses their capability for repair and maintain cartilage, losing integrity over time (Coryell *et al.*, 2021). Yet, there can be development of OA in case of other risk factors, among the younger groups. In this scenario, obesity can be considered as a major contributing force in this OA as it develops more pressure on weight-bearing joints, especially the knees (Khan *et al.*, 2020). The lower graded systematic inflammation, through obesity, can also increase joint issues. There can be risks related to joint injury or trauma from

previous contexts. Werner *et al.* (2022) have also revealed through the analysis that previous injuries can hinder joint mechanics and increase the potential for developing OA later in life. Furthermore, genetic factors also contribute to OA development as they can influence cartilage metabolism and joint structures (Rice *et al.*, 2020).

Osteoarthritis is a progressive disease that occurs as the protective cartilage that cushions the end of bones starts to degenerate. Cartilage is important in enabling movements of the joints without pain and in a smooth manner. As this cartilage starts to degenerate, bones can slide past each other causing inflammation, stiffness and pain. As time passes, more alterations can take place in the joint such as bone spurs, lengthening of joint capsule, and atrophy of muscles (Werner *et al.*, 2022). Though Osteoarthritis has been linked with ageing, it has now been broadly accepted that the disease mechanism is not as simple. The condition can be progressed by mechanical stress, metabolic, and the inflammatory responses. Evidence has indicated that joint stress, more so when exposed to weight bearing joints like knees and hips, can make cartilage degeneration fast. This is the reason why some professions and physical exercises are related to increased cases of Osteoarthritis. Moreover, such lifestyle habits as lack of physical activity, unhealthy eating, and obesity may lead to

the development of the disease. Overweight also causes a load on the joints, especially lower limbs, which can speed up degradation in cartilage (Di Martino *et al.*, 2024). As an illustration, overweight status may add a burden to knee joints during walking or stair climbing, and thus cause quicker erosion of the joint structures. Consequently, lifestyle change is important in prevention and management of Osteoarthritis.

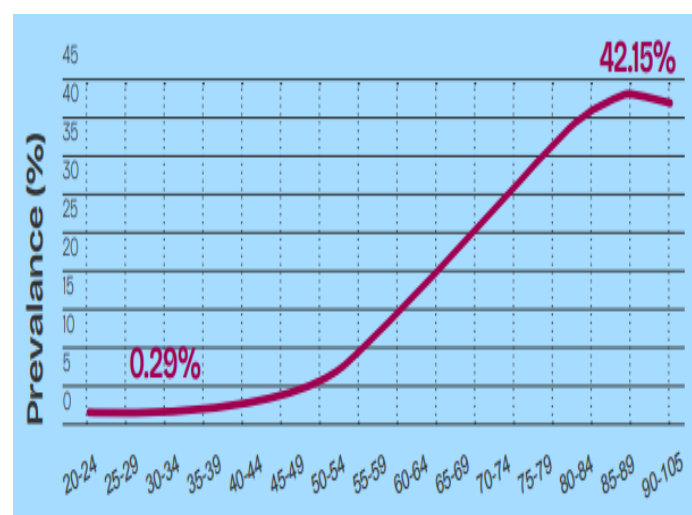


Figure 3: Relation of OA with age among the UK individuals

(Source: arthritis-uk.org, 2025)

More risk factors can be considered for females, especially after their menopause, and anatomical abnormalities in joint shapes, which can hinder mechanical loads (Di Martino *et al.* 2024). Occupation-level factors can also contribute to development of these OA. Especially jobs involving repeated movements, long-term kneeling, or heavy lifting, like construction or others, can increase the risk for joint damage (d'Errico *et al.* 2023).

Impact of Osteoarthritis on health conditions

Physical impact

For physical approach, joint pain is the most common symptom, which gets worse with activities (Perrot and Anne-Priscille, 2023). This long-term health condition brings in swelling and tenderness and can be significantly common in case of overweight. As time passes, individuals can face a reduction in their joint flexibility and muscle weakness, all hindering mobility. Reduction of mobility can result in major negative outcomes for independence and daily life movements. Individuals with OA can face issues in activities like walking, climbing stairs, and performing other daily tasks. This also leads to instability and hinders movements further. Osteoarthritis may have a physical consequence that is much more significant than joint pain. Later on in the disease, one might find the condition severely restricting their capacity to carry out daily tasks (Fairley *et al.* 2021). Posture and balance may also be affected by reduced joint mobility because this increases the risk of falls in older adults. The physical impact is also related to other long-term aspects. It is also estimated that 4 out of 5 people with OA have at least one or other long-term condition (McKevitt *et al.*, 2020). These aspects complicate the treatment and increase the risk for inadequate health outcomes.

