

Relation between Knowledge, Attitude and Quality of Life Among Elderly Patients with Musculoskeletal Problems Who Use Complementary and Alternative Medicine

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Abstract

Background: Using of complementary and alternative Medicine are increasing rapidly and plays a crucial role in the management of musculoskeletal problems among elderly patients. **Aim:** To assess relation between knowledge, attitude and quality of life among elderly patients with musculoskeletal problems who use complementary and alternative medicine. **Design:** A descriptive research design was used. **Settings:** This study was conducted at musculoskeletal out patient's clinic in Al-Mabra Hospital for Health Insurance, Central Upper Egypt branch, Assiut. **Sample:** A purposive sample of 330 elderly patients with musculoskeletal disorders who use complementary and alternative medicine. **Tools:** four tools were utilized. Self-administered questionnaires, knowledge assessment questionnaire, attitude scale, and MOS SF-36 quality of life. **Results:** it was clear that 48% of elderly patients had poor knowledge, 53% of them had positive attitude and they had high mean score in QOL domains. There was positive correlation between knowledge, attitude and quality of life among elderly patients. **Conclusion:** the study was concluded that significant positive correlation between knowledge, attitude and quality of life among elderly patients with musculoskeletal problems who use complementary and alternative medicine. **Recommendations:** conduct comprehensive education program to help the elderly patients to increase their knowledge and improve quality of life regarding musculoskeletal problems.

Keywords: *Alternative Medicine, Attitude, Complementary, Elderly, Knowledge, Musculoskeletal Problems & Quality of life.*

Introduction

Ageing is an inevitable developmental phenomenon bringing along a number of changes in the physical, psychological, and the social conditions (Kasinathan et al., 2021). The number of elderly people has increased worldwide as result of demographic transition in the 20th century. The percentage of individuals aged 60 years and older is predicted to double from about 11 % in 2000 to 22 % in 2050, with 80 % of them living in developing nations. In Egypt, the total number of Egyptian populations was 94.8 million, with 7 % of the population being 60 years or over, by 2030 that number is predicted to rise to 12 % (Central Agency for Public Mobilization and Statistics, Egypt 2023).

Musculoskeletal diseases are debilitating conditions that significantly impair the state of health, especially in elderly subjects, since they are associated with pain, mobility disorders, increased risk of falls and fractures and impaired ability or disability to perform activities of daily living (WHO, 2021 & Marco et al 2020).

Elderly patients prefer using complementary and alternative medicine (CAM) for many the reasons that motivate them to use CAM, due to the popularity of these therapies in some populations and even some significant results of efficacy, they could arguably be

offered in conventional healthcare settings including family physician practices, hospitals and hospices (Ng, 2021).

CAM is also defined as the total knowledge, skills and practices that can be explained which are based on theories, beliefs and experiences specific to different cultures that are used for the prevention, diagnosis, improvement or treatment of physical and mental diseases and maintaining good health (Fakih et al., 2022).

The World Health Organization (WHO) defines traditional medicine as those including diverse health practices, approaches, knowledge and beliefs incorporating plant, animal and/or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain wellbeing, as well as to treat, diagnose or prevent illness (WHO, 2020).

Knowledge, attitude, and practice (KAP) studies are popular in the health sciences; these are now widely accepted for the investigation of health-related behaviors and health-seeking practices. A KAP survey is meant to be a representative survey of a target population; it aims to elicit what is known (knowledge), believed (attitude), and done (practiced) in the context of the topic of interest (Andrade, et al., 2020).

Due to the impact of musculoskeletal on quality of life, CAMs are used to improve symptoms in these patients, although no treatment delays or prevents musculoskeletal problems among elders or provides long term relief of symptoms (Zhao et al., 2021). Quality of life is a good indicator of the health and wellbeing of the elderly population. It is a complex, broad-ranging concept that can include a person's physical health, psychological state, personal beliefs, social relationships, and relationship to salient environmental features (Santhalingam et al., 2021). The role of the gerontological nurse should be to focus on the daily monitoring of the patient's condition while using CAM identify in time the possible risks, and to explain to the patient how to take the therapy (Pirushi et al., 2022).

Significance of the study

Musculoskeletal Problems is common among the elderly population. According to the centers for disease control and prevention (CDC), in The United States, over 25% of Adults Aged 65 Years and older reported some musculoskeletal problems including, osteoporosis, fractures, joint pain, and back pain (Faison et al., 2021).

