

Prevalence of Complementary and Alternative Medicine use among Patients Attending the Arthritis Clinic at Kenyatta National Hospital, Nairobi, Kenya

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Arthritis is a group of over one hundred inflammatory diseases mainly affecting the joints. Conventionally, arthritis is managed using anti-inflammatory drugs, steroids, disease modifying antirheumatic agents and biologic disease modifiers. Owing to the chronic and life-changing nature of the disease, patients also use complementary and alternative medicine to manage the disease. This study aimed to determine the prevalence and practice of complementary and alternative medicine use among patients attending the arthritis clinic at a national referral hospital in Nairobi, Kenya. This was a descriptive cross-sectional study using semi-structured questionnaires to elicit responses from consenting patients. Among the 53 respondents recruited, most were female (81.1%, n=43). The prevalence of use of complementary and alternative medicine among arthritis patients was 49.1%, with majority using herbs or massage therapy. 61.5% of complementary and alternative medicine users did not disclose this fact to their primary physicians. These findings highlight the need for healthcare providers to be conversant with and discuss complementary and alternative medicine use with their patients.

Keywords: prevalence, complementary and alternative medicine, arthritis, osteoarthritis

INTRODUCTION

Arthritis, a condition primarily affecting the joints and surrounding tissues, encompasses over one hundred inflammatory diseases.¹ The most prevalent types of arthritis are osteoarthritis and rheumatoid arthritis.^{2,3} Globally, in the year 2020, an estimated 595 and 17.6 million people were suffering from osteoarthritis and rheumatoid arthritis, respectively.^{4,5} The most common symptoms of arthritis are pain, swelling and stiffness, characterized by decreased joint function.⁶⁻⁸ Additionally, rheumatoid arthritis results in extensive systemic complications that can involve the heart, lungs, kidneys, eyes and other organs.⁹ The negative impact on quality of life caused by arthritis has been reported to be higher than that caused by gastrointestinal, chronic respiratory or cardiovascular diseases.¹⁰

The management of arthritis varies depending on the type, stage and patient characteristics. In general, treatment is aimed at symptomatic relief and prevention of further damage to the joints. In the case of osteoarthritis, pharmacological

management mainly relies on nonsteroidal anti-inflammatory agents (NSAIDs) and intraarticular corticosteroids.¹¹ Additionally, rheumatoid arthritis treatment utilizes disease modifying antirheumatic agents (such as methotrexate, hydroxychloroquine, sulfasalazine, ciclosporin and azathioprine) and biologic response modifiers such as monoclonal antibodies.¹² Non-pharmacological interventions include weight reduction, exercise, physical therapy and use of supportive devices.^{13,14} Often, patients combine this conventional treatment with complementary and alternative medicine (CAM).^{15,16}

CAM refers to a “broad spectrum of healthcare practices not traditionally considered part of conventional medical care”.¹⁷ The terms “Complementary” imply use alongside conventional treatments and “Alternative” use instead of conventional treatments.¹⁸ Forms of CAM include biologically based therapies such as herbs; mind body therapies such as prayer and meditation; manipulative and body based methods such as massage, chiropractic and

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reflexology; energy therapies such as far infrared therapy; and alternative medicine systems such as Ayurveda and Traditional Chinese Medicine.^{18,19} Herbal medicine is one of the most widely used forms of CAM, with up to 80% of those in the developing world relying on it for their healthcare needs.²⁰

Use of CAM is widespread and is estimated to range from 9.8 to 76% worldwide.²¹ Chronic disease patients commonly use CAM.²² Factors that drive this use include perceived benefits and safety, ease of access and availability, influence from social circles and dissatisfaction with conventional medicine.^{23–25} However, there are challenges associated with CAM use such as limited regulatory oversight, lack of standardized dosages, risk of drug-drug interactions with conventional therapy and lack of sufficient evidence to support the safety and efficacy of these medicines.^{22,26} Moreover, most patients using CAM rarely disclose this fact to their healthcare providers. Some patients have been known to discontinue conventional therapy without informing their clinicians.²¹ There is a paucity of data on the prevalence of CAM use alongside conventional medicine in the management of arthritis and other chronic conditions in Kenya. The aim of this study was to document the prevalence of CAM use among patients attending the arthritis clinic at the Kenyatta National Hospital.

METHODOLOGY

This was a descriptive cross-sectional study that involved administering of interviews guided by pre-tested semi-structured questionnaires to outpatient arthritis patients attending the once-a-week rheumatology clinic at Kenyatta National Hospital (KNH). The questionnaires included open-ended and close-ended questions. The data collected included socio-demographic characteristics, clinical history and CAM use. The study was conducted over a five-week period in 2021. Convenience sampling was used to select patients aged 18 years and above previously diagnosed with arthritis on follow-up at the outpatient rheumatology clinic. The sample size aimed at selecting the maximum number of respondents accessible during the study period.