Psychological impact

Factors like emotional distress, anxiety, and depression are some of the key negative outcomes of chronic pain (Aaron *et al.*, 2025). Individuals can feel frustrated due to the constant nature of their symptoms and lack of freedom in their daily activities. Sleep can also be impacted through this, which leads to increased fatigue. As highlighted in the study of Zahid-Al-Quadir *et al.* (2020), pain in the long-term due to the musculoskeletal conditions can impact quality of life. Another critical aspect that is related to Osteoarthritis is muscle weakness. When people have pain in the joints, they can avoid physical activity so as to avoid pains. It may, however, result in muscle atrophy due to decreased physical activity, which further decreases joint stability and functioning. This forms a circle where pain results in inactivity and inactivity results in the worsening of the physical functioning even more (McKevitt *et al.* 2020).

Sleep patterns are also affected by chronic pains. A high number of Osteoarthritis patients have also complained of having sleeping difficulties as they always complain about having a form of discomfort especially at night. Low quality of sleep may result in fatigue, less concentration and a general low wellbeing. The problems can also have an impact on the capacity of an individual to work or engage in social activities. These can be also increased via the increase fatigue and reduction of

quality of life among these individuals. Being affected by such a chronic condition like Osteoarthritis can significantly affect the psyche (Zahid-Al-Quadir, *et al.*, 2020). Chronic pain and lack of mobility can result into frustration, feeling helpless, and loss of control. People had been active before and now they fail to cope with emerging physical restriction, with that impacting their emotional wellbeing and mental health (Perrot and Anne-Priscille, 2023). A prevalent condition that is reported among people with long-term musculoskeletal conditions is depression and anxiety. The lack of knowledge about the progression of a disease and its possible mobility may bring about further stress. In addition, people can also be socially isolated when they cannot engage in recreational or community programs. The assistance of medical workers, relatives, and society groups is, thus, necessary to allow people to handle the emotional struggles that come with Osteoarthritis. Educating patients as well as psychological support can be useful in dealing with such challenges (Perrot and Anne-Priscille, 2023). By becoming aware of their condition, and knowing the tricks of how to control the symptoms, people usually feel more confident in their independence and quality of life.

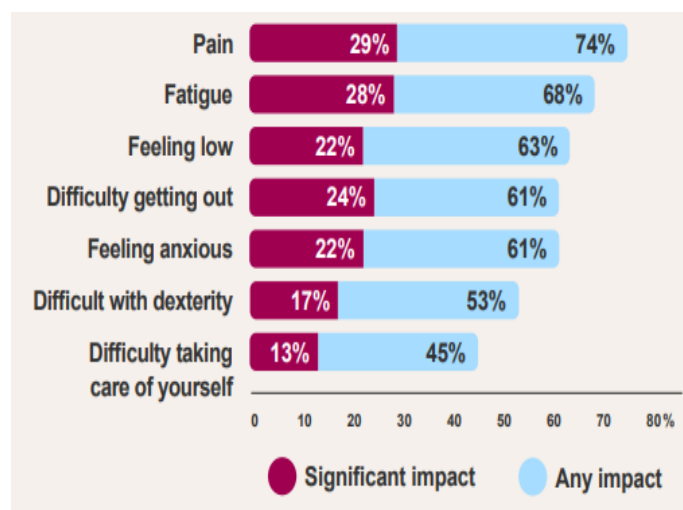


Figure 4: Factors impacting the lives of people with MSK conditions in the UK

(Source: arthritis-uk.org, 2025)

Social impact

Reduction of mobility can hinder work level participation, leisure activities, and social interactions (Fairley *et al.*, 2021). People can also need more support from family members for daily tasks or their transportation. For working-age adults, this can also lead to a reduction in productivity, sick leave or early retirement. Musculoskeletal conditions are among the most crucial concerns that lead towards lack of employment rate in the UK (Parliamentuk, 2024). This develops individual-level financial insecurity and even hinders wider economic issues for the region. Family members who provide care can also face emotional and financial pressures. As informal caregivers often balance their caregiving responsibility with employment and personal commitments, which can lead to stress or hindered quality of life (Alemu *et al.*, 2025). As these

increase the support requirement can also increase and impact family conditions and situations.