In Egypt, a study based on village-based elderly showed a higher use of alternative medicine than rural-based elderly, with olive oil being the most common dietary type (22.9%) and cupping being the most common physical type (41.6%). Recommendations for cupping came primarily from elderly patients (64% of elderly users of dietary cupping and 59% of elderly users of physical cupping) (Alnaimat et al., 2023).

There are limited studies in this area in Egypt, so, the present work will assess relationship between complementary and alternative medicine (knowledge, attitude, and practice) with quality of life about among elderly patients with musculoskeletal problem who use complementary and alternative.

Aim of the study:

General objective:

- The aim of the current study was to assess relation between knowledge, attitude and quality of life among elderly patients with musculoskeletal problems who use complementary and alternative medicine.

Specific objective:

- Assess relation between knowledge, attitude and quality of life among elderly patients with musculoskeletal problems who use complementary and alternative medicine.
- Assess relation between attitude and quality of life among elderly patients with musculoskeletal problems who use complementary and alternative medicine.

Research questions:

- Q1:** What is the relation between knowledge and quality of life among elderly patients with musculoskeletal problem who use CAM?
- Q2:** What is the relation between attitude and quality of life among elderly patients with musculoskeletal problem who use CAM?

Research design:

A descriptive research design was used in this study.

Study setting:

This study was conducted at musculoskeletal out patient clinic in Al-Mabra Hospital for Health Insurance, Central Upper Egypt branch, Assiut.

Sample:

A Purposive sample was used and sample size were (330) elderly patients, which calculate through using Epi/Info version 3 with confidence level 95% according to the prevalence rate during one-year 2022 was 2664 in musculoskeletal out patient's clinic in Al-Mabra Hospital for Health Insurance, Central Upper Egypt branch, Assiut.

Inclusion criteria:

- Elderly patients aged 60 years and above of both sexes.
- Had musculoskeletal problem more than one year ago.
- Who use complementary and alternative medicine for musculoskeletal problem.
- Alert and able to communicate.

Tools of the study:

Four tools were used for data collection.

Tool (I): Self-administered questionnaire:

A structured questionnaire form was developed by the researchers, based on reviewing related literatures, (AlSaleh, et al., 2023) written in English and consist of three parts.

Part one: Patients demographic characteristics:

It consists of; age, gender, marital status, education, occupation, residence, height and weight.

Part two: Past medical history:

It include; chronic illness, previous accident/falls, previous musculoskeletal surgery and family history of musculoskeletal problems.

Part three: Present history of musculoskeletal problems:

It include; primary diagnosis, duration, signs and symptoms and medication.

Scoring system: Scoring of the questionnaire of each item was made using 2-point ranging from 0 to 1, where "0" indicated no and "1" indicate yes for each question.

Reliability:

The reliability coefficient by Cronbach's alpha = 0.93. The intra-class correlation for the test-retest reliability was 0.89.

Tool (II): Knowledge assessment questionnaire:

This tool was developed by the researchers depending on the related review of literature; it used to assess the knowledge of elderly patients about (CAM) that used for musculoskeletal problems (Khattab, et al., 2018) and (Masoud, 2014). Closed ended 7 questions were used to ask about their knowledge. It included questions regarding to definition of CAM, types of CAM, reasons for using CAM, diseases are treated with CAM, advantages CAM and disadvantages CAM and source of the knowledge about CAM.

Scoring system:

One grade given for each correct answer and zero was given for incorrect answer, the total grades of knowledge equal (55): The grades for each item were summed and then converted into a percent score as following: Poor knowledge; (Scores less than 50 %), Fair knowledge, (score from 50-70 %) and good knowledge (more than 70%) (Khalaf, 2015).

Reliability:

The reliability coefficient by Cronbach's alpha = 0.827.

Tool (III): Attitude scale:

This scale developed by Mc Fadden et al., 2010 and adapted by the researcher. It must be translated into Arabic version. It is a Likert scale consisted of 21 statements to assess attitude towards CAM among elderly patients with musculoskeletal problems.