Patients under the age of 18 were excluded from the study. Fifty-three patients were recruited upon giving their consent to participate in the study. Data was entered in MS Excel and analyzed using descriptive statistics. Ethical approval to conduct the research was granted by the Kenyatta National Hospital/University of Nairobi Ethics and Research Committee (KNH/UON ERC UP201/03/2021).

RESULTS

Participant sociodemographic characteristics

A total of 57 participants met the inclusion criteria. Two of the patients did not fill the questionnaires completely while two others did not consent to the interview. Thus, a total of 53 questionnaires were duly filled and retrieved, giving a response rate of 93%. The demographic characteristics of the participants are captured in Table 1. Most of the respondents were aged between 31 and 40 years (22.6%, n=12) and 61 to 70 years (18.9%, n=10). The mean age of the respondents was 49.01 years (SD $\pm$ 1.75), with the oldest 87 years old and the youngest 20 years old. Among the 53 respondents; most were female (81.1%, n=43), majority had attained secondary school level of education (45.3%, n=24), most were Christian (83%, n=44), and about three quarters (75.5%, n=40) resided in urban areas and had medical insurance.

Prevalence of CAM use

Data on the prevalence of CAM use is presented in Table 1 alongside the demographic characteristics. The prevalence of CAM use among the 53 respondents was 49.1% (n=26). Of the 10 male respondents in the study 7 (70 %) used CAM as opposed to 19 out of 43 female respondents (44.2%). The prevalence of CAM use decreased with age with participants less than 50 years (57.7%, n=15) more likely to use CAM than older participants (42.3%, n=11). It was noted that the older participants were more satisfied with their conventional medication as most stated that the conventional drugs they were using had been effective for their condition over the years.

Table 1: Socio-demographic characteristics of respondents and prevalence of CAM use

Characteristic		Frequency (%)	CAM use frequency (%)
Age (years)	20-30	9 (17.0)	3 (33.3)
	31-40	12 (22.6)	7 (58.3)
	41-50	8 (15.1)	5 (62.5)
	51-60	6 (11.3)	3 (50.0)
	61-70	10 (18.9)	6 (60.0)
	>70	8 (15.1)	2 (25.0)
	TOTAL	53 (100)	26 (49.1)
Gender	Male	10 (18.9)	7 (70.0)
	Female	43 (81.1)	19 (44.2)
Highest level of education	No formal education	4 (7.5)	2 (50.00)
	Primary	14 (26.4)	8 (57.1)
	Secondary	24 (45.3)	9 (37.5)
	Post-secondary	11 (20.8)	7 (63.6)
Religion	Muslim	9 (17.0)	6 (66.7)
	Christian	44 (83.0)	20 (45.5)
Residence	Urban	40 (75.5)	20 (50.0)
	Rural	13 (24.5)	6 (46.2)
Insured	Yes	40 (75.5)	19 (47.5)
	No	13 (24.5)	7 (53.8)

Among the urban residents, 50% (n=20) used CAM. This proportion was slightly higher than that among rural residents where 46.2% (n=6) were CAM users. A smaller proportion of respondents with medical insurance were CAM users (47.5%, n=19) compared to uninsured respondents (53.8%, n=7). Regarding the level of education, the prevalence of CAM use was highest in respondents with post-secondary education (63.6%, n=7) and lowest among those with secondary education (37.5%, n=9).

Respondents with no formal education and those with primary education reported 50% and 57.1% CAM use, respectively.

Clinical history and challenges faced by respondents

The vast majority of respondents (92.5%, n=49) suffered from rheumatoid arthritis, while the remaining 7.5% (n=4) suffered from osteoarthritis. Most of these patients reported having lived with the illness for a long time, with 47.2% reporting a duration of more than 5 years, 28.3% between 3 to 5 years and 24.5% less than 3 years.

Slightly over two thirds of the respondents (67.9%, n=36) reported not having experienced any side effects from the prescribed conventional medication. The remaining 32.1% (n=17) who reported having experienced side effects complained mainly of gastrointestinal disturbances attributed to NSAIDs and methotrexate, while a few reported having experienced allergic reactions. Out of the 53 respondents, a majority (71.7%, n=38) were satisfied with the prescribed conventional medication, while the rest (28.3%, n=15) complained that the prescribed medication was not adequately effective for their condition, especially in cold weather which exacerbated joint pain and stiffness.