Evidence-based treatments of Osteoarthritis in the UK

NICE guidelines are mainly focused on non-pharmacological interventions making it the first-line treatment for OA (NICE, 2022). Exercise programmes for enhancing muscle strength can increase flexibility are highly recommended. Physical activity can support the reduction of pain, enhance function and manage their independence. It is a common fact that obesity increases the strain on joints. Under such circumstances, weight management is also crucial for treatment for individuals who are being affected with obesity. This is crucial as the slightest reduction of weight can result in a lack of stress on the joints and overcome symptoms.

In terms of pharmacological treatments, these are utilising when non-pharmacological treatments do not work and require medications for reducing pain and inflammation. In these situations, often topical non-steroidal anti-inflammatory drugs (NSAIDs) are often recommended in the beginning stages (Lee *et al.*, 2023). Although, if these traditional approaches fail and the damages of the joints become more critical, the surgical option can be considered. Based on NHS data, joint replacement surgery, like knee or hip replacements, is a more common approach

for advanced Osteoarthritis, becoming an effective treatment (NHS, 2023).

Theoretical perspectives and models for Long-term condition management

UK-based model: The house of care model

The house of Care model is a UK-focused framework, developed by the NHS for enhancing outcomes of people with long-term conditions like OA (whittingtonnhs, 2025). It is based on a coordinated, person-focused care approach to ensure individuals are engaged in their health management. The model is based on four key aspects, including engaged and informed patients, healthcare professional commitment to partnership working, organisational systems supporting coordinated care and Commissioning or wider community providing more support and resources (whittingtonnhs, 2025). This model, in the NHS, provided personalised care planning, shared decision making, and self-management support, all contributing to a better quality of life.

Preventative measures are also becoming known to be a critical part of Osteoarthritis treatment. The condition can be prevented or prevented by early lifestyle interventions to reduce the progress of the condition. Exercise is among the best ways of keeping the joints healthy. Exercises that are not strenuous like swimming, cycling and walking can help strengthen muscles

around joints with minimal stress to cartilage (Lee *et al.*, 2023).

The physiotherapy programmes are usually prescribed to make people engage in safe and effective exercise routines (Lee *et al.*, 2023). Another important parameter in the prevention and management of Osteoarthritis is weight management. Having a healthy body weight helps a great deal in alleviating weight on weight-bearing joints. The symptoms and mobility of people with knee Osteoarthritis have been found to be ameliorated by even minor weight reduction. Medical practitioners frequently recommend people to follow healthy eating habits that help maintain a healthy weight as well as getting necessary nutrients that help to maintain the bones and other joints.

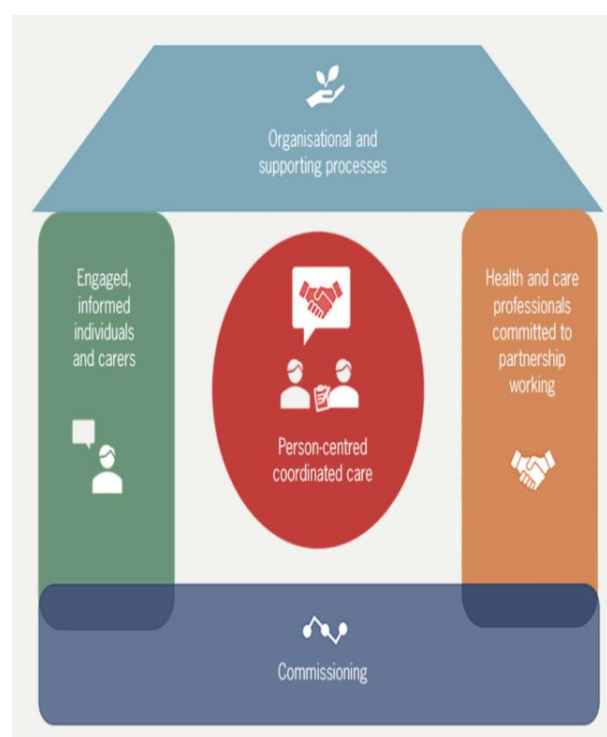


Figure 5: House of care model by NHS

(Source: Fuat *et al.*, 2023)