Scoring system:

Regarding the patients' attitudes, three-point Likert scale agree, uncertain and disagree were scored 2, 1, and 0 respectively. The scoring was reversed for negative statements. Total scoring of attitude was 21 grades; patients' attitude score was calculated by summing up and converted into a percent score. The respondent's attitude was considered positive if 60 % or higher and negative if less than 60 % (Mc Fadden et al., 2010).

Tool (IV): 36- items Short Form quality of life (SF-36) (Ware, 1992):

It is a set of generic, coherent, and easily administered quality-of-life measures. SF-36 contains 36 questions that make up 8 scales. The scales are Physical Functioning, role-based physical functioning, pain, general health, vitality, social functioning, role-based emotional functioning, and mental health.

Scoring system:

The answers to the questions were expressed in points from 0 to 100, with a higher number of points on each scale corresponding to a higher level of QOL.

reliability:

The overall Cronbach's α coefficient of the SF - 36 questionnaire was 0.791, while the respective Cronbach's α coefficients for each of dimensions were

> 0.70, except where the social function dimension was 0.631. Results showed that the SF - 36 questionnaires was reliable.

Validity of the tools:

The tools were tested for face validity by a panel of five experts from the gerontological Nursing Department, Faculty of Nursing, and Assiut University. The required modifications were done according to their recommendation.

Method**Ethical considerations:**

The research proposal has been approved by the Ethics Committee of the Faculty of Nursing on June 2023, with ID approval (1120230642), and patients' oral agreement was obtained after they had been informed of the study's nature and objectives. There is no risk to the study subject during the implementation of the study. The study adheres to the accepted ethical principles of clinical research. The confidentiality and anonymity of the participants have been safeguarded. They were informed that they had the right to refuse participation in the study at any time and that they could withdraw from it at any time without providing a reason. The privacy of study participants was taken into account when data was collected.

Data collection phase (Field work):

The researcher began collecting data over the duration of six months, from the first of September 2023 to the end of February 2024, three days a week. After receiving permission to perform the study, the researchers directed to orthopedic outpatient's clinic and selected all elderly patients that use CAM and elderly patients with musculoskeletal problems from the previously mentioned hospital setting. Afterward, the researcher introduced herself, described the study's goals, and received elderly patients' verbal consent to take part in the study on a voluntary basis. Each elderly patient who participated in the study was interviewed individually in the in-patient's ward or the hallway of outpatient's orthopedic clinic. The questionnaire was filled out by the researcher, who asked elderly patients and documented their answer, which was filled out and completed in 20 and 30 minutes. Five to six interviews are conducted daily.

Statistical analysis:

Data entry and data analysis were done using SPSS version 22 (Statistical Package for Social Science). Data were presented as frequency, percentage, median, mean \pm standard deviation. Pearson correlation was done to measure correlation between quantitative variables. P-value considered statistically significant when $P < 0.05$.

Results:**Table (1): Distribution of elderly patients with musculoskeletal problems who use CAM according to their demographic data (No = 330)**

Demographic data	No. (330)	%
Age: (years)		
60 - < 65	107	32.4
65 - < 70	138	41.8
≥ 70	85	25.8
-Mean ± SD (Range)	67.44 ± 5.45 (60.0-88.0)	
Gender:		
Male	164	49.7
Female	166	50.3
Occupation:		
Farmer	41	12.4
Manual work	83	25.2
Housewife	79	23.9
Not work	56	17.0
Retired	71	21.5
Level of education:		
Illiterate	51	15.5
Reads and writes	65	19.7
Primary	16	4.8
Preparatory	53	16.1
Secondary	123	37.3
University	22	6.7
Marital status:		
Single	74	22.4
Divorced	95	28.8
Married	116	35.2
Widow	45	13.6
Residence:		
Urban	195	59.1
Rural	135	40.9
Body mass index (BMI):		
Normal	92	27.9
Overweight	161	48.8
Obese	77	23.3

Table (2): Distribution of medical history among elderly patients with musculoskeletal problems who use CAM (No = 330)

Health history	No. (330)	%
Past history of chronic disease #		
Cardiovascular disease	39	11.8
Cerebrovascular disease	37	11.2
Pulmonary disease	6	1.8
Hypertension	108	32.7
DVT	48	14.5
Diabetes	78	23.6
Hypercholesterolemia	72	21.8
Kidney disease	55	16.7
Family history of musculoskeletal problems		
Yes	101	30.6
No	229	69.4
History of accident /falls		
Yes	126	38.2
No	204	61.8