A total of 31 patients (58.5%) reported having faced challenges in accessing their medication, with the main challenge reported being the high cost of medication. About half (50.9%) of the respondents stated that they spent less than KES 5,000 per month on medication while 43.4% spent KES 5,000 to 10,000 and 5.7 % spent approximately KES 11,000 to 15,000 per month. Among the 26 CAM users, most (61.5%, n=16) reported experiencing challenges with accessing their conventional medication. In terms of the impact of medication cost on CAM use, those that spent a higher amount of money in purchasing conventional medicine (KES 11,000 to 15,000) were less likely to use CAM (7.6%) than those that spent less. Respondents who were on hydroxychloroquine sulphate stated that there had been a shortage of the drug in 2020 at the onset of the COVID-19 pandemic, possibly due

to claims that hydroxychloroquine could treat the disease resulting in a global spike in demand for the drug.

A large number (88.5%, n=23) of the respondents using CAM did not experience any side effects from the CAM they used, while the remaining three (11.5%) reported having experienced gastrointestinal side effects but could not tell whether the side effects were from complementary or conventional medicine because they were using the two concurrently. Majority of the CAM users (69.2%, n=18) reported experiencing added benefits from CAM use and as a result, would recommend CAM to other patients.

Forms of CAM used

The most commonly used forms of CAM were herbs (50%, n=13) and massage therapy (50%, n=13). Among those that practiced massage therapy, far infrared (FIR) heat therapy and physiotherapy were the most commonly reported forms while a few reported self-massage. A large number of the respondents who used herbs had little knowledge of the herbs used and stated that they simply heeded instructions given by their herbalists. The dietary modifications mostly

reported were incorporation of ginger and garlic into food and occasional intake of bone soup. Dietary supplements were used by 8 (30.7%) of the CAM users with the most common supplements used being calcium and omega-3. Spiritual healing was practiced by only 6 (23.1%) of the respondents.

Majority of the CAM users (n=19, 73.1%) used CAM together with conventional medicine, while the remaining seven (26.9%) either did not combine the two or stopped using complementary medicine when they started using conventional medicine. Most (73.1%) of these respondents adhered to their conventional medication even while using CAM concurrently.

A total of 16 (61.5%) respondents who used CAM did not inform the doctor about the complementary medicine used, giving the reasons that the doctor did not ask and fear that the doctor would not approve. An observation of interest was that all the respondents who reported CAM use to their physicians (n=10, 38.5%) utilized massage therapy. The CAM and conventional medicine use history of the respondents is summarized in Figure 1.

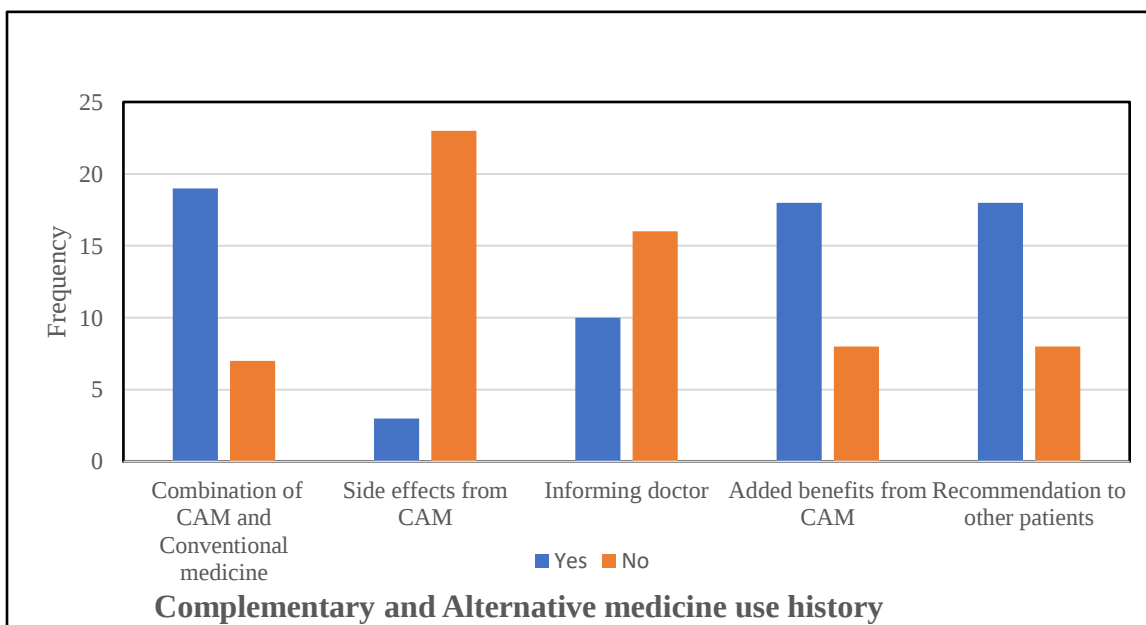


Figure 1: Complementary and Alternative Medication history of Respondents

Most of the CAM users (n=19, 73.1%) started using CAM after conventional medicine. The most common reasons for starting to use CAM were influence and testimonials from other patients and relatives (n=11, 42.3%) and additional support to conventional medicine to enhance effectiveness (n=7, 26.9%). Other reasons given include doctor's advice to use supplements and massage therapy (23.1%, n=6) and frustration of experiencing side effects caused by conventional medication (3.8%, n=1).

