Policy Brief

Understanding the extent and impact of arthritis and joint problems in Tanzania

Introduction

Sub Saharan Africa is currently facing a preventable crisis caused by the rapid rise in people developing non-communicable diseases (NCDs). This brings not only clinical but economic, societal, and quality of life impacts on people's day-to-day lives. Yet plans to reduce NCDs often overlook the impact of Musculoskeletal (MSK) disorders. Arthritis is one of the commonest MSK disorders, is a leading cause of disability, causes significant absence from work and sufferers can incur substantial medical costs worldwide. Measuring the full impact of these diseases is urgently needed to inform policy.

Framing the problem

Clinical problems affecting the MSK system are common among patients attending hospitals in Tanzania (such as the Kilimanjaro Christian Medical Centre (KCMC)). Yet there is currently little information on how arthritis is understood, its frequency, economic, social and quality of life impacts. By measuring the prevalence and understanding the lived experiences of people with arthritis and joint problems in Tanzania we describe its impacts on the local population. In doing so we provide evidence-based recommendations on how clinical, economic and quality of life impacts of arthritis and joint problems can be mitigated in Tanzania and how the lives of those affected can be improved.

Executive Summary

Working across different disciplines, and in both clinical and community settings, this research project aimed to establish the prevalence of arthritis and joint problems and better understand its impact - clinically, economically and socially - in Tanzania.

Key Research Findings:

We found joint problems to be common in the community, with around 1 in 17 people confirmed as having some joint problems, but few receiving appropriate treatment.

Those who have joint problems experience significant detrimental economic impact, with their ability to earn negatively impacted while their spending on health care was higher than those without joint problems.

Many research participants detailed the negative impacts of joint problems through interviews, explaining how it reduced what they could do, and required them to draw on support from family and neighbours.

Overall, the quality of life of those who experience joint pain was negatively impacted in comparison to those who do not experience joint problems.

We recommend improving awareness of diagnostic and management strategies for joint problems in Tanzania to reduce the impact for those with joint problems and improve their quality of life.

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Research Findings

How common are joint problems in Tanzania?

Our community-based prevalence study found that arthritis is very common. We found that 5.8% of participants had confirmed joint problems, meaning **around 1 in 17 people in the community had joint problems**.

Women and older people were most likely to experience joint pain.

About **1 in 20 people had degenerative 'wear and tear' arthritis**, most commonly involving knees, fingers, hips and lower back with associated pain and restriction of movement.

Very few of these individuals have sought medical treatment although treatment in the form of painkillers is affordable and effective in controlling pain and helping improve function.

We found that **1 in 100 people had evidence of inflammatory arthritis**, most often Rheumatoid Arthritis (RA). These levels of RA are similar to high income countries such as the UK. **Few people with RA had sought medical advice**, and **even fewer were on appropriate treatment**. RA is a chronic inflammatory arthritis that destroys joints if untreated. **RA needs early diagnosis and effective specialist treatment in order to reduce the risk of deformity and dysfunction.**

Research Approach

Bringing together medical scientists, clinicians, economists, geographers, epidemiologists and sociologists, this project undertook research in both a clinical and community setting. Clinical based research took place in the Zonal Hospital **Kilimanjaro Christina Medical Centre (KCMC)** and community-based research was conducted in 15 villages within the **Hai District**, Kilimanjaro.

The research included:

Community-based survey: A detailed survey of over 2,500 households with clinical screening in Hai District provided insights into the prevalence of joint pain in the community setting; the economic impact joint pain has and the ways it impacts on peoples' quality of life.

Hospital Patient File Analysis: Over 8,000 patient files who had attended 13 medical wards in KCMC between 2017-2019 were analysed. This allowed us to explore any diagnoses of joint pain.

Clinic set up and examination of patients: Those identified with possible arthritis and joint pain through the community screening exercise were referred to KCMC's new arthritis and joint pain clinic for further investigation, treatment and management.

In-depth interviews & community observations: Initial observations and 60 short interviews allowed us to gather peoples understandings of joint pain and inform the design of the community survey. Subsequently, 48 in-depth interviews were conducted with those experiencing joint pain to explore their lived experiences.

Development of new tools: A sub study has begun the process of designing a new, Tanzanian specific, measure of capability and wellbeing to use in economic evaluations. We asked 34 adults in rural and urban areas what they valued in their lives. We did the same study with a further 34 adults in Malawi. This research will allow us to express important quality of life concepts in language everyone can understand. We will also be able to attach values to these features in the future.

Analysis of KCMC patient records over a 3 year period found that while patients presented with issues of joint pain, swelling and stiffness, a precise diagnosis for the arthritis was rarely recorded. This emphasises the need to improved awareness of MSK diagnostic and management strategies in Tanzania.

In summary, arthritis is common but very few people are diagnosed, and even fewer are treated. In conditions such as RA, this lack of treatment can lead to avoidable life long deformity and disability.

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What is the economic impact of arthritis?