Health history	No. (330)	%
Present history		
Signs and symptoms #		
Warmth and redness of joint	43	13.0
Pain	252	76.4
Acute lower backache	52	15.8
Gait imbalance	60	18.2
Tenderness	66	20.0
Joint stiffness	69	20.9
Difficulty movement	105	31.8
Grating sensation	24	7.3
Joint swelling	38	11.5
Duration of disease		
1 - < 6 Months	59	17.9
6 - < 12 Months	70	21.2
12 - < 24 Months	109	33.0
≥ 24 Months	92	27.9
Medications #		
Corticosteroids	75	22.7
Analgesic	302	91.5
Muscle relaxants	61	18.5
Anti-Inflammatory drug	72	21.8
Anti-rheumatic drug	40	12.1

More than one answer

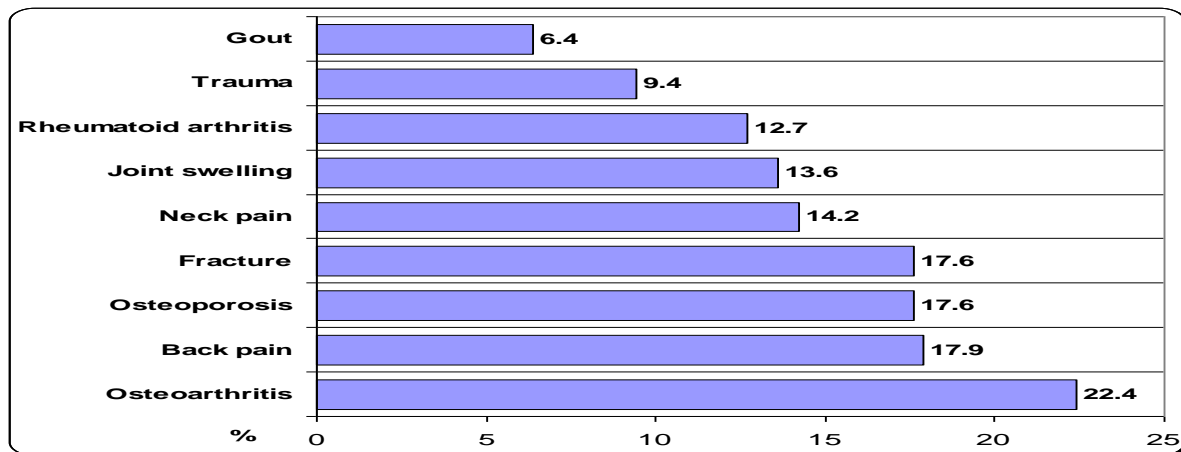


Figure (1): Musculoskeletal problems of elderly patients who use complementary and alternative medicine CAM

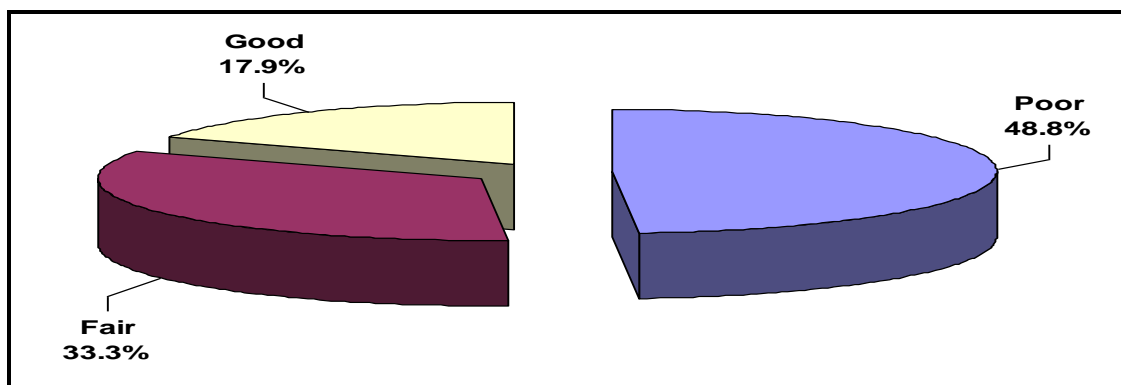


Figure (2): Knowledge score of elderly patients with musculoskeletal problems about Complementary and Alternative Medicine (CAM)