DISCUSSION

The preponderance of female and older respondents is in agreement with existing prevalence data which reports that females and older patients are more affected by arthritis.^{27,28} The prevalence of CAM use among arthritis patients in KNH was similar to the 50.3% reported by Jianping and others in a Chinese cross-sectional study.²⁹ Other studies report disparate percentages of CAM use from as low as 34% to as high as 90%.^{15,27}

A larger proportion of male respondents used CAM compared to female respondents. This is contrary to findings of a Saudi Arabian study where a majority of female arthritis patients used CAM.²⁷ Use of CAM was observed to decrease with age. Possible explanations for this include limited social interaction with other CAM users, fewer complications of conventional treatment, and milder symptoms if the disease is still in its early stages. Uninsured patients were more likely to use CAM than insured patients. This may be attributed to the fact that insured patients had greater access to conventional medicines. Although respondents with post-secondary education were more likely to use CAM than those with lower levels of education, there was no clear trend regarding CAM use and education level. A majority of patients using CAM mentioned high cost of conventional medicine as a hindrance to access. Patients who could afford higher prices of medication were less likely to resort to CAM use.

Contrary to findings of a study by Rouster-Stevens *et al.*, which revealed a high rate of conventional medication side effects among the

participants who chose to use CAM for arthritis, in the present study over a third of CAM users reported not having experienced any side effects from their conventional medication and generally viewed the conventional medication as effective.³⁰ This may be supported by the fact that a majority of the participants in this study used CAM as additional support to conventional medication and that side effects from conventional medication was rarely cited as a reason for initiation of CAM therapy.

The most frequently used CAMs among the respondents were massage therapy and herbs. Several studies confirm the predominant use of these two forms of CAM in arthritis. According to a study by Rao *et al.*, massage therapy was the most commonly used form of CAM among arthritis patients in the United States.³¹ This is consistent with findings by Jaber *et al.* in Palestine where massage therapy accounted for 47.4% of CAM use and another by Rouster-Stevens *et al.*, in which massage therapy was the most commonly utilized form of CAM by 54% of the participants.^{30,32} The prevalent use of herbal medicines is consistent with a systematic review on CAM use in the UK.³³

The observed use of supplements such as omega-3 and calcium was consistent with a study carried out by Zhao *et al.*, which reported that the most commonly used supplement in rheumatoid arthritis is fish oils rich in omega-3, with 19% of patients reporting their use. According to the authors, omega-3 could reduce cardiovascular complications associated with rheumatoid arthritis and should be recommended in managing the condition.³⁴

It may be inferred from this study that CAM use may not affect adherence to conventional medicine to a large extent. A Canadian study reported no difference in adherence to conventional medication between CAM users and non-CAM users.³⁵ As confirmed in studies such as Khan *et al.*³⁶ and Lee *et al.*,³⁷ friends, relatives and other patients play a big role in influencing use of CAM and conventional medicine. Failure to disclose CAM use to doctors was driven by the reasons that the doctor did not ask or that respondents were afraid that the doctor would disapprove. This finding concurs with that

by Zaman *et al.*, who reported that a majority (87%) of rheumatoid arthritis patients in India did not report CAM use to physicians.³⁸ Consequently, routine enquiry about CAM use and comprehensive medication history taking by clinicians during consultations with arthritis patients is recommended. Physicians can also advise patients on appropriate CAM use in arthritis. For instance, one of the reasons given by CAM users for initiating CAM therapy was the doctor's advice to use supplements and massage therapy. This was in agreement with a study carried out by Naidu *et al.*, to assess the knowledge and attitude of Australian pharmacists towards CAM, which revealed that a majority of the pharmacists had positive views on CAM in general.³⁹

This study had a number of limitations. Firstly, the number of respondents available was small. Secondly, the study was carried out at the arthritis clinic at a specialized national referral hospital. Since such factors may limit generalizability of study findings, it is recommended that further studies select a large number of respondents and include hospitals at different levels of care.

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CONCLUSION

Nearly half of arthritis patients on conventional anti-arthritis medication attending the KNH arthritis clinic used CAM. Social influence from relatives, friends and other patients was the greatest motivator for the initiation of CAM therapy among the participants. CAM use did not negatively affect adherence to conventional medication among most of the participants. Generally, there was a positive perception of CAM therapy among the respondents, with a significant number reporting having experienced additional benefits and their willingness to recommend CAMs to other patients. Most of the respondents, however, did not inform their physicians of their CAM use. As a result, physicians are encouraged to carry out routine enquiries about CAM therapy use to avoid possible drug-drug interactions.

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