International model: WHO Innovative Care for Chronic Conditions framework

In terms of the international framework, the WHO based Innovative care for Chronic Conditions framework is a major and widely applied model for long-term condition management (Zezai *et al.*, 2024). This model focuses on interaction among healthcare systems, patient self-management, and even community support. This framework is shedding light on the cruciality of empowering all individuals to manage their conditions properly through accessing resources, supportive healthcare situations, and education. The collection of healthcare providers and communities is also emphasised for better health quality (Zezai *et al.*, 2024). These two models are shedding light on a collaborative context importance for integrated care, patient engagement, and prevention approaches for long-term conditions management like the OA.

Political and policy in relation to OA in the UK

The national health and social care policies play a key role in managing the healthcare outcomes, especially in these long-term conditions. In the UK, various policies and approaches aim to enhance outcomes for individuals with these musculoskeletal issues. For example, the NHS Long-term Plan sheds light on prevention, early intervention, and personalised care for

individuals with chronic issues (England and Improvement, 2020). The plan is showcasing the crucial need for integrated care for better coordination in primary care, community services, and hospitals. On the other hand, All Our Health is another policy initiative which is focused on preventing and promoting health in communities (Govuk, 2024). The policy allows for better encouragement among healthcare professionals for supporting individuals to adapt to their healthy lifestyles, such as through physical activities, weight management, and others. These approaches are also crucial in terms of managing the early stages of OA, thus making the policy more impactful on the lives of the region. There is also a UK-based charity which sheds light on the key facts of people with arthritis and MSK conditions (Kalsoum *et al.*, 2024). These policies and entities also develop the idea that there is a rising cruciality for OA analysis becoming a major public issue and needing interventions from healthcare systems.

Recommendations for enhancing person-centered care

Based on the complete analysis, it can be said that enhancing outcomes of individuals with OA is a developing need for a person-focused approach, which is focused on individual needs, experiences and situations.

- One key approach can be promotion of self-management programmes which can support developing skills and confidence for managing their conditions by themselves. Programs like the WHO-based Innovative Care for Chronic Conditions framework can allow a better educational approach for pain management, information for exercise, and lifestyle management for enhancing quality of life (Zezai *et al.*, 2024).
- As per Aaron *et al.*, (2025), integrated care services need to be enhanced to ensure continuous care in various healthcare groups. Teams collaborating with various expertise can provide more in-depth support for these patients.
- Healthcare professionals need to adapt a shared decision-making approach to ensure patients are engaged in their treatment. This is a key stage in the House of Care framework for partnership working (whittingtonnhs, 2025). This will allow encouraging collaboration between patients and clinicians.
- As stated by Fairley *et al.* (2021), individuals with major disability may need long-term supportive care, which makes planning to ensure dignity and independence of the patient, ensuring their quality of life.

Conclusion

It can be concluded from above discussions that Osteoarthritis is a long-term condition, which requires support to cope with issues of reduced mobility, and advice on financial support. Osteoarthritis is among the most crucial long-term conditions affecting millions across the globe and especially the UK. This condition causes pain and makes the joints stiff and can significantly reduce the quality of life. Some of the common symptoms include tenderness, swelling, along with crackling sound during movement of the affected joints. The study highlighted how it is identified through progressive joint issues, leading to pain and reduced mobility. Ageing population and rising obesity are key contributing factors of this condition. The physical outcomes of OA are highly crucial and often are progressive, while it also has a psychological impact and even social implications for individuals and their families. Dealing with this condition requires regular exercise. Policies like the NHS long-term plan plays a critical role for managing the growing pressure from OA. These developed the need for preventive approaches like enhanced person-centered care, self-management, and others to support the quality of life for individuals with this condition. Early diagnosis and strictly adhering to the treatment plan are the best ways to reduce its impact and optimize normal functioning of affected joints.

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