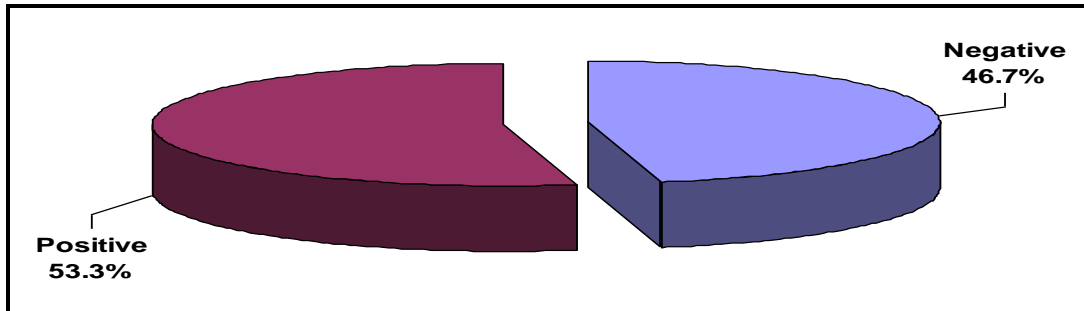


Figure (3): Attitude of elderly patients with musculoskeletal problems regarding Complementary and Alternative Medicine (CAM)

Table (3): Distribution of mean score of quality of life domains among elderly patients with musculoskeletal problems who use CAM

Quality of life domains.	Mean ± SE	Median (IQR)
Physical functioning	54.58 ± 1.78	57.5 (25.0-85.0)
Role limitations due to physical health	50.30 ± 2.57	50.0 (0.0-100.0)
Role limitations due to emotional problems	48.69 ± 2.68	33.3 (0.0-100.0)
Energy/ Vitality	46.76 ± 1.51	50.0 (30.0-55.0)
Emotional well-being	46.73 ± 1.62	48.0 (32.0-64.0)
Social functioning	54.92 ± 1.49	62.5 (37.5-75.0)
Pain	56.72 ± 1.53	55.0 (32.5-77.5)
General health	47.91 ± 0.91	50.0 (40.0-55.0)

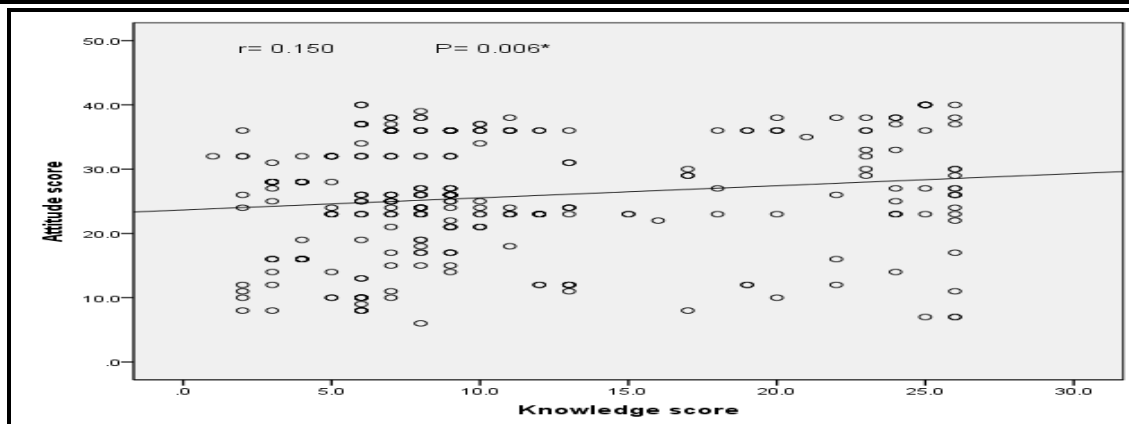


Figure (4): Correlation between knowledge and attitude of elderly patients with musculoskeletal problems who use CAM

Table (4): Correlation between knowledge, attitude and quality of life domains among elderly patients with musculoskeletal problems who use CAM.