Our economic analysis found those with arthritis and joint problems experience significant detrimental economic impacts:

2-3 times higher health costs

People with arthritis have approximately **two to three times higher healthcare costs** compared to those who do not have arthritis.

People with arthritis spend more than **10% of their total income on healthcare**. The World Health Organisation says this level of expenditure is **'catastrophic'** which means they suffer excessive financial hardship and are unable to meet their subsistence needs.

10% income on healthcare

2 days off work per month

People with arthritis had to take on average **2 days off work per month** and/or had their **daily activities at home affected** each week because of their joint pain and other symptoms.

15% Reduction in Quality of Life

Our findings reveal a major reduction in quality of life of around 15% for those who have arthritis.

What does 'quality of life' mean?

A good quality of life refers to a person's ability to look after themselves, get around their community, participate in their usual activities, and avoid pain and distress.

We also carried out a methodological sub study to explore what people in Tanzania regard as important for their welling. Our sub study found that people in Tanzania and Malawi, in rural and urban areas, valued very similar things in their life. They **valued their financial security highly** and also their **ability to meet the basic needs** of life such as food, water and shelter. They also valued the **attachment they felt to their families**, contacts with friends, and being able to achieve for themselves and their families. They greatly **valued their health and access to health services**. They enjoyed participating in community activities, being able to make autonomous decisions, and their **faith and spirituality**.

How is joint pain understood and experienced?

Many people thought their joint pain was caused by **working a long time in cold conditions** and mentioned that their pain was worse in the cold weather. A few thought being exposed to pesticides used in coffee cultivation may have put them at risk and some felt that supernatural forces were at work.

"[The pain is intense] during the cold in April, May to June, in July when the sun is out, the pain subsides because the cold has ended completely". (Interview Particpant)

The pain meant people felt **severely disabled**:

"It hurts me so much ..... I can't go to the bathroom to pee I think, you can't sit down and clean yourself, don't you see it's a problem my sister? It's like someone is half dead" (Interview Particpant)

Others could no longer do what they used to do, such as taking care of children or family, or cultivating their land.

"I used to go to church, but I have not been to church for a month now" (Interview Participant)

"It affects [me] a lot, [you used to] find me in my activities there or I cultivate a field, going to sell vegetables or sell other business, now I just sit here at home" (Interview Participant)

Their disability meant **relying on a lot of help from others**. Husbands, wives, children, or wider family can take on the burden of everyday tasks whereas neighbours can sometimes offer information or greetings. Asking for help, however, was frustrating for many and some felt they had few people who could offer support.

People tried to **manage their pain** using **allopathic pain killers** from a pharmacy or doctor or would try **rubbing**, or **gentle movement** to ease their pain. Some used traditional medicines, especially when they could not access painkillers because of the cost.

The **costs of attending hospital or buying pharmaceuticals was a major barrier** for many participants.

"What prevents me [from accessing care] is lack of money. I have no support, where will I get money? If I had money, my child do you think I would not go for treatment? I have no money at this time .... I prayed to God... I have no cows I have nothing but a few chickens." (Interview Particpant)

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Policy Implications and Considerations

Based on the findings of this project, we highlight a number of considerations to mitigate against the clinical, economic and quality of life impacts of arthritis and joint problems. If implemented, these could ultimately improve the lives of many Tanzanian citizens suffering from these conditions.

1 **Adapt and further develop study materials to make suitable for community dissemination to increase awareness of preventive and mitigation measures.**

Rationale: Some arthritis is preventable through lifestyle choices, physical exercise and diet management while these measures often also help reduce the impact of arthritis when present. Our research findings can help inform how this preventative information can best be shared in communities in a culturally appropriate and sensitive manner.

2 **Use our study dissemination materials to raise awareness and skills in primary care facilities through educational materials developed in the project**

Rationale: A hospital review of patient files found under-diagnosis and therefore low awareness among healthcare staff of arthritis in the clinical setting. We can use our dissemination materials to effectively increase clinical awareness and understandings of these conditions.

3 **Use Tanzanian-led training video to develop clinical skills via GALS and REMS screening tools to detect arthritis and other joint problems**

Rationale: This project demonstrated that quick and relatively simple and easy to learn assessments such as gait, arms, legs and spine (GALS) and regional examination of the musculoskeletal system (REMS) can detect arthritis and musculoskeletal issues and can easily be used at primary care level after suitable staff training.

4 **Develop guidelines for referral pathways and treatment for the many forms of arthritis (for example, identifying available and affordable drugs and/or appropriate lifestyle changes)**

Rationale: As well as painkillers and steroids there are disease modifying treatments for rheumatoid arthritis and related conditions which can stop the progression of the condition before deformities occur. While the newer disease-modifying agents are very expensive the older ones are less so, and would potentially be affordable. These could prevent lifelong deformity and disability.

5 **Use KCMC arthritis and joint pain clinic as a model for roll out to other zonal hospitals within Tanzania**

Rationale: Those identified with rheumatoid arthritis and inflammatory conditions will require more specialist assessment and the KCMC clinic can serve as model and training opportunity for other health care providers and facilities.

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