Quality of life	R	Knowledge	Attitude
Physical functioning	r-value	0.113	0.305
	P-value	0.041*	0.000*
Role limitations due to physical health	r-value	0.106	0.438
	P-value	0.055	0.000*
Role limitations due to emotional problems	r-value	0.160	0.408
	P-value	0.003*	0.000*
Energy/ Fatigue	r-value	0.200	0.491
	P-value	0.000*	0.000*
Emotional well-being	r-value	0.211	0.494
	P-value	0.000*	0.000*
Social functioning	r-value	0.106	0.433
	P-value	0.054	0.000*
Pain	r-value	0.173	0.390
	P-value	0.002*	0.000*
General health	r-value	0.117	0.383
	P-value	0.034*	0.000*

* Mean there is statistical significance difference $p < 0.05$.

Table (1): Shows the distribution of elderly patients with musculoskeletal problem according to their demographic data. It was observed that 41.8% of the elderly patients were aged from 65- 70 years, 50.3% were females, 37.3% of them had secondary education, 35.2% were married and 25.2% of the elderly patients had manual work. It was clear that 59.1% of them lived in urban and 48.8 % were overweight.

Table (2): Shows the distribution of health history among elderly patients with musculoskeletal problems. Regarding past history 32.7% of elderly patients had hypertension, 30.6% of them had family history of musculoskeletal disorder and 38.2% of them had history of accident. Regarding to their present history 76.4% of them complained from pain and 31.8% of them complain from difficulty movement. Also 33.0% elderly patient suffered from musculoskeletal problems for 12-24 months and 91.5% of them used analgesic for treatment musculoskeletal disorders.

Figure (1): Illustrates musculoskeletal problems of elderly patients who use CAM. It was observed that 22.4% of elderly patients had osteoarthritis 17.9 % had back pain while 17.6% had osteoporosis and fracture respectively.

Figure (2): Illustrates knowledge score of elderly patients with musculoskeletal problems about Complementary and Alternative Medicine (CAM). It was observed that 48.8% of elderly patients had poor score of knowledge and 17.9 % of them had good score of knowledge.

Figure (3): Reveals attitude of elderly patients with musculoskeletal problems regarding Complementary and Alternative Medicine (CAM). It observed that 53.3% of them had positive and 46.7% of them had negative toward Complementary and Alternative Medicine (CAM).

Table (3): Reveals distribution of mean score of quality of life domains among elderly patients with musculoskeletal problems who use CAM. Regarding physical functioning it was found that the mean score had (54.58 ± 1.78), while role limitations due to physical health domain the mean score had (50.30 ± 2.57), role limitations due to emotional problems domain the mean score had (48.69 ± 2.68) and energy/vitality domain the mean score had (46.76 ± 1.51). Regarding the emotional well-being domain the mean score had (46.73 ± 1.62), also social functioning domain the mean score had (54.92 ± 1.49), pain domain the mean score had (56.72 ± 1.53) and general health domain the mean score had (47.91 ± 0.91).

Figure (4): Illustrates the Correlation between knowledge and attitude of elderly patients with musculoskeletal problems who use CAM. It was clarified that there was a significant positive

correlation between attitude and knowledge (P-value 0.006).

Table (4): Reveals the correlation between knowledge, attitude and quality of life among elderly patients with musculoskeletal problems who use CAM. It was observed that there was a significant positive correlation between knowledge score and physical functioning (P-value 0.041), role limitations due to emotional problems (P-value 0.003), energy/fatigue (P-value 0.000), emotional well-being (P-value 0.000), pain (P-value 0.002) and general health (P-value 0.034).

It was observed that there was a significant positive correlation between attitudes all domain quality of life (P-value 0.000).

Discussion:

Complementary and Alternative Medicine (CAM) plays a vital role in the management of musculoskeletal problems among elderly patients, influencing their knowledge, attitudes, and overall quality of life (Alnaimat et al., 2023).

Regarding demographic data of elderly patients with musculoskeletal problem. The present study found that the majority of elderly patients age within the 65 to less than 70 years age group. Relationship between age and CAM use is increase. As older adults often seek (CAM) for chronic conditions, which increase with aging. This agree with a study by Morrissey et al., (2022), who found that older adults, particularly those aged 60 and above, are more likely to use CAM, especially for chronic conditions like musculoskeletal problems. The prevalence of CAM use tends to increase with age, as elderly individuals seek alternative therapies to manage pain and improve quality of life.

The present study revealed that the distribution of elderly patients was between male and female patients are nearly equal.

Regarding occupation, the present study reported that manual workers constitute the largest occupational group as a quarter. The researcher opinion that the relationship between occupation and CAM use can be influenced by several factors, including the physical demands of the job, income, and health insurance coverage. Manual workers may experience more musculoskeletal pain and seek CAM, those in less physically demanding jobs might use CAM for stress relief or general wellness.

This agrees with a study by Quandt et al., (2019), explored CAM use among older adults in physically demanding occupations and found that individuals in manual labor roles were more likely to adopt CAM to manage work-related musculoskeletal pain.

These disagree with Patterson et al., (2022), who found that occupation did not significantly predict

CAM use among older adults. Their research indicated that factors such as income and insurance coverage were more important determinants than occupation type. This suggests that financial accessibility and coverage for CAM services might play a larger role than the physical demands of one's job.

The present study found that the largest educational group is those with secondary education. The researcher point of view, education generally correlates with increased health literacy, which can lead to greater CAM use.

These agree with **Ni et al., (2022)**, who found that higher education levels are positively correlated with the use of CAM. Individuals with more education are more likely to seek out and utilize CAM therapies due to greater health literacy and access to information. While disagree with **Sirois, (2018)**, who found that the relationship between education level and CAM use. It is not always linear. The study reported that highly educated individuals were not always the most frequent users of CAM, especially in older age groups.

The present study found that the majority were married, marital status might influence CAM use through social support and shared health behaviors, married individuals may have more encouragement from spouses to explore CAM. This agree with **Lee et al., (2020)**, who found that married individuals are more likely to use CAM than their unmarried counterparts, potentially due to the influence of a spouse who might encourage the exploration of alternative therapies. The study also notes that divorced or widowed individuals might use CAM as a form of self-care to cope with stress and loneliness

The present study revealed that a greater proportion of the elderly patients reside in urban areas. The difference in CAM use between urban and rural residents is often attributed to accessibility and availability of services. Urban residents typically have better access to a wider variety of CAM practices, leading to higher reported usage.

This agree with research by **Marks, (2023)**, who found that urban residents are more likely to use CAM than those in rural areas, possibly due to greater availability and accessibility of CAM services in urban settings. However, rural residents might use specific types of CAM that are more culturally rooted in their communities. Oppositely, **Graham et al., (2019)**, who found that rural residents were just as likely, to use certain types of CAM as their urban counterparts, particularly those therapies rooted in local traditions. The study suggested that rural populations might have better access to culturally ingrained CAM practices, which could offset the lack of access to conventional healthcare services.

However, rural residents may use CAM rooted in local traditions or as a substitute for conventional healthcare, which can make their CAM usage patterns different but equally significant. The mixed findings suggest that the type of CAM practiced might vary more than the overall prevalence based on location.

The existing study found nearly half of the elderly patients are overweight. This agrees with **Adams et al., (2023)**, who showed that individuals with higher body mass index (BMI), particularly those who are overweight or obese, are more likely to use CAM to manage musculoskeletal pain and other related health issues. This may due to the relationship between BMI and CAM use may be indirect, with the presence of obesity-related conditions like joint pain driving CAM adoption rather than BMI alone. While higher BMI is associated with musculoskeletal problems, CAM use may be more directly linked to the need for pain management rather than weight management.

Regarding to health history of elderly patients with musculoskeletal problem. The present study found that one third of chronic illness among studied sample was hypertension with musculoskeletal problems. This co-morbidity could lead to a more complex management scenario, where patients might require a combination of conventional and alternative therapies to address both conditions effectively.

This in the same line with **Katon et al., (2023)**, who found that hypertension is frequently associated with musculoskeletal pain and other chronic conditions in elderly populations. Hypertension often complicates the management of chronic pain, leading to a higher prevalence of musculoskeletal issues among patients with high blood pressure. While disagree with **Pereira Santos, (2024)**, who indicated that hypertension and musculoskeletal disorders do not always show a significant association, suggesting that other factors, such as lifestyle or socioeconomic status, might be more influential in determining the prevalence of musculoskeletal problems among the elderly.

Regarding the musculoskeletal problem among elderly patients who use CAM. The present study revealed that more than one fifth of elderly patient had osteoarthritis and less than one fifth of elderly patient had back pain, osteoporosis and fracture. According to the researcher opinion, this result is due to their association with decreased bone density and increased fall risk. Integrating Complementary and Alternative Medicine (CAM) with conventional treatments can enhance management by offering additional support for pain relief, improving mobility, and promoting overall bone health, ultimately contributing to a better quality of life for elderly individuals.

The present result disagrees with **Peat et al., (2021)**, who found that osteoarthritis is the most common form of arthritis in older adults, particularly affecting the knee and hip joints. It highlights the high prevalence of osteoarthritis and its significant impact on mobility and quality of life among the elderly.

Deyo et al., (2019), highlighted the prevalence of back pain in the elderly, identifying it as a common issue that significantly affects quality of life and functional status. Back pain is one of the most frequent complaints among older adults, often resulting from degenerative changes in the spine. It supports the need for effective treatment and management strategies.

The present result disagrees with **Bouvard et al., (2021)**, demonstrated that osteoporosis is a major health issue in the elderly, and with a high incidence of fractures related to decreased bone density. It underscores the need for preventive measures and effective management to address this condition.

Regarding the distribution of knowledge levels about Complementary and Alternative Medicine (CAM) among elderly patients with musculoskeletal problems the current study reveals a significant gap in knowledge. Nearly half of the patients have a poor level of knowledge regarding CAM. This in line, **Mao & Xie, (2019)**, who identified that many patients have limited knowledge about CAM, similar to the findings that a significant portion of patients in this study have poor knowledge. Also confirmed that knowledge levels about CAM vary widely among patients, with many having poor understanding.

Regarding of attitudes toward Complementary and Alternative Medicine (CAM) among elderly patients with musculoskeletal problems the present study found that more than half of patients having a positive attitude toward (CAM). This suggests that while a majority of patients view CAM positively, a significant portion still harbors reservations or concerns. The positive attitude may reflect recognition of CAM's potential benefits or its role as a complementary treatment option.

This agrees with **Harris et al., (2022)**, who supported the positive attitude towards CAM, including its use to manage pain and negative with conventional treatments. It also emphasizes the importance of discussing CAM use with healthcare providers.

Regarding quality of life among elderly patients with musculoskeletal problems who use CAM, the present study found elderly patients high score of quality-of-life domains. A study by **Stöcker et al., (2023)**, found that individuals using CAM reported higher levels of satisfaction with their health compared to those who did not. This study indicated that CAM therapies could positively influence patients' perceptions of their health status and overall quality of life.

Aldanyowi, & AlOraini, (2024) suggested that the impact of musculoskeletal disorders on quality of life may be less severe than reported, indicating a discrepancy with the high score quality of life scores observed in the current study.

Regarding the correlation analysis between quality of life domains and both knowledge and attitude, the present study found that there was positive correlations between quality of life domains and attitude scores are generally stronger compared to those with knowledge scores. **Lee & Woo, (2023)**, found that a positive attitude towards CAM was strongly associated with improved quality of life across multiple domains, whereas knowledge alone had a less consistent impact. This agree with present study.

Also **Mokhatri-Hesari & Montazeri (2020)** who found that both increased knowledge about CAM and a positive attitude were independently associated with improved quality of life, suggesting that both factors play a crucial role. **Stie et al., (2020)**, suggested that knowledge of CAM had a significant positive correlation with quality of life measures, indicating that understanding CAM practices could contribute to better health outcomes. They were agreeing with the current study.

Limitation of study:

The study has limitation during collecting data which our samples were elderly patients who had age related changes affecting on their communication with researcher.

Conclusion:

Based on the results of the present study, it can be concluded that:

Nearly half of elderly patients with musculoskeletal problem who use CAM had poor knowledge more than half of them had positive attitude and they had high mean score in quality of life domain. Significant positive correlation was appeared between knowledge, attitude and quality of life among elderly patients with musculoskeletal problem.

Recommendations:

Based on the results of the present study, the researcher suggested the following recommendations:

- Conduct comprehensive education programs to help the elderly patients to increase their knowledge and improve quality of life regarding elderly patients with musculoskeletal problem.
- Update scientific CAM information should be provided to elderly patients as part of musculoskeletal problem routine management and counseling at musculoskeletal out patient's clinic in Al-Mabra Hospital for Health Insurance, Central Upper Egypt branch, Assiut. .
- Further researches are required involving many regions and to obtain knowledge data on any health benefits achieved through CAM usage